OMNII HAND-HELD COMPUTER
USER GUIDE

for Windows Embedded CE 6.0

Draft #4 for review

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OMNII HAND-HELD COMPUTER USER GUIDE

(Windows Embedded CE 6.0)

8000211.H

August 2014

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Revision History

Changes to the original guide are listed below:

Change	Date	Description
-01 Rev H	08/2014	Narrowband updates.

TABLE OF CONTENTS

Appendices

Appendix A: Port Pinouts

Appendix B: Imager & Camera Settings

Appendix H: Wireless Zero Config Settings

Appendix I: Omnii XT15ni Non-Incendive Safety Guidelines

Appendix J: Narrowband Radio Configuration

ABOUT THIS GUIDE

About This Guide

This guide applies to the following models:

• 7545MBW

• 7545MBWP

• 7545MBWPT

• 7545MBWT

• 7545MBWN

• FCC ID: GM37545MBW, GM37545MBWM and GM37545MBWP

• IC: 2739D-7545MBW and 2739D-7545MBWP

This user guide describes the configuration, operation, and maintenance of the Omnii Hand-Held Computer.

Chapter 1: Basic Operation. describes the steps required to get the Omnii ready for operation.

Chapter 2: Getting To Know Your Omnii. describes Omnii features, including how to charge and maintain the battery, the keyboard features, the display, using the internal scanner, etc. This chapter also describes the Microsoft® Windows® Embedded CE 6.0 desktop, and how to change the appearance and actions of the desktop from Windows Classic Shell to the Kiosk Shell.

Chapter 3: Configuration. describes the programs and applications accessed through two main areas from the Desktop Start Menu: *Programs* and *Settings>Control Panel.* The software includes both Motorola Software Advantage and Microsoft programs, and details how to use them to configure the Omnii, along with scanners/imagers, *Bluetooth*, etc. This chapter also details the Kiosk program, which enables you to customize your computer settings.

Chapter 4: Accessories. describes the peripherals and accessories available for your Omnii computer.

Appendix A: Port Pinouts. describes the Omnii and accessories pinouts.

Appendix B: Imager & Camera Settings. describes in detail your imager's settings.

Appendix C: Scanner Settings. details your barcode options.

Appendix D: Internal Imager & Scanner Specifications. lists the specifications for the Omnii scanners and imagers.

Appendix E: Omnii Specifications. lists the specifications for your Omnii computer, radios, and battery.

Appendix F: Omnii XT15f Freezer Variants. describes the hardware and heating software of the freezer units.

Appendix G: Wireless Wide Area Network (WWAN) Settings. describes WWAN configuration information.

Appendix H: Wireless Zero Config Settings. outlines the steps used to configure your radio using *Windows Zero Config.*

Appendix I: Omnii XT15ni Non-Incendive Safety Guidelines. lists the approvals, important warnings, and cautions for the Omnii XT15ni (non-incendive) Hand-held Computer.

Appendix J: Narrowband Radio Configuration. describes setting up the RA1202 Narrowband radio.

Text Conventions

NOTE   Notes highlight additional helpful information.

IMPORTANT   These statements provide particularly important instructions or additional information that is critical to the operation of the equipment.

WARNING!   **These statements provide critical information that may prevent physical injury, equipment damage or data loss.**

Overview of the Omnii Hand-Held Computer

The Omnii Hand-Held Computer is a modular, industrial hand-held computer. A variety of options are available to suit applications in courier/delivery, field service, manufacturing facilities, material handling applications in warehouses, ports and yards, with a focus on real time wireless data transactions. Barcode input methodologies are supported by a variety of available scanners. Optimization for specific operational environments is also supported with a wide range of peripheral options and carrying accessories.

The Omnii XT15f (Freezer Variant) combines modularity, customizability and performance with added technology to resist condensation for use in cold, condensing environments. For details, see Appendix F: Omnii XT15f Freezer Variants.

NOTE   The Omnii Hand-Held Computer is a body worn device, and to maintain compliance with the FCC RF exposure guidelines, use a Motorola approved carrying case. Use of non-approved accessories may violate FCC RF exposure guidelines.

NOTE   For product specifications, refer to Appendix E: Omnii Specifications.

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Model Variants

- Omnii RT15 Hand-Held Computer (rugged) - Model 7545XC

- Omnii XT15 Hand-Held Computer (extremely rugged) - Model 7545XT

- Omnii XT15f (Freezer Variant) Hand-Held Computer (extremely rugged) - Model 7545XT

Processor and Memory

- Texas Instruments® Sitara AM37xx, ARM Processor 800 MHz (OMAP3® compatible)

- Flash ROM: 1 GB

- RAM: 512 MB

- 3 axis accelerometer

Operating System

- Microsoft® Windows® Embedded CE 6.0

Bundled Applications

- Internet Explorer® 6

- Windows Mobile Device Center

- WordPad®, ActiveSync®

Supported Applications

- Open TekTerm

- Stay-Linked Terminal Emulation

- Naurtech Browser

- Naurtech Terminal Emulation

- NetMotion Mobility XE VPN

Device Management and Utilities

- Kiosk

- Total Recall, TweakIt, Dr. Debug

- Mobile Control Centre (MCC)

  - Easy configuration management and provisioning platform.

  - Powerful remote control and troubleshooting functionality.

  - Integrated real time geofencing and location services.

  - Advanced device security, user authentication and lockdown features.

User Interface

- Colour/Touch Display 9.4 cm (3.7 in) diagonal

  - VGA (640 x 480) Transflective

  - High visibility option: superior sunlight visibility with 165 cd/m2 brightness

  - Extreme Duty option: withstands 1.25 Joule impact, superior low temperature operation (to -20° C/-4° F), with 160 cd/m2 brightness. Better abrasion resistance.

- Touchscreen

  - Passive stylus or finger operation; pan and flick gestures supported

- - Signature capture

- • Keyboards

  - - Large selection of backlit keypads in both alpha and numeric formats. For a list of currently available keyboard configurations, consult your Motorola representative, or go to:
    http://www.motorolasolutions.com/US-EN/Product+Lines/Psion/?WT.mc_id=psion_us_p_handheld

- • Voice, Audio & Feedback

  - - High volume beeper: 95 dBA

  - - Integrated microphone and speaker

  - - Optional Push-to-Talk Speaker

- • Walkie-talkie style Push-to-Talk – VoIP over WiFi or WWAN

- • Vibration feedback

Wireless Connectivity

- • Integrated *Bluetooth®* V2.0 + EDR

- • Integrated 802.11a/b/g/n WiFi

- • *Bluetooth*® coexistence

- • CCX v4

- • Optional SIRF III GPS Receiver

- • Optional GPS/GPRS/EDGE WWAN radio

- • Optional GPS/GPRS/EDGE with UMTS/HSPA+ WWAN radio

- • Optional RA1202 Narrowband radio

✓ *NOTE*   802.11b/g and Bluetooth are available simultaneously.

The following figures illustrate the main features of the Omnii — for detailed views, please see Omnii Features on page 1-1.

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Figure 1   *Omnii XT15 and RT15 Alphanumeric Variants*

Omnii XT15
59-Key ABC Keyboard

Omnii RT15
55-Key ABC Keyboard

Figure 2   *Omnii XT15f Freezer Variants*

Alphanumeric   Numeric

Figure 3   *Bottom View (Docking Connector)*

Figure 4   *Top View (Scanner Window)*

Laser Aperture

Regulatory Labels

Figure 5   *Laser Warning Label*

⚠ **WARNING!**   **Using controls or adjustments or performing procedures other than those specified herein may result in hazardous radiation exposure.**

MODEL No:
7545

LASER RADIATION
DO NOT STARE INTO BEAM
CLASS 2 LASER PRODUCT (IEC)
CLASS II LASER PRODUCT (CDRH)
650-680nm LASER DIODE
Max.Output:1.4mW (SCAN) <1mW(AIM)
IEC60825-1:2007 (2nd Edition)

1003838A

This label is affixed below the scanner window.

Figure 6   *SE955 Laser Warning Label*

MODEL No:
7545

LASER RADIATION
DO NOT STARE INTO BEAM
CLASS 2 LASER PRODUCT (IEC)
CLASS II LASER PRODUCT (CDRH)
650-680nm LASER DIODE
Max.Output:1.9mW (SCAN)<1mW (AIM)
IEC60825-1:2007 (2nd Edition)

1003853A

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Figure 7   *SE965 and SE4500 Laser Warning Label*

Figure 8   *LED Radiation Notice Label*

Figure 9   *SE4600 Laser Warning Label*

This label is affixed below....

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CHAPTER 1   BASIC OPERATION

Omnii Features

Figure 1-1 *Front View of the Omnii XT15 Model with Alphanumeric Keyboard*

Speaker

LEDs

Beeper

Display

Scan Key

Microphone

SYM Key

FN Modifier Key

Enter/Power Key

✓ **NOTE** The Omnii 55- and 66-key keyboards are equipped with a Power button as shown in Figure 1-1 Front View of the Omnii XT15 Model with Alphanumeric Keyboard on page 1-1.

Draft #4 for review

Figure 1-2   *Side Views of the Omnii XT15*

Right Side   Left Side

Vertical
scroll button

Volume
rocker button

Scan button

Enter button

Battery release button

Side rail

Slot for Snap Module arm

Figure 1-3   *Bottom View*

1 - Docking Connector
2 - Alignment Pin Holes
3 - M2.5 Locking Screws
    (for firmly attaching devices)
4 - Hand Strap Slot

Figure 1-4 *Top View*

Laser
Aperture

End-Cap

Figure 1-5 *Back View*

Rear PTT Speaker
(optional)

Camera Aperture

Scanner Window

Scanner Pod

Expansion Back

Pistol Grip
Attachment Screws (4)

Battery Pack
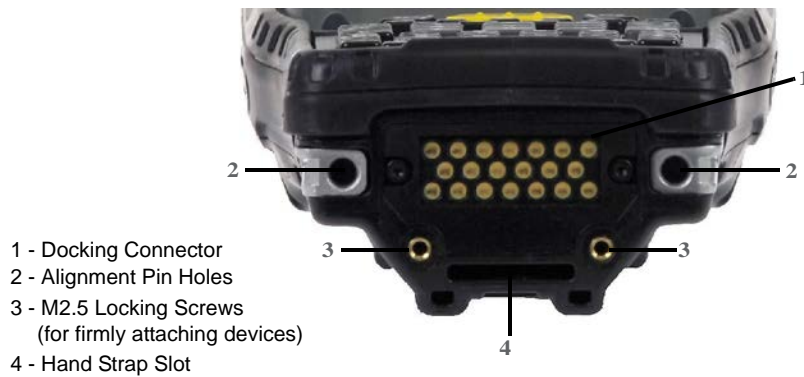
Omnii Modules Available

To see a current list of Omnii accessories and modules, please go to the website at:

http://www.motorolasolutions.com/US-EN/Product+Lines/Psion/?WT.mc_id=psion_us_p_handheld

Documents Available

To see a current list of documents and download what you need, please go to the Knowledge Base on the IngenuityWorking community website:

http://community.psion.com/knowledge/w/knowledgebase/product-manuals.aspx

Preparing the Omnii for Operation

The Battery

The Omnii is powered by a Lithium-ion Smart Battery pack, 5000 mAh — Model ST3003.

⚠️ *IMPORTANT*   Before charging the battery, it is critical that you review the battery safety guidelines in the Omnii Hand-Held Computer Regulatory & Warranty Guide (PN 8000191).

Battery packs shipped from the factory are charged to approximately 40% and must be fully charged prior to use. Batteries can be charged using a variety of chargers and docking stations. For detailed information, see Battery Details on page 2-1.

Replacing the Battery Pack

⚠️ *IMPORTANT*   Always switch the unit off before changing the battery (see Switching the Omnii On and Off on page 1-5). However, assuming the default power saving parameters and battery reserve level have not been altered, battery swap time is a minimum of 4 minutes — you will not lose data if the battery is replaced within this time frame.

Figure 1-6   *Omnii Battery*

Battery Top

1 2

Contacts

4

1

3

4

3

3

3

Battery bottom

1 - Release button
2 - Battery compartment
3 - Guide tabs
4 - Release button tabs
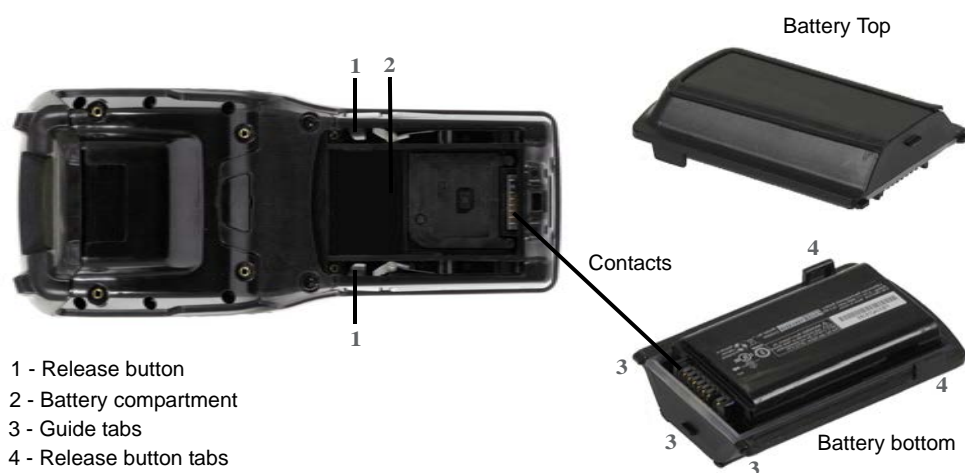
✓ *NOTE*   If you are using a docking station or an external power supply, you can insert an uncharged battery and use the device while the battery charges.

Assuming the default power saving parameters and battery reserve level have not been altered, a battery can be removed for up to 4 minutes without losing data. After 4 minutes the terminal may reboot.

Removing the Battery Pack

• If your unit is equipped with a hand strap, unhook it from the base of the battery.

• Press the two buttons at the sides of the compartment simultaneously, and slide the battery out.

Installing the Battery Pack

• Slide the charged battery with the contoured plastic facing you into the unit with the contacts matching position and the guide tabs moving into the corresponding slots at the base of the compartment. Click both sides of the battery into place.

• If your computer is equipped with a hand strap, re-attach the clip to the slot at the base of the battery.

• Switch the unit on (see Switching the Omnii On and Off on page 1-5).

Switching the Omnii On and Off

Follow the instructions below for your Omnii. If your keyboard has a power button (55- and 66-key keyboards only), press that instead of the **[FN]+[Enter/Power]** key combinations described.

Switching the Omnii On

• Press and hold down the **[Enter/Power]** key for at least one second.

When the unit is turned off, normally it automatically enters a power-saving, "suspend" state. When the Omnii is switched on from the suspend state, within a few seconds operation resumes in the screen in which you were working prior to turning the computer off.

⚠ *IMPORTANT*   If your Omnii fails to power up, consider the following troubleshooting options:

> The battery may be overheated (>60C°), a non-Motorola battery may be installed, or the battery may have fallen below the configured Suspend Threshold. See Suspend Threshold and Estimated Battery Backup on page 3-41 for details.
>
> To switch on the hand-held, you will need to replace the overheated battery.
>
> **However, if you supply AC power to the Omnii with a battery that falls below the configured** Suspend Threshold, the unit <u>will</u> switch on.

Switching the Omnii Off

• To switch off the Omnii, press the **[FN]** key and then press and release the **[Enter/Power]** button. The Omnii will automatically enter the *Suspend* state.

⚠ *IMPORTANT*   Turning off the hand-held does not result in a complete shutdown; rather, the unit enters a power-saving, "suspend" state. When the Omnii is turned on from suspend state, operation resumes within a few seconds.

⚠ *IMPORTANT*   If the word 'FN' is displayed underlined in the taskbar area at the bottom of the screen, this key is locked "on" and the Omnii will not switch off. Press the [FN] key twice followed by [Enter/Power] to switch the Omnii off.

> However, if you've set the mode to "Lock" (see Keyboard One Shot Modes on page 3-30), the Omnii can be turned off even when the [FN] key is locked 'on'.

Resetting the Omnii

To perform a warm or cold reset, you can access the menu by going to *Start>Shutdown*. Alternatively you can use the keyboard shortcuts described below.

✓   *NOTE*   If your Desktop is switched to the Kiosk Shell (refer to), resetting the unit is done solely by use of the keyboard shortcuts.

Performing a Warm Reset

During a *warm reset*, running programs are halted. The contents of the file system, RAM Disk, Flash Disk, and the registry are preserved.

- Press and hold down the **[FN]** key and the **[Enter/Power]** key simultaneously for a minimum of four seconds.

✓   *NOTE*   You need to reset your Omnii after configuring the radio by switching between Windows Zero Config and WiFi Config.

Performing a Cold Reset

A *cold reset* reinitializes all hardware. All RAM including the RAM Disk is erased. Non-volatile storage such as the Flash Disk is preserved, as is the file system.

To execute a cold reset:

- Press and hold down the **[SYM]** key, the **[FN]** key, and the **[Enter/Power]** key, simultaneously for a minimum of four seconds.

✓   *NOTE*   As part of the normal Windows Embedded CE cold boot process, the screen may go blank for a few seconds after the splash screen loading bar reaches the end. The desktop is displayed after a few moments.

Performing a Clean Start

A *clean start* returns the Omnii to factory settings, flushes the registry keys, and deletes volatile storage and the file system. The Flash Disk is preserved.

- Press and hold down the **[FN]** key, the **[Enter/Power]** button and the **[SCAN]** key simultaneously for a minimum of six seconds.

The Omnii displays the Boot to BooSt menu.

- On an *alpha keyboard*, type **.clean**.

- On a *numeric keyboard*, type **.25326**.

Boot to BooSt

If you choose Boot to BooSt, the BooSt menu is loaded.

- Press and hold down the **[FN]** key, the **[Enter/Power]** button and the **[SCAN]** key for a minimum of four seconds.

- Press **[1]** to launch the *OS*.

Performing a Hard Reset

⚠️ *IMPORTANT*   This procedure is recommended as a last resort, when all other methods fail.

To execute a hard reset:

- Remove the battery.

- Using a coin, or other conductive item, connect pins 5 and 6 of the battery contacts for at least six seconds.

- Replace the battery and power Omnii on. The terminal will boot as if from a cold reset.

Attaching Carrying Accessories

Motorola recommends that a carrying accessory — a hand strap — be installed on the Omnii before use. For detailed information, please see Carrying and Protective Accessories on page 4-2.

Calibrating the Touchscreen

✓ *NOTE*   The touchscreen function can be turned off (see Touch on page 3-63).

The Omnii touchscreen feature is factory-calibrated and ready-to-go; however, over time the touchscreen's operating parameters may change, and it may need to be recalibrated for correct operation. Refer to Calibrating the Touchscreen on page 2-8 for details.

Imager and Scanner Options

If your Omnii is equipped with an internal imager or scanner, please review the relevant sections: Appendix B: Imager & Camera Settings and Appendix C: Scanner Settings for details.

Appendix B: Imager & Camera Settings lists their current model numbers, descriptions, and specifications.

Connectivity

For information on connecting the Omnii to a PC, please refer to Data Transfer between Omnii and a PC on page 3-18.

The Omnii contains an integrated 802.11a/b/g/n radio module. The *Wi-Fi Config* application is used to configure the radio for one or more wireless network profiles. To configure the radio, follow the steps outlined under the heading Wi-Fi Config on page 3-76.

To configure your *Bluetooth* settings, please go to Bluetooth® Setup on page 3-7.

If you have a GPS (Global Positioning System) module, you can choose from a set of GPS profiles built into the modem and set up AGPS (Assisted Global Positioning System). See GPS (Global Positioning System) Settings on page 3-23.

The Omnii is available with one of the following Wireless WAN radio options: the Cinterion MC75i EDGE and the Cinterion PH8-P HSPA+. See Appendix E: Omnii Specifications for full specifications. With either of these radios and a SIM card, you can wirelessly transfer data (see Appendix G: Wireless Wide Area Network (WWAN) Settings), and you can use the Omnii voice option to place phone calls (see Voice Communication on page 1-8 below).

To see the radio specifications, please go to Wireless Radios on page E-4.

Data Transfer

Data transfer options vary slightly depending on the type of operating system installed in your PC. Various options exist depending on whether you are using Windows XP or earlier, Windows Vista®, Windows 7 or later. For connection details, please refer to Data Transfer between Omnii and a PC on page 3-18.

Voice Communication

If the MC75i EDGE or the Cinterion PH8-P HSPA+ WWAN radio modem is installed and enabled, the *Phone icon* and the *GSM signal strength icon* will appear automatically on the taskbar. For details on using your Voice options, please refer to Voice – Using the WWAN Phone Dialer on page 3-70.

✓   *NOTE*   The voice option is not available in North America for the MC75i EDGE radio.

CHAPTER 2   GETTING TO KNOW YOUR OMNII

Operating System

- Microsoft® Windows® Embedded CE 6.0

Battery Details

Omnii Hand-Held Computers are powered by a lithium-ion battery pack, Model ST3003.

Please see the following sections for detailed battery information:

- Installation: Preparing the Omnii for Operation on page 1-4.
- Calibration and power settings: Power Properties on page 3-40.
- Chargers and docking stations: Chapter 4: Accessories.
- Specifications: Lithium-ion Smart Battery 5000 mAh (ST3003) on page E-3.
- Contact pinout: Omnii Battery Contacts on page A-4.

Battery Safety

⚠️ *IMPORTANT*   Before attempting to install, use, or charge the battery pack, it is <u>critical</u> that you review and follow the important safety guidelines in the quick reference guide entitled the Omnii Hand-Held Computer Regulatory & Warranty Guide, PN 8000191.

Battery Swap Time

Assuming the default power saving parameters and battery reserve level have not been altered, battery swap time is a minimum of 4 minutes — you will not lose data if the battery is replaced within this time frame.

To protect data, the safest place to store data is on a microSD memory card or externally to the device on a USB memory stick or on a PC. You can also save data in the "Flash Disk" partition of the file system.

Refer to Suspend Threshold and Estimated Battery Backup on page 3-41 for details about reserving battery power for data backup purposes.

The *Suspend Threshold* adjustment in the *Power Properties* tab allows you to determine the battery capacity at which the Omnii will be shut down. If left at the default value, *Maximum Operating Time*, the unit will run until the battery is completely empty; the RAM is only backed up for a short period of time. If you choose *Maximum Backup Time*, the Omnii shuts off with more energy left in the battery so RAM can be backed up for a longer period of time.

⚠️   ***IMPORTANT***   If your Omnii fails to power up, consider the following troubleshooting options:

> The battery may be overheated (>60C°), a non-Motorola battery may be installed, or the battery may have fallen below the configured Suspend Threshold. See Suspend Threshold and Estimated Battery Backup on page 3-41 for details.

> To switch on the hand-held, you will need to replace the overheated battery.

> ***However, if you supply AC power to the Omnii with a battery that falls below the configured*** Suspend Threshold, the unit <u>will</u> switch on.

Charging the Battery

Batteries shipped from the factory are charged to approximately 40% of capacity. Lithium-ion battery packs must be fully charged before use. These batteries can be charged with a variety of chargers and docking stations. For detailed information on these accessories, please see Chapter 4: Accessories.

Normally it takes 3 to 4 hours to charge a battery. The Omnii intelligent charging system protects the battery from over-charging by terminating the charge process when the battery is at maximum capacity.

% Charge Completed	During Sleep Mode	While Operating
100%	4 hrs.	8 hrs.
75%	2 hrs.	6 hrs.

⚠️   ***IMPORTANT***   To avoid damaging the battery, chargers will not begin the charge process until the battery temperature is between 0°C to 40°C (32°F to 104°F).

The Keyboard

The Omnii offers a wide variety of Alpha and Numeric keyboard layouts.

See http://www.motorolasolutions.com/US-EN/Product+Lines/Psion/?WT.mc_id=psion_us_p_handheld for a list of available configurations. Most of the keys on these keyboards operate much like a desktop computer. Where a key or key function is not consistent with the PC keyboard, those differences are described in the following sections.

The Omnii is equipped with either an [Enter/Power] key or Power button (55- and 66-key keyboards only) that allows you to switch the unit on and to shut down the unit to *Suspend* mode. For details refer to Switching the Omnii On and Off on page 1-5.

There are a number of modifier keys that provide access to additional keys and system functions, as described in Modifier Keys on page 2-4.

The [Blue/FN] modifier key provides access to additional keys and system functions. These functions are colour coded in blue print above the keyboard keys.

Figure 2-1 *Keyboard Layouts*

[SYM] Key   [SCAN] Key   [FN] Modifier Key

[Enter/Power] Key

[SHIFT] Modifier Key

[Windows] Key

36-Key Numeric 123 Keyboard   59-Key Alpha ABC Keyboard
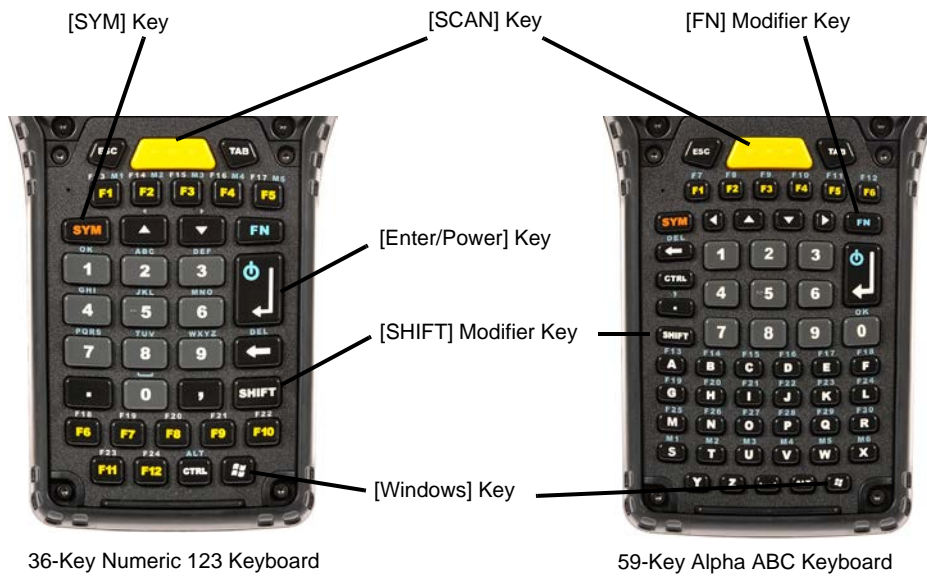
The Power Button (55-Key and 66-Key Keyboards only)

The [Power] button in the upper right corner of the keyboard switches the unit on and off.

[Talk] key   Power button

[End] key

55-Key Alpha ABC Keyboard with phone
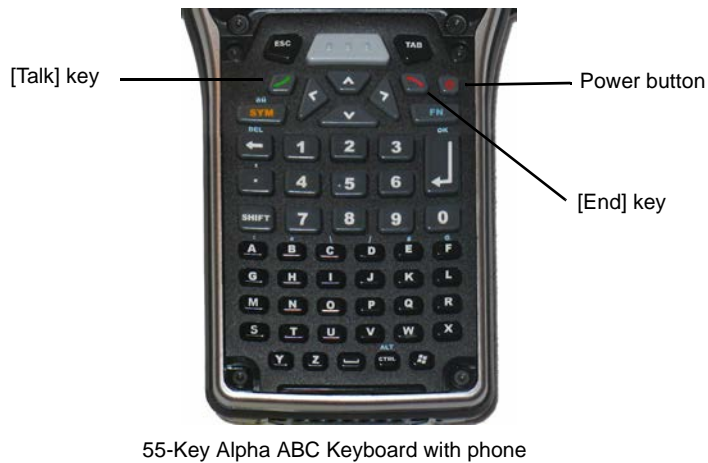
Regular Keys

The [Enter] Key

The [Enter] key is used to execute the usual Enter keyboard functions, and on some units to also power the unit on and off (for details refer to).

✓ **NOTE** 55-key and 66-key keyboards are equipped with a Power button. For these keyboards, the [Enter] key does not switch the unit on or off.

Draft #4 for review

The [SHIFT] Key

The [SHIFT] key is used to display uppercase alpha characters and to provide access to other symbols and functions on the numeric keyboards. Press the [SHIFT] key to turn the shift state 'on' (it will be represented by an up arrow in the taskbar), then press another key to access the shifted function of that key.

Press the [SHIFT] key twice to lock the shift state on (the up arrow in the taskbar will be underlined). Press [SHIFT] again to turn the shift state off.

To access CAPS LOCK mode, press **[FN] + [SHIFT]**. In this state, if you press a numeric key, the number is displayed rather than the normal shifted function of that key. Press **[FN] + [SHIFT]** again to turn the CAPS LOCK mode off.

The Arrow Keys

The [Arrow] keys are located near the top of the keyboard, and are represented on the keyboard as triangles pointing in different directions. The [Arrow] keys move the cursor around the screen in the direction of the arrow: up, down, left and right. The left arrow key should not be confused with the [BACKSPACE] key which is depicted as a left arrow. The cursor is the flashing box or underline character that indicates where the next character you type will appear.

The [BACKSPACE/DEL] Key

The [BACKSPACE] key (represented on the keyboard as an arrow pointing left) moves the cursor one character to the left, erasing the previous key stroke.

The [DEL] key ([FN] +[BACKSPACE]) erases the character at the current cursor position.

The [CTRL] and [ALT] Keys

The [CTRL] and [ALT] keys modify the function of the next key pressed and are application dependent. Pressing either key twice locks it 'on' (it appears underlined on the Taskbar). Pressing the key once again unlocks it.

The [TAB] Key

Typically, the [TAB] key moves the cursor to the next field to the right or downward.

The [ESC] Key

Generally, this key is used as a keyboard shortcut to close the current menu, dialog box, or activity.

The [SPACE] Key

The [SPACE] key is represented on the keyboard by a long, low horizontal line contained by a small vertical line on each side. Pressing this key inserts a blank space between characters. In a Windows dialog box, pressing the [SPACE] key enables or disables a check box.

The [SCAN] Key

The Omnii is equipped with a single [SCAN] key on the keyboard and an extra [SCAN] button located on the left side of the unit. [SCAN] keys activate the scanner beam. For units that do not have internal scanners, these keys can be remapped to serve other functions.

Modifier Keys

The [SHIFT], [CTRL], [ALT], [FN] and [SYM] keys are modifier keys that change the function of the next key pressed.

The [SHIFT], [CTRL] and [ALT] keys operate much like a desktop keyboard except that they are not chorded (two keys held down simultaneously). The modifier key must be pressed first followed by the key whose function you want modified.

[SHIFT] and [FN]

The [SHIFT] and [FN] modifier keys provide access to additional keys and system functions. The functions related to these modifier keys are colour-coded in white and blue print respectively above the keyboard keys, dependant on your keyboard format.

[SYM]

✓   ***NOTE***   When using the Mobile Devices SDK Developers' Guide (PN 8100016), note that the [SYM] key is interchangeable with the [ORANGE] key.

The Symbol [SYM] modifier key is represented on the keyboard by the characters SYM and provides access to commonly used symbolic characters. Pressing the key brings up the Symbol soft input panel (SIP) onscreen keyboard, with symbols mapped to each key. If you wish to adjust the settings for the pop-up screen (e.g. time of delay before screen appears, etc.), modify the file *softinputpanel.xml*, located in the Windows folder.

✓   ***NOTE***   Modifier keys are remapped in Control Panel, and the Symbol SIP will automatically show and use the new mappings after the next reboot.

The onscreen keyboard corresponds to the specific keyboard on your Omnii — either numeric or alphanumeric.

Figure 2-2   *Symbol Soft Input Panels*

Internet Browser Keys

36-KEY Numeric Keyboard

[SPACE] Key

59-KEY Alpha Keyboard
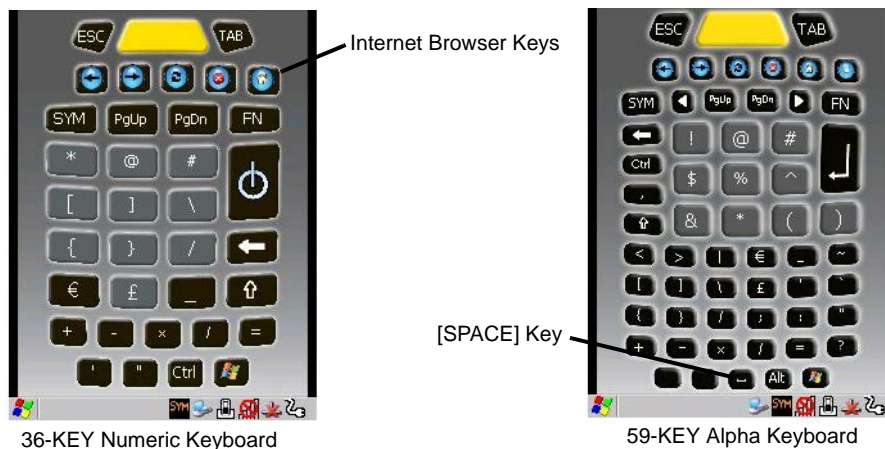
Activating Modifier Keys

When a modifier key is pressed, it is shown in the softkey bar at the bottom of the screen, making it easier to determine whether a modifier key is active. For example, if the [CTRL] key is pressed, **Ctrl** is displayed at the bottom of the unit screen. Once the next key is pressed, the modifier key becomes inactive and disappears from the taskbar.

Locking Modifier Keys

When a modifier key is pressed twice, it is locked on. A locked modifier key is displayed in underlined letters in the taskbar. For example, pressing the [FN] key twice locks it on — it is displayed as an underlined blue FN in the taskbar at the bottom of the computer screen. The same is true of the [SYM] key, which is shown as an underlined orange SYM in the taskbar.

The locked modifier key will remain active until it is pressed a third time to unlock or turn it off. Once a modifier key is unlocked, the underline representation at the bottom of the screen is no longer displayed.

✓   *NOTE*   The locking function of the modifier keys can be changed so that pressing a key **once** will lock the key on.

If you disable the One Shot function of the key, pressing it once will lock the key on. Pressing the same key a second time will unlock or turn it off. Refer to Keyboard One Shot Modes on page 3-30 for details.

Function Keys and Macro Keys

In addition to the standard keyboard functions (see The Keyboard on page 2-2), the Omnii supports function keys and macro keys.

All function keys and macro keys can be custom defined for each application. The Open TekTerm application utilizes these keys (for detailed information, see the *Open TekTerm Software User Manual*, PN 8000073).

Function Keys

Function keys perform special, custom-defined functions within an application. These keys are accessed by pressing one of the dedicated function keys on the keyboard, or through the appropriate [SHIFT] or [FN] key sequence, depending on the keyboard variant being used.

Alphanumeric Keyboard Function Keys

The Alphanumeric keyboards are equipped with up to thirty function keys, including those function keys that are colour-coded in blue print above the alpha keys or function keys (depending on your keyboard).

To access the blue function keys, press the [FN] key followed by the appropriate alpha or function key.

Function keys [F1] through [F24] can be used with the Windows Embedded CE operating system or another application. The additional function keys, [F25] through [F30] along with the macros, are not used as part of the Windows Embedded CE operating system.

Numeric Keyboard Function Keys

The Numeric keyboards are equipped with up to 24 function keys, including those function keys that are colour-coded in white print above the function keys. Function keys F25 through F30 can only be accessed by remapping another key to that function.

To access the white function keys, press the **[SHIFT]** key followed by the appropriate function key.

Macro Keys

⚠   *IMPORTANT*   Refer to Keyboard Macro Keys on page 3-31 for details about creating macros.

Several of the Omnii keyboards are equipped with a series of macro keys that can be programmed to replace frequently used keystrokes, along with the function of executable keys like the [Enter/Power] key, the [BACK-SPACE] key, any function key and arrow key, etc.

59-Key Alphanumeric Keyboard Macro Keys

These keyboards have six macro keys: [M1] to [M6], located on the S to X keys (second-last row of keys).

To access a macro key, press the [FN] key followed by the macro key.

36-Key Numeric Keyboard Macro Keys

These keyboards are equipped with five macro keys: [M1] to [M5]. These keys are colour coded in blue print above function keys [F1] to [F5].

To access a macro key, press the **[FN]** key followed by the macro key.

Numeric Keyboards — Accessing Alpha Keys

On the Numeric Omnii keyboards, all alphabetic characters are printed on the unit plastic in blue typeface above the keys. Alpha characters are accessed by pressing the [FN] modifier key, then pressing another key on the keyboard.

The Alpha Modified Numeric 789 keyboard has each blue alphabetic character assigned as a single [FN]-shifted character on individual keys. An indicator in the left corner of the taskbar displays the currently selected character.

The Numeric 123 keyboards have telephone-style alphabetic keys, with the blue alphabetic characters located in groups of 3 or 4 above each of the numeric keys. To access characters on these keyboards, a few extra steps are needed, as described below.

Choosing a Single Alpha Character

✓ *NOTE* The following examples assume that the [FN] key is enabled as Lock mode in the One Shot screen (accessible through the Control Panel Keyboard icon). In Lock mode, pressing the [FN] key once locks it on. Refer to Keyboard One Shot Modes on page 3-30 for details.

The examples below illustrate how to access A, B and C, all of which are printed in blue characters above the numeric key [2]. The letters you choose appear in the softkey bar as you press the numeric key, providing a visual indicator of which letter will be displayed on the screen.

To choose the letter a:

- Press the **[FN]** key, and press the numeric key **[2]**.
- Press the **[FN]** key again to unlock or turn it off.

To choose the letter b:

- Press the **[FN]** key, and press **[2]** twice.
- Press the **[FN]** key again to unlock or turn it off.

To choose the letter c:

- Press the **[FN]** key, and press **[2]** three times.
- Press the **[FN]** key again to unlock or turn it off.

✓ *NOTE* Keep in mind that there is a timeout of one second between key presses when sequencing through the alphabetic characters on a key. If you pause longer than one second between key presses, the alphabetic character that is displayed at that time will be entered.

Selecting Uppercase Letters

To display a single capital letter, press the **[SHIFT]** key first, then the letter you want.

To access CAPS LOCK mode, press **[FN]** + **[SHIFT]**. In this state, if you press a numeric key, the number is displayed rather than the normal shifted function of that key. Press **[FN]** + **[SHIFT]** again to turn the CAPS LOCK mode off.

The Keypad Backlight

The intensity of the keypad backlight and the conditions under which this backlight is activated can be configured using the *Keyboard* icon in the Windows Embedded CE *Control Panel*. The behaviour of the keypad backlight is tailored in the *Keyboard Properties* dialog box. Refer to Keyboard Backlight on page 3-29 for details about this option.

> **NOTE**   Keep in mind that this option may be restricted to supervisory use only.

The Display

The Omnii is equipped with display backlighting to improve character visibility in low light conditions. The backlight switches on when a key is pressed.

Adjusting the Display Backlight

The behaviour of the display backlight and the intensity of the backlight can be specified in the *Display Properties* dialog box in the *Control Panel*.

> **NOTE**   Refer to Backlight on page 3-20 for details about the Display Properties dialog box.

Calibrating the Touchscreen

If your Omnii touchscreen has never been calibrated, or if you find that the stylus pointer is not accurate when you tap on an item, use the *Stylus Properties* dialog box in the *Control Panel* to recalibrate the screen.

• In the *Control Panel*, choose the **Stylus** icon to display the *Stylus Properties* window.

Stylus

• Select the **Calibration** tab, and then choose the **Recalibrate** button.

• Follow the directions on the calibration screen to calibrate the screen.

Indicators

The Omnii uses LEDs (Light Emitting Diodes), onscreen messages, vibrations, and audio tones as indicators.

LEDs

The Omnii is equipped with four coloured LEDs. This section outlines what these LEDs indicate.

> ⚠️ **IMPORTANT**   If an LED is illuminated in red, the operator should be cautious as this generally indicates an abnormal operating condition or active laser emission.

Figure 2-3   *LED Status Indicators*

1. Battery Charge Status

2. Operating System Status

3. Radio Status

4. Scanner Status

Battery Charge Status LED

The far left LED is reserved for battery charge status. This indicator is active even when the hand-held is inserted in a docking station (and in suspend mode) so that the charge status of the battery can be detected easily.

Charge LED Behaviour	Function
OFF	External power not detected.
Solid Green	Battery charging complete.
Flashing Green	Charge in progress.
Yellow	Cell temperature out of range for charge.
Solid Red	Unable to charge battery.

Operating System Status LED

The second LED indicates system notifications and operating system status. It is also available for user-loaded custom Windows Embedded CE applications.

Operating LED Behaviour	Function
OFF when unit is in Suspend or Shutdown.	Normal operating status.
Solid Yellow	The unit is powering on.
Fast Flashing Yellow	The unit is entering Suspend mode.
Flashing Yellow	This LED is controlled by the Microsoft NLED api.

Radio Status LED

The third LED from the left indicates that the GPS radio is enabled or that the WWAN radio is enabled.

Radio Traffic LED Behaviour	Function
OFF	The radio is disabled.
Slow Flashing Blue	The radio is enabled and active.

Scanner Status LED

The fourth (far right) LED indicates scanner status.

Scan LED Behaviour	Function
OFF	The scanner is not in use.
Solid Red during scan	Scan in progress.
Solid Green after decode OFF when scan ended	Successful scan.
Flashing Red	Unsuccessful scan.

Onscreen Indicators

The taskbar at the bottom of the screen displays a variety of system status indicators, including the Input Panel button if you have chosen to show that option in the *Taskbar and Start Menu* settings.

Figure 2-4 *Taskbar*

The taskbar changes dynamically, and only those icons that are applicable are displayed. For example, if a radio is not installed in your Omnii, the radio signal icon is not displayed in the taskbar.

Windows® Start Button

If you are using the touchscreen, you can either tap the Windows icon at the bottom left of the screen, or press the [Windows] key to display the Start Menu, and then tap on the desired application.

Modifier Key Indicators

[SHIFT], [CTRL], [ALT], [FN] and [SYM] are modifier keys that have onscreen indicators to show when a key is active or locked. If a modifier key is pressed once to activate it, the key is displayed in the taskbar, for example, pressing the [FN] key once displays FN in the taskbar. If a modifier key is pressed twice, it is locked on and the onscreen indicator is displayed with underlined letters in the taskbar, for example, pressing [FN] twice displays FN in the taskbar.

Power

The battery shaped icon displayed in the taskbar provides quick access to the charge state of the battery. Tapping on the icon once will show the percentage charge left in the battery. Tapping on the icon twice opens the *Power Properties* menus (see Power Properties on page 3-40), where you can set the low battery warnings levels, and time to enter Suspend.

If the Omnii is using external AC power, an AC icon is displayed in the taskbar.

802.11 Radio Signal Quality

Increasing radio signal quality is represented by longer, filled bars within this icon.

Good Reception				Weak Reception		No Radio Link

WWAN Radio Signal Quality

Wireless WAN icons in the taskbar indicate the status of your wide area network connection. For details, see Taskbar Icons on page G-1.

Docking Device

When a hand-held is inserted in a docking station, charger or cradle, an associated icon appears in the taskbar.

Combo Charger &   Quad Docking Station   Powered Vehicle Cradle, Desktop Dock
Combo Docking Station   & Snap Module

***Bluetooth* Radio**

This icon displayed in the taskbar represents the installed *Bluetooth* radio.

Input Panel

You can tap the Input Panel icon to activate the soft keyboard application.

Audio Indicators

The Omnii supports several audio options, including *Bluetooth*. The optional rear speaker can be used for system (Windows) sounds and .*wav* files. When a rear speaker is absent, those sounds are routed to the front receiver. The beeper provides a variety of sounds and can be configured to emit a sound when a key is pressed, a keyboard character is rejected, scan input is accepted or rejected, an operator's entry does not match in a match field or the battery is low. The volume rocker button is located on the left side of the hand-held. Information on configuring sounds is detailed in Volume & Sounds Properties on page 3-75.

Vibrations

You can set the Omnii to vibrate when a successful or unsuccessful barcode scan is performed. See Scanners on page 3-50.

Inserting the microSD Card and SIM Card

There are two slots available in the battery compartment — the lower slot is provided for a *microSD* (Secure Digital) card, which provides additional non-volatile memory to your Omnii, and the upper slot is for a *SIM* (Subscriber Identity Module) card, which allows access to the Voice option, access to the Internet, and so on.

SD Cover

microSD Card Slot

SIM Card Slot
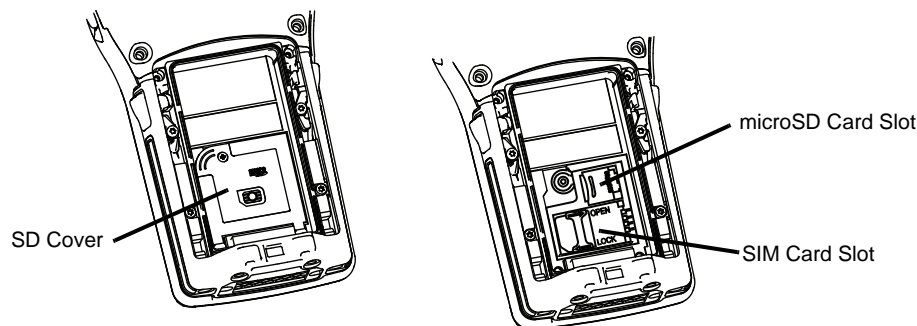
Inserting the Cards

- Switch off the power to the Omnii.
- Remove the battery.

- Use a Phillips screwdriver to remove the SD cover screw. Flip the cover open or remove it.

For a microSD card:

- Slide the microSD card door to the left to unlock it. Flip it open.

- Slide the microSD card into the guides on the SD card door.

- Close the microSD card door, and slide it to the right to lock it.
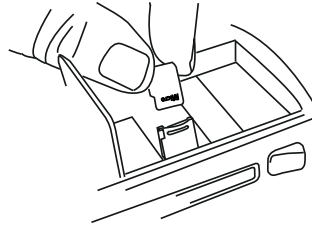
For a SIM card:

- Slide the SIM card metal door latch to the right to unlock it, then flip the door open.

- Slide the card into the guides on the SIM card door.

- Swing the hinged door back down into place, and slide the metal door latch to the left to lock it.
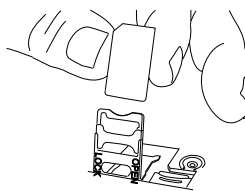
Scanners and Imagers

⚠️ *IMPORTANT*   It is critical that you review the "Laser Warnings" in the Omnii Hand-Held Computer Regulatory & Warranty Guide (PN 8000191) before using any of the scanners described in this chapter.

For detailed scanner specifications and decode zone tables, refer to Appendix D: Internal Imager & Scanner Specifications.

✓ *NOTE*   To enable a newly-installed imager or scanner, press and hold down the *[FN]* key and the *[Enter/Power]* key simultaneously for a minimum of three seconds.

If your unit has a [Power] button, press and hold down the *[FN]* key and the *[Power]* button for a minimum of three seconds.

The Omnii supports a wide range of scanner options to address a variety of user application requirements. Refer to the following sections for detailed information:

- Scanner list and specifications: Appendix D: Internal Imager & Scanner Specifications.

- Configuration: Scanners on page 3-50 and Manage Triggers on page 3-36.

- Scanning Techniques on page 2-14 outlines the mechanics of a successful scan.

- Scanner Status LED, Sounds, and Vibrations on page 2-15 details how to interpret whether or not a barcode has been successfully scanned.

- Barcode Parameters: Appendix C: Scanner Settings.

- Imager Settings: Appendix B: Imager & Camera Settings.

- Troubleshooting on page 2-15 provides some helpful suggestions should the scan fail.

Scanner types include:

- Long Range: reads large 1D barcodes (55 mil) at long distances (up to 3m).

- Standard Range/High Performance: reads damaged or low contrast regular 1D barcodes (5 - 55mil) at medium distances (up to 1m).

- Extended Range: reads regular 1D barcodes (5 - 55mil) at short to medium distances (1m), as well as large 1D barcodes (e.g. 55 mil) at long distances.

- 1D Imager: reads regular 1D and PDF417 barcodes at short to medium distances.

- EA11 2D imager: reads 1D and 2D barcodes including damaged and low contrast regular 1D barcodes; smallest barcode at 5 mil with a minimum read distance to 2.8 in. / maximum read distance of 5.1 in.; largest barcode at 40 mil with a minimum read distance of 3.1 in. / maximum distance of 32.4 in.

- EA20X 2D imager: reads 1D and 2D barcodes including damaged and low contrast regular 1D barcodes; shortest barcode at 6 mil with a minimum read distance of 6.1 inches / maximum read distance of 9.1 inches; longest barcode at 40 mil with a minimum read distance of 5.1 inches / maximum read distance of 49.2 inches.

- SE4600LR imager: captures digital images for transmission to a decoder to decode a barcode of any format supported by the decoding software. Uses laser aiming, LED illumination, and CMOS sensors to capture barcode images over an extended range and under a wide variety of lighting conditions.

Basic Scanner Operations

- Turn the hand-held on. Wait until the unit has booted up completely.

- Aim at the barcode and press the scan key or the trigger. A scan beam and a warning indicator appear until a successful decode is achieved or six seconds have elapsed.

Scanning Techniques

- Hold the scanner at an angle. Do not hold it perpendicular to the barcode.

- Do not hold the scanner directly over the barcode. In this position, light can reflect back into the scanner exit window and prevent a successful decode.

- Scan the entire barcode. If you are using a 1D or PDF laser scanner, make certain that the scan beam crosses every bar and space on the barcode, including the margins on either end of the symbol.

- If you are using a 2D imaging scanner, make certain the red, oval shaped framing mark is centered within the barcode you want to scan.

- When using imaging scanners, do not move the scanner while decoding the barcode. Movement blurs the image.

- Hold the scanner farther away for larger barcodes.

- Hold the scanner closer for barcodes with bars that are close together.

Scanner Status LED, Sounds, and Vibrations

The scanner LED (the far right LED) indicates whether or not your scan is successful. The LED behaves as follows:

- Scan In Progress: scan LED displays solid red colour.
- Successful Scan: scan LED displays solid green colour and turns off when the scan is ended.
- Unsuccessful scan: scan LED flashes red.

A barcode icon appears on the screen during a scan. While the scanner beam is active, the onscreen message states: SCANNING. If you want to turn off the onscreen message, disable the "Scan Indicator" parameter in the *Control Panel>Scanners>Options>Display menu*.

When the scan is successful, the barcode data is displayed on the screen until the scan button (or pistol trigger) is released, but only if the "Scan Result" parameter is turned on in the *Control Panel>Scanners>Options>Display menu*.

You can also enable sounds and vibrations to indicate good and bad scans by enabling those options in the *Control Panel>Scanners>Options>Display menu*.

Troubleshooting

If the scanner is not working, investigate the following:

- Is the unit on?
- Check that the barcode symbology being scanned is enabled for the hand-held you are using. Check any other parameters that affect the scanning procedure or the barcode.
- Check the barcode to make sure it is not damaged. Try scanning a different barcode to verify that the problem is not with the barcode.
- Check that the barcode is within the proper range.
- Does the hand-held display the warning without scanning? This suggests a hardware problem in the hand-held.
- Is the laser beam scanning across the barcode?
- Once the scan beam has stopped, check the scanner window for dirt or fogging.

Operating One Dimensional (1D) Internal Laser Scanners

- Turn the hand-held on. Wait until the unit has booted up completely.

⚠️ *IMPORTANT*   If an aiming dot is available on the installed scanner, the dot will be enabled for a configurable time period (including off), after which normal scanning begins. Refer to Dot Time (msec) on page C-3 for details.

Double-clicking the trigger will override the aiming delay and initiate an immediate scan. Note that the aiming dot is standard on long-range and high visibility internal scanners.

- Aim at the barcode and press the scan key or the trigger. A scan beam and a warning indicator appear until a successful decode is achieved or six seconds have elapsed.

Operating Internal Two Dimensional (2D) Imagers

An imager scanner takes a snap shot of a single barcode or multiple barcodes (at one time). It can find a barcode regardless of its orientation — that is, even a barcode printed at a 45 degree angle to the hand-held will be decoded successfully.

✓   *NOTE*   When scanning **multiple** barcodes, ensure that all of the desired barcodes are within the field of view of the scanner. It is possible that even when all barcodes are within the field of view, not all of them will be decoded. Only successfully decoded barcodes are passed to the application program. The application program then issues a warning, asking that you scan the missing barcodes.

When scanning a **single** barcode, ensure that only the desired barcode is within the field of view of the scanner.

Because imager scanners generally have a shorter depth of field than laser scanners, some practise may be required to find the optimal distance from the types of barcodes being scanned. Although the imager includes illumination LEDs, ambient light will help the imager decode the barcodes, especially if the barcode is far from the hand-held.

⚠   *IMPORTANT*   Keep in mind that the imager scanner is a camera, and the LED illumination is a flash. Glare can be an issue on reflective media such as plastic coated barcodes, just as glare is an issue for photographers. When pointing at a shiny surface, either shift the barcode to the side or top, or angle the barcode so that the glare reflects away from the imager scanner.

Most imagers take several snap shots of the barcode in order to decode it. It is normal for the LEDs to flash two or three times. Hold the unit steady between flashes to improve decode performance.

- Turn the hand-held computer on. Wait until the unit has booted up completely.

- Aim at the barcode and press the scan key or the trigger. Hold the trigger until a successful or failed scan result is obtained.

- When the scan button or trigger is pressed, a red, oval shaped light (the framing marker) is displayed. Centre the framing marker in the field — either in the centre of the barcode you want to scan or in the centre of the area in which multiple barcodes are to be scanned.

The illumination LEDs will flash (typically several times) and a picture of the barcode is taken.

Windows Embedded CE 6.0

Navigating in Windows Embedded CE and Applications

Graphic user interfaces such as Windows Embedded CE for portable devices and desktop Windows (Windows Vista™, Windows 7, Windows 8, etc.) utilize point and click navigation. An equivalent keyboard shortcut is also available for every point and click action.

Windows Embedded CE supports the same point and click user interface and keyboard shortcuts as desktop Windows with one difference — the point and click action is accomplished using a touchscreen rather than a mouse. Actions can be performed using any combination of keyboard shortcuts or touchscreen tapping. In those applications that support it, you can also flick and pan your finger to scroll through screens.

Navigating Using a Touchscreen

NOTE   If the touchscreen is not registering your screen taps accurately, the touchscreen may need reca-libration. Refer to Calibrating the Touchscreen on page 2-8.

The Omnii comes equipped with a stylus — a pointing tool that looks like a pen. The stylus is used to select objects on the touchscreen. You can also use gestures with your fingers. You can use two gestures: pan and flick. Use left or right flicks to quickly move between tabs of a multi-tab control panel, or to scroll long lists of options. Use panning by touching and dragging a page that has scrollbars.

NOTE   To prevent damage to the touchscreen, use only a finger touch or the stylus (pen) supplied with your Omnii.

To choose an icon, open a file, launch an applet or open a folder:

• Double-tap on the appropriate icon.

Navigating Using the Keyboard

If you would like to use keyboard input to choose icons and navigate dialog boxes, refer to the table following.

Operation	Key or Key Combination
Switch between active applications	[ALT] [TAB]
Open task manager	[ALT] [ESC]
Move the cursor	Arrow keys
Open file, folder or icon	[Enter]
Exit & Save	[Enter]
Close/Exit & Do Not Save	[ESC]
Navigate Dialog Boxes	[TAB] To move cursor up [SHIFT] [TAB] To display the contents of the next tab in a dialog box [CTRL] [TAB]
Select Radio Button/Press Button	[SPACE]
Go to Start Menu	[Windows]

Keep in mind that unlike a desktop computer, the Omnii does not support key chording (pressing two keys at the same time). You must press one key followed by the next in sequence.

The Windows Classic Shell Startup Desktop

When the Omnii boots up, the default startup desktop (Windows Classic Shell) is displayed. Any applications stored in the Startup folder start up immediately.

✓   *NOTE*   The startup folder is located in \Windows\StartUp and \Flash Disk\StartUp.

Figure 2-5   *Omnii Windows Classic Shell Startup Desktop*

To access desktop icons:

•   Double-tap on the icon to open a window or, in the case of an application icon, launch an application.

On the keyboard:

•   Use the arrow keys to highlight the icon, and press **[Enter]** to launch the highlighted icon.

✓   *NOTE*   If the arrow keys do not highlight the desktop icons, the desktop may not be selected. Press [Windows] to display the Start Menu, and select Desktop. Now the desktop will be "in focus" and the arrow keys will highlight the icons.

The Taskbar

The Omnii is equipped with a taskbar at the bottom of the screen. It displays icons through which you can view the battery capacity and radio signal quality of your unit. If the hand-held is attached to a charger, cradle, docking station, or Snap Module, an associated icon is displayed. In addition, the taskbar displays the application(s) currently running on your unit.

The taskbar also displays active modifier keys: [SHIFT], [ALT], [CTRL], [FN] and [SYM]. Keys that have been locked "on" are displayed with underlined letters. For example, if you have set the [CTRL] key lock to "on" in the Keyboard menu and you press the key, it is displayed as an underlined Ctrl in the taskbar. (For detailed information on modifier keys and keyboard options, see The Keyboard on page 2-2).

Using the Taskbar

A tooltip is displayed as each taskbar icon is highlighted. The tooltip provides the status of each icon.

If you're using the touchscreen:

- Tap and hold on an icon to display the icon's tooltip. Double-tap the icon to open the Control Panel dialog box associated with the icon. For example, double-tap the battery icon to display a dialog box listing the current battery capacity information.

On the keyboard:

- Press **[Windows]** to display the *Start Menu*.
- Choose **Shortcuts** from the *Start Menu*, and then press the **[RIGHT]** arrow key to display the sub-menu.
- Choose **System Tray** in the sub-menu.
- Use the arrow keys to highlight the icon in the taskbar about which you'd like more information.
- Press **[Enter]** to display the appropriate dialog box.

Customizing the Taskbar

To customize the taskbar so that it displays only those icons you require:

- In the *Start Menu*, choose **Settings**, and then **Taskbar**.

If you're using the keyboard:

- Press **[Windows]** to display the *Start Menu*.

- Highlight the **Settings** option, highlight **Taskbar** in the sub-menu, and press **[Enter]**.

The *Taskbar and Start Menu* dialog box is displayed.

- Tap on the items you want to activate or deactivate. The check mark indicates active items.

If you're using the keyboard:

- Highlight the options you want to activate, and press the **[SPACE]** key to select them. A check mark indicates active items.

The Start Menu

The *Start Menu* lists the operations you can access and work with. It is available from the startup desktop or from within any application.

- To display the menu, tap on the **Start Menu**.

NOTE   Tap on the item in the menu with which you want to work.

If you're using the keyboard:

- Use the arrow keys to highlight a menu item, and press **[Enter]**, or

If the menu item has an underlined character:

- Type the underlined alpha character. For example, to display the *Run* dialog box, type the letter **r**.

Programs

- Choose **Programs** to display a sub-menu of options. The programs displayed will be those resident in the *Windows\Programs* folder of the computer.

Figure 2-6   *Program Sub-Menu*

This sub-menu allows you to choose *Command Prompt*, *Internet Explorer*, installed applications (e.g., Microsoft WordPad), *Kiosk Access, Remote Desktop Connection*, *Wi-Fi Config*, or *Windows Explorer*.

Demo

This folder contains the *Scanner Demo*, *Demo Signature* and *Demo Sound* applications. *Scanner Demo* can be used to test how the hand-held reads barcodes. *Demo Signature* allows you to capture a signature written on the screen with your stylus and save it to a file. *Demo Sound* allows you to record and playback sound files. The Sample Rate and the Bits Per Sample are the rates at which the sound will be recorded. Sounds recorded at the higher sample rate or bits per sample will be higher quality sound but will require more file storage space. Lower sample rates and/or bits per sample produces a smaller file, but the sound quality suffers. The record and play buttons operate the same as any recording device. The *X* icon deletes the sound and the *diskette* icon allows you to save your sound.

Command Prompt

Command Prompt is used to access the DOS command prompt. At the prompt, you can type DOS commands such as *dir* to display all the directories in the drive.

Internet Explorer

The Omnii is equipped with Microsoft Internet Explorer for Windows Embedded CE. You can access the *Internet Options* icon through the *Start Menu* under *Settings>Control Panel* or by double-tapping on the desktop icon **My Device** and then, double-tapping on the **Control Panel** icon.

Microsoft WordPad

WordPad is a basic word processor used to create, edit, and print *.rtf*, *.doc*, and *.txt* files.

Kiosk Access

Kiosk Access allows you to change the appearance and actions of the desktop from the default Windows Classic Shell to the Kiosk shell.

Remote Desktop Connection

Remote Desktop Connection is an Omnii application used to connect to a Windows Terminal Server so that you can run a "session" on the Server machine using the hand-held (Windows Embedded CE device). Remote Desktop Connection on page 3-50 provides a website with details about this option.

Wi-Fi Config

The *Wi-Fi Config* application is used to configure the Omnii 802.11a/b/g/n radio for one or more wireless network profiles.

Windows Explorer

The Windows Explorer installed on your Omnii is consistent with all Windows Embedded CE devices.

Shortcuts

Figure 2-7   *Shortcuts Sub-Menu*

System Tray

If your touchscreen is not enabled, you can use the *System Tray* option to access the icons in the taskbar at the bottom of the screen. The taskbar displays indicators such as a radio signal icon. These indicators are attached to dialog boxes that provide additional information.

- Choose **Shortcuts>System Tray**.

When *System Tray* is chosen, the taskbar icons become accessible. To display the dialog box attached to an icon:

- Use the arrow keys to highlight an icon, for example, the *Bluetooth* icon.
- Press **[Enter]** to display the *Bluetooth* menus.

Cycle Tasks

When *Cycle Tasks* is selected (and the Task Manager is not open), you can cycle through active applications.

To cycle through your active applications:

- Choose **Shortcuts>Cycle Tasks**, or
- Press [**ALT] [TAB]**.

Task Manager

The *Task Manager* allows you to switch to another task or to end an active task. To display the task manager window:

- Tap on **Shortcuts>Task Manager**, or

- Press **[ALT] [ESC]**.
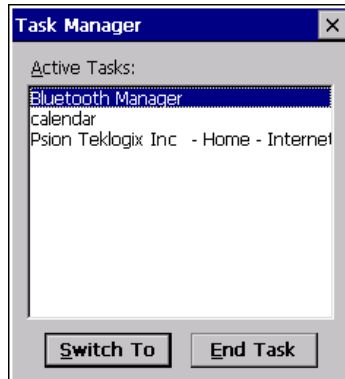
Settings

The **Settings** sub-menu includes the following settings: *Control Panel*, *Network and Dial-up Connections* and *Taskbar and Start Menu*.

Figure 2-8   *Settings Sub-Menu*

Control Panel

The *Control Panel* contains applets used to configure hardware, the operating system and the shell. If your Omnii is running with the Motorola TekTerm application or another application, additional configuration applets may appear in the *Control Panel*.

Network and Dial-Up Connections

The *Network and Dial-up Connections* window allows you to configure the Omnii network interfaces or execute an existing configuration. Refer to Connectivity on page 1-8 for radio setup details.

Taskbar and Start Menu

The *Taskbar and Start Menu* option displays a dialog box in which you can customize the taskbar, choosing which options will be displayed. Refer to Customizing the Taskbar on page 2-19 for additional details about this option.

Run

Choosing the *Run* option from the *Start Menu* displays a dialog box in which you can enter the name of the program, folder or document you want to open or launch.
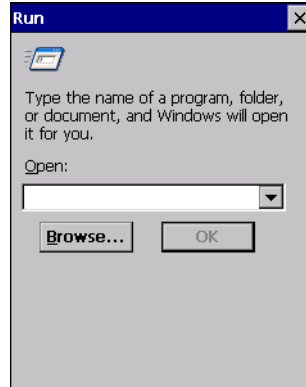
Shutdown

The *Shutdown* menu includes these options: *Suspend, Warm Reset* and *Cold Reset*.

Suspend

The *Suspend* option suspends the Omnii immediately. This is equivalent to turning the hand-held off.

Warm Reset

The *Warm Reset* option resets the hand-held, leaving all saved files and registry settings intact. Any unsaved data is lost.

Cold Reset

The *Cold Reset* option resets the hand-held. Any files not stored in permanent memory are lost; however, the registry settings are saved.

The Kiosk Desktop Shell

The appearance and actions of the desktop can be changed by tapping on the **Kiosk Shell** icon on your desktop, which activates the Kiosk shell.

✓   *NOTE*   The Omnii will be reset if you choose to switch shells.

Figure 2-9   *Switch to Kiosk Shell*

After resetting the Omnii, the desktop appearance will be very different. The programs are accessed with finger (or stylus) taps and swipes. If there are more applications than shown on one screen, a white animated dot will be present on the side of the screen in the direction of the next set of icons. Swiping the screen to that direction will move the display to the next screen.

✓   *NOTE*   Although the Desktop appearance defaults to the "Ingenuity" theme, the theme is not changed using the *Kiosk Shell* icon. To change themes, open the Shell Settings>Advanced menu in *Kiosk Access* (see Shell Settings on page 3-46).

Hold the stylus or your finger on the Active Tasks, Favourites, or Notifications Bar, and swipe to the left or right to switch to the next screen.

Active Tasks Bar

Favourites Bar

Notifications Bar
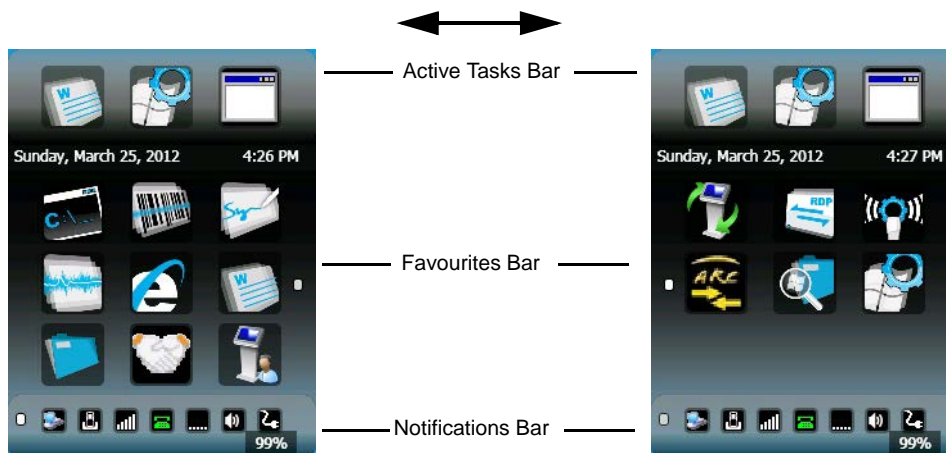
A different program, *Kiosk Access*, enables you to customize your computer settings, remove or add shortcuts to the Favourites Bar and Control Panel, and limit access to various different components on the computer and the system tray icons for security. For details see Kiosk Access on page 3-44. To change your Desktop background, refer to Shell Settings on page 3-46.

Active Tasks Bar

Open applications are shown in the top bar — the most recently opened is the first icon on the left. Tapping once on a program icon will maximize the application. This feature replaces the Task Manager of the Windows Classic Shell.

Date/Time Bar

Tapping once on the date or time will open the *Date/Time Properties* settings to enable you to change your settings and time zone.

Favourites Bar

The *Favourites Bar* replaces the Windows Classic Shell Desktop and Start Menu. These icons are the program shortcuts from your *Windows>Start Menu*. Tapping once will open the program. If you tap and hold on an icon, the application name is displayed.

Notifications Bar

This bar shows the run-time program notifications for *Battery*, *Volume*, *Wi-Fi*, *Phone* or *GPRS*, and other notifications for the programs you are running. This feature replaces the Taskbar of the Windows Classic Shell.

Desktop Minimized View

When an application is opened and maximized, the desktop view is minimized and the *Notifications Bar* is shown at the bottom of the screen. Tapping anywhere on the **Notifications Bar** (except on the SIP) will restore the Kiosk desktop.

✓   *NOTE*   In order to use the SIP, turn on the automatic settings in ***Control Panel>Input Panel***

Kiosk Access

The *Kiosk Access program* allows you to open a different program, *Kiosk*, which enables you to customize your computer settings, remove or add shortcuts to the Favourites Bar and Control Panel, and limit access to various different components on the computer and the system tray icons for security. For details see Kiosk Access on page 3-44. To change your Desktop background, refer to Shell Settings on page 3-46.

To open Kiosk:

• Tap on the **Kiosk Access** icon in the *Favourites Bar*.

Restoring the Windows Classic Shell

The default Desktop appearance and actions can be restored by tapping on the **Kiosk Shell** icon in the *Favourites Bar*.

Figure 2-10 *Shell Switch to Windows Classic Shell Desktop*
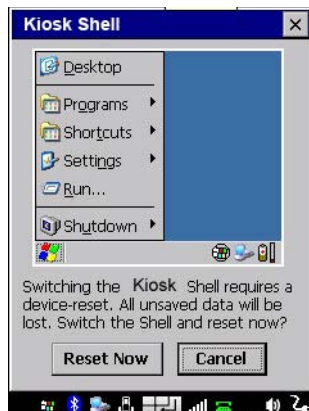
✓   **NOTE**   The Omnii will be reset if you choose to switch shells.

General Maintenance

Caring for the Touchscreen

The touchscreen is covered with a thin, flexible polyester plastic sheet with a conductive coating on the inside. The polyester can be permanently damaged by harsh chemicals and is susceptible to abrasions and scratches. Using sharp objects on the touchscreen can scratch or cut the plastic, or crack the internal conductive coating. The chemicals listed below must not come into contact with the touchscreen:

- mustard
- ketchup
- sodium hydroxide
- concentrated caustic solutions
- benzyl alcohol
- concentrated acids

If the touchscreen is used in harsh environments, consider applying a disposable screen protector (RV6105). These covers reduce the clarity of the display slightly but will dramatically extend the useful life of the touchscreen. When they become scratched and abraded, they are easily removed and replaced.

Do not to expose the touchscreen to direct sunlight for prolonged periods of time. If this is unavoidable, use a UV screen protector to extend the life of the screen.

Cleaning the Omnii

⚠   **IMPORTANT**   Do not immerse the unit in water. Dampen a soft cloth with mild detergent to wipe the unit clean.

To prevent damage to the touchscreen, use only your finger or the stylus (pen) supplied with your Omnii.

- Use only mild detergent or soapy water to clean the hand-held unit.

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- Avoid abrasive cleaners, solvents or strong chemicals for cleaning. The Omnii has a plastic case that is susceptible to harsh chemicals. The plastic is partially soluble in oils, mineral spirits and gasoline. The plastic slowly decomposes in strong alkaline solutions.

- Exposure to aircraft de-icing fluids can degrade the plastics on Omnii. If the Omnii is used near aircraft de-icing environments, regular rinsing with water is recommended.

- To clean ink marks from the keypad and touchscreen, use isopropyl alcohol.

CHAPTER 3   CONFIGURATION

Overview of Software

The Omnii programs and applications are accessed through two main areas from the Desktop Start Menu: *Programs and Settings*>*Control Panel*. This chapter details the configuration for the major software from both areas, listed alphabetically.

Software Advantage

Software Advantage is a collection of applications and features designed to support system administrators and end users. These tools enable enterprises to customize the product to meet their needs and to maximize productivity.

- AGPS
- App Launch Keys
- Battery Health
- Bluetooth Manager
- Compass
- Dr. Debug
- Manage Triggers
- PartnerUp
- Kiosk
- Scanner
- Total Recall
- TweakIt
- WiFi Config
- WiFiConnect A.R.C.

Microsoft Software

Windows CE 6.0 R3 is a 32-bit, real-time, multitasking Operating System. The OS features a small footprint, with compatibility to port existing Win32 applications and Touch & Gesture support.

Some of the major Windows CE 6.0 R3 components are:

- Control Panel, where both our Advantage product and Microsoft applications are listed
- Flash Lite
- Internet Explorer Embedded
- Microsoft WordPad
- Remote Desktop Connection
- Windows Explorer

The Control Panel

The Windows Embedded CE *Control Panel* provides a group of applications through which you can set a variety of system-wide properties, such as power, keyboard sensitivity, network configuration, system backup, desktop appearance, and so on.

When the Omnii boots up, the startup desktop (Windows Classic Shell) is displayed, and any applications stored in the Startup folder start up immediately.

To access the *Control Panel*:

- Press the **[Windows icon]** to display the *Start Menu*.
- Tap on **Settings**>**Control Panel**.

If you're using the keyboard:

- Press the **[Windows icon]** to display the *Start Menu*.
- Highlight **Settings** in *Start Menu*, and press the [RIGHT] arrow key to highlight the *Control Panel*.
- Press the **[Enter]** key.

The *Control Panel* folder contains icons used in the setup of your Omnii.

Figure 3-1   *Control Panel Icons*
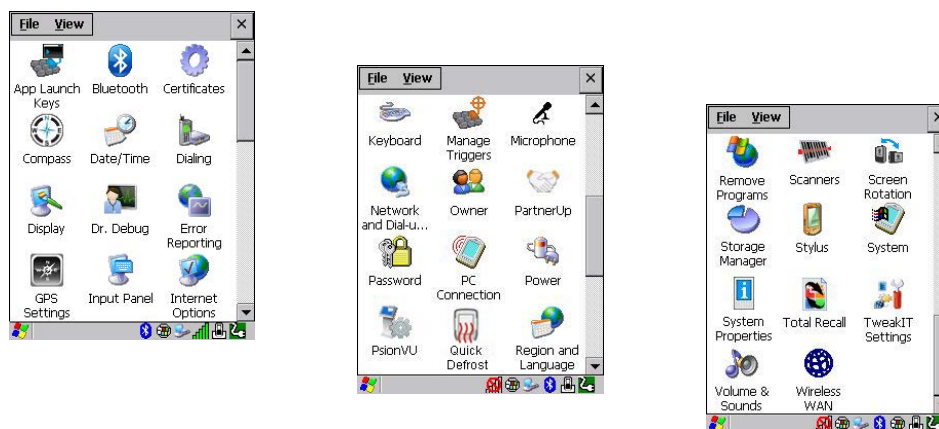
Control Panel Applications

The *Control Panel* provides a group of applications that allow you to customize and adjust settings on your Omnii. This section shows the related icons in the Control Panel and gives a brief description of each.

App Launch Keys

By mapping keys to applications using this program, you can then launch those applications from a single key-press.

Bluetooth

Opens the *Bluetooth* Manager which provides options for configuring various Bluetooth peripherals. It also provides the capability to use a *Bluetooth*-enabled cellular phone as a data modem to exchange information with other *Bluetooth* devices and provide network access.

Certificates

This program provides access to the Certificates Manager and Stores. The Certificates Manager displays the certificates in the Windows Certificates Store, and allows you to import, delete, and view these certificates. Compass on page 3-3 directs you to the appropriate setup information.

Compass

The internal compass can be calibrated to indicate in which direction the unit is pointed.

Date/Time

Allows you to set the current Month, Date, Time, and Time Zone on your unit.

Dialing

Specifies dialing settings, including area code, country code, dial type and the code to disable call waiting. You can store multiple patterns — for example, Work, Home, and so on using this dialog box.

Display

Changes the display backlight and the appearance (colour scheme) on the unit desktop.

Dr. Debug

Provides both error diagnostic and troubleshooting tools.

Error Reporting

Allows you to enable or disable Microsoft error reporting prompts.

GPS Settings

Allows you to enable and configure GPS operation.

Imagers

The Imagers applet is used to create, modify, delete, and activate imager settings. This icon is only present when the appropriate imager is installed. For detailed information, see Appendix B: Imager & Camera Settings.

Input Panel

Provides the framework for a Microsoft Soft Input Panel (SIP) should you need to design your own SIP, or change some soft keyboard options.

Internet Options

Provides options to configure your Internet browser. You can determine items such as the default and search page that the browser applies when connecting to the Internet, the cache size, the Internet connection options, and the security level that is applied when browsing.

Keyboard

Toggles character repeat on and off and specifies delay and rate for repeated characters. It also allows you to adjust the keyboard backlight threshold and intensity, and many other functions.

Manage Triggers

This utility allows you to define buttons as triggers for different devices. For example you would use this utility to configure a button for the scanner, RFID reader, and camera.

Microphone

Enables you to adjust the gain for the specific microphones associated with your hand-held.

Network and Dial-up Connections

Displays network interfaces and allows new dial-up and VPN interfaces to be created. It also allows Windows configuration of the interface. Refer to Connectivity on page 1-8 for details.

Owner

Provides fields in which you can specify owner information. A *Notes* tab allows additional information to be entered and displayed when the unit is powered up. *Network ID* tab information is used to access network resources. (This information should be provided by your System Administrator.)

PartnerUp

This app displays a number of pre-loaded applications. By tapping on an application in the list, you are taken to the associated web site and allowed to install the application.

Password

Allows you to assign a password to restrict access to elements of the unit. Once assigned, password access cannot be circumvented so it is important that you write down your password and keep it in a safe place.

PC Connection

Enables direct connection to a desktop computer (or through ActiveSync — see Data Transfer on page 1-8). Selecting the *Change Connection* button allows you to change the type of direct connection to your PC.

Power

Displays battery pack power status. (Alternately, battery status can be accessed through the taskbar.) Additional tabs allow you to determine suspend states and specify a suspend threshold.

Kiosk

Kiosk enables you to customize your computer settings, remove or add shortcuts to the desktop and Control Panel, and lock down access to various different components on the computer and the system tray icons for security. With *Kiosk* and *Kiosk Shell* (see The Kiosk Desktop Shell on page 2-25) you can customize the entire look and feel of your User Experience.

Quick Defrost

The optional Heater Control feature for the OmniiXT15f freezer models is used in cold environments to prevent condensation from developing on or inside the Omnii. Refer to Appendix F: Omnii XT15f Freezer Variants for detailed information.

Region and Language

Allows you to specify the local language that is to be displayed on the hand-held screen along with the format of numbers, currency, time and date for your region.

Remove Programs

Lists the programs that can be removed from your unit. To remove a program, select it and then click on the **Remove** button.

Scanners

Provides scanner parameters and the barcode symbologies that the Omnii barcode scanner will successfully read.

Screen Rotation

This feature enables you to change screen orientation into either landscape, portrait, or both modes.

Storage Manager

Allows you to view information about the storage devices that are present, such as SD-MMC flash cards. For details, see Storage Manager on page 3-59.

Stylus

Adjusts how Windows Embedded CE recognizes your double-tap (as slow or rapid successive taps). In the *Calibration* tab, you can recalibrate your touchscreen by tapping on the **Recalibrate** button and following the directions on the screen.

System

You can display the system and memory properties, as well as create your device name. In the *Memory* tab, you can allocate memory between storage memory and program memory.

System Properties

Identifies the computer's software and hardware components, indicating which components are installed, their version or part numbers, and whether they are enabled or disabled.

Total Recall

Provides access to a backup/restore and deployment utility to maintain applications and settings over cold reboots and for multiple devices.

TweakIt

Allows you to change Advanced System Settings (interface, network, and servers), User System Settings (display font size), and provides the Registry Editor.

Volume & Sounds

Allows you to adjust the volume of the sound emitted to indicate events like warnings, key clicks, and screen taps. You can also configure system (Windows) sounds and .*wav* files.

Wireless WAN

Provides access to technology like GSM/GPRS, which allows wide area networking capability such as internet browsing via GSM/GPRS. It also provides access to the Phone API. For detailed information, see Appendix G: Wireless Wide Area Network (WWAN) Settings.

App Launch Keys

The *App Launch Keys* icon allows you to map a key to an application so that you can then launch the application from a single key-press.

- In the *Control Panel*, choose the **App Launch Keys** icon.

To assign an application key:

- Tap the **Add** button.
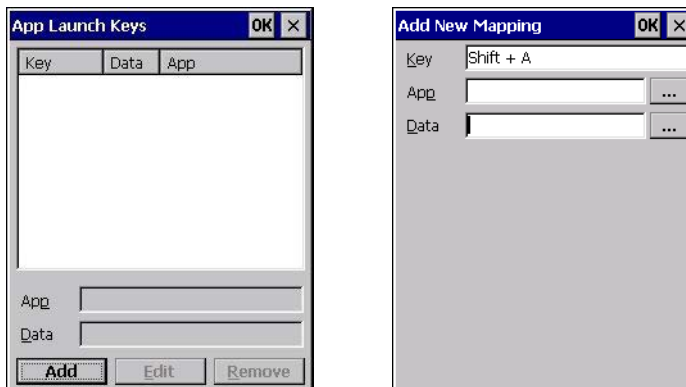
- Press the key you want to use to launch an application. (If an unsupported key is pressed, a message appears on this screen letting you know.)

The cursor moves to the *App* field and a new screen is displayed where you can choose the application to which you want to assign the application key. If you need to, you can *Browse* through the information in your Omnii until you locate the application you want to launch.
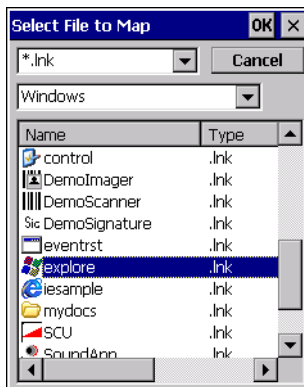
- Once you've selected the file you want to map, tap on **OK**.

The cursor moves to the *Data* field. You can use this field if you need to need to define command line parameters for your application. If you don't want to assign any parameters, you can leave the *Data* field blank. If, for example, you want to assign an application launch key to launch the *WordPad* application, you can leave this field blank. If you want to assign an application launch key that will open a specific document in the *WordPad* application, you need to browse to and choose that document while the cursor is in the *Data* field.

• Tap on **OK**.
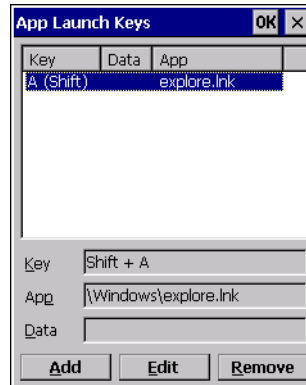
• If you need to Edit, Remove or Add another *App Launch Key*, you can do it from this final screen. Otherwise, tap on **OK** to save your *Application Launch Key*.

• To launch the application you chose, press the application key you assigned.

Bluetooth® Setup

Bluetooth is a global standard for wireless connectivity for digital devices and is intended for Personal Area Networks (PAN). The technology is based on a short-range radio link that operates in the ISM band at 2.4 GHz. When two *Bluetooth*-equipped devices come within a 10 metre (32 ft.) range of each other, they can establish a connection. Because *Bluetooth* utilizes a radio-based link, it does not require a line-of-sight connection in order to communicate.

It is possible to communicate with a variety of *Bluetooth* peripherals, including GSM/GPRS handsets, scanners, printers, and so on.

We provides built-in support for:

• GSM/GPRS universal handset

• *Bluetooth* printer

• *Bluetooth* headset

Keep in mind that *Bluetooth* and IEEE 802.11g radios both operate in the 2.4GHz band. Although the Omnii includes features to minimize interference, performance of the system will not be optimal if you use both radios simultaneously. Typically, when both radios operate in the hand-held at the same time, they cannot transmit simultaneously — this has a negative impact on overall system throughput. To minimize the impact on the backbone 802.11 network, we recommend using *Bluetooth* peripherals that have low transaction rates (such as printers and scanners).

Bluetooth peripherals are configured by choosing the **Bluetooth** icon in the *Control Panel*. In addition, review the manual shipped with your *Bluetooth* device to determine the method used to associate with the Omnii host.

✓   *NOTE*   The **Bluetooth** radio uses an internal antenna.

- In the *Control Panel*, choose the **Bluetooth** icon to display the **Bluetooth** *Manager* screen.

The **Bluetooth** *Manager* allows users to search, pair and connect to other *Bluetooth* devices within their personal area network.

The *Bluetooth* radio is disabled by default. Before you begin the setup process:

- Tap on the **Mode** tab, and tap in the check box next to *Turn on **Bluetooth***. Tap on **OK**.

When the radio is enabled, a *Bluetooth* icon appears on the taskbar at the bottom of the screen. It is ready for setup.

Paired

This tab lists all paired devices and their corresponding services. The format of the name is <Device Name>:<Service Name>. Additional information may appear in this screen such as the Port Numbers for Serial Profiles service.
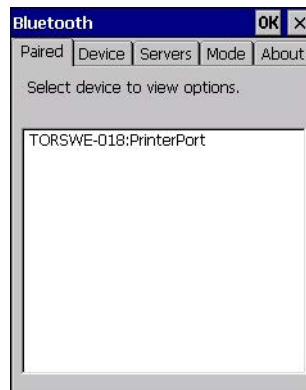
To learn how to scan for devices to pair, review .

✓ **NOTE**   If a service is actively paired and connected, the device and its services are displayed in bold type-face in this list.

- Tap on an item in the *Paired* tab to display an associated pop-up menu.
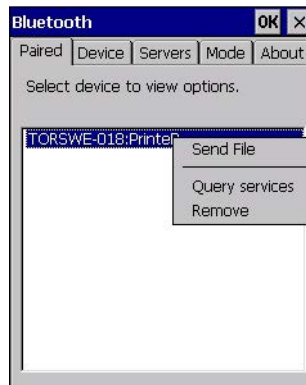
The displayed menu depends on the type of the service chosen.

Query Services and Remove Commands

- *Query Services* displays a *Services* dialog box where a pairing service is chosen.

- *Remove* unpairs the highlighted service and deletes the entry from the tab.

OBEX OPP (Object Exchange-Object Push Profile) Commands

The *OPP* defines two roles — a *Push Server* and a *Push Client. Push Server* is the device that provides an object exchange server. *Push Client* is the device that pushes and pulls objects to and from the *Push Server*.

OBEX OPP contains the following unique menu option:

- *Send File* displays an *Open File* dialog box where the file to be sent can be selected. When the transmission begins, another dialog box tracks the progress of the file transmission.

HSP/HFP (Headset Profile/Hands-Free Profile) Service Commands

The *HSP (Headset Profile)* allows users to connect their device to *Bluetooth* enabled headsets and other audio devices.

HSP/HFP services provide the following unique menu options:

- *Connect Audio* establishes an audio connection to the *Bluetooth* headset.

- *Disconnect Audio* disconnects the audio connection from the *Bluetooth* headset.

- *Volume Control* displays a dialog box where the headset and microphone volume can be adjusted.

Device

In this tab, users can discover and display *Bluetooth* devices.

Discovering and Removing Devices

Scan discovers *Bluetooth* devices in range of the Omnii and lists them in this tab. Any existing devices previously discovered and listed will also be displayed.

Clear removes all *Bluetooth* devices listed except those with currently paired and connected services.

✓   *NOTE*   To limit the number of devices listed to a particular type of device, refer to , next section.

Filtering By Class of Device (COD)

This menu allows you to filter the displayed devices by their COD. If, for example, you choose **Computer** from this menu, only the devices that have the matching *Computer* COD value will be displayed. Choosing *All* lists all detected devices.

Device Pop-up Menu

The *Device* pop-up menu allows you to pair a device, update a device name or delete a device from the list.

Pair begins the pairing process by querying the services and profiles of the discovered device. An *authentication* dialog box is displayed the first time a *Bluetooth* device is paired.

Refresh Name repeats the device name inquiry, updating the name. This command is useful if a device is listed without a name (unknown), or if a device name has been changed remotely.

Delete removes this device from the list.

Pairing a Device

To pair devices:

- Follow the manufacturer's instructions to place the remote device in pairing mode.

- Choose the **Devices** tab and **Scan** for devices in your area.

- When the scan is complete, tap on the **device** to which you want to pair.

- In the pop-up *Device* menu, tap on **Pair**.

An *Authentication* dialog box is displayed.

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- If the remote device has authentication enabled, type the PIN in this dialog box.

- To proceed *without* authentication, tap on **Next**.

After entering the device *PIN*, the *Services* dialog appears with a list of services available for that device.
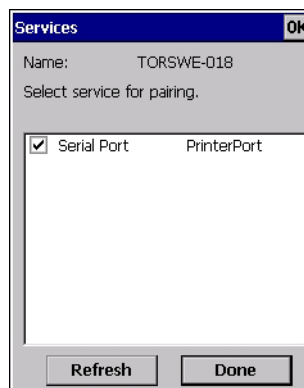
- Click in the check box to the left of the service to activate it.

- Click on **Done**.

Services that require more information present a configuration dialog box. *Serial Profile* is an example.
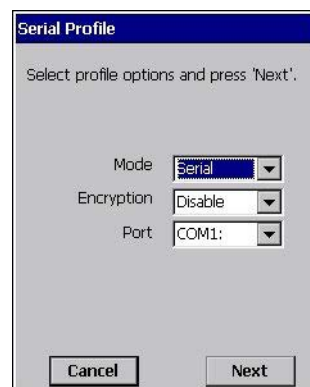
This dialog box offers a number of additional options such as enabling *Encryption* and selecting four different *Modes*: *Serial*, *ActiveSync, Scanner*, and *Printer Port*.

Serial is used for simple serial port communication.

ActiveSync is for ActiveSync-over-*Bluetooth*.

Scanner is used to create a connection to a barcode scanner. A serial connection is created, then the *Scanner Services* is notified of the connection so that the incoming barcode scan will be forwarded directly to *Scanner Services.*

Printer Port must be chosen here if you want to communicate with a paired *Bluetooth* printer. For further details, see .

• Once you've completed the information, tap on **Next** and then in the *Services* screen, click on **Done**.

Servers

When a remote *Bluetooth* device initiates a *Bluetooth* connection to the Omnii, the remote device is considered the *Bluetooth* master and the hand-held, the *Bluetooth* slave. In order for the remote device to connect to the hand-held, the Omnii must offer a service in the form of a server. The *Servers* tab allows these services to be enabled and configured. There are three server services available: *Serial*, *Scanner* and *OBEX OPP*.

Serial server enables the Serial Port Profile server; a Serial Port can be selected from the drop-down menu.

You can assign either a BSP or a COM prefix from the drop-down menu. BSP (*Bluetooth* Serial Port) was created by Microsoft to allow *Bluetooth* to have its own serial prefix in order to free up virtual COM prefixes as these are limited and are widely used.

✓ *NOTE* Even after a Serial Port Profile server is created, an application must open the created port before a remote device can connect.

Scanner server enables a Serial Port Profile server and then relays it to the Scanner Service (SCS). This is used for *Bluetooth* barcode scanners that operate in client mode. SCS opens the server port and handles the scanner input.

OBEX OPP server enables the Object Push Profile server. A warm reset must be performed on the Omnii after a change is made to this option. The OPP Server allows other *Bluetooth* devices to send files to this device.

• Tap on the check box to activate the server.

Mode
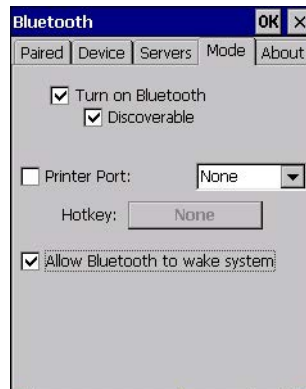
Turn on Bluetooth activates the *Bluetooth* radio.

Discoverable determines whether the Omnii is visible or invisible to other devices.

Printer Port allows you to assign and enable a virtual outgoing COM port selected from the drop-down menu to communicate with a paired *Bluetooth* printer. Keep in mind that when a port is chosen, the printer must be on and connected to the chosen port for a remote device to be able to connect.

- Select a port within the *Printer Port* drop-down list, e.g. **BSP1:**

- Check the *Printer Port* check box.

- Open the *Device* tab and tap on **Scan**.

- Tap-and-hold each *Bluetooth* Printer device entry and then select **Pair**, key-in the Passcode (if needed) and then tap **Done**. DO NOT select any services!

- Close the *Bluetooth* Manager.

- Select the *Bluetooth* device to print to — you will need to key-in (or programmatically raise) the following key sequence [CTRL] [ALT] [F1].

- You can now select the *Bluetooth* device to which you wish to print.

Allow Bluetooth to wake system allows remote *Bluetooth* devices to wake the Omnii by requesting a *Bluetooth* service that requires host intervention. This feature can also be used when the Omnii is waking from suspend to significantly to reduce the initialization time of the *Bluetooth* system.

About

Device Name displays the broadcasted name of the hand-held. The name can be changed in the *System Properties* applet: *Start>Settings>Control Panel>System icon>Device Name tab*.

Local Address displays the MAC address (BD_Addr) of the *Bluetooth* chip.

HCI Version & LMP Version display the version of the chip firmware.

Component indicates the version of the *Bluetooth* Subsystem (the manager, drivers, etc).

Profiles lists the supported profiles on this specific Omnii.

The *Bluetooth* GPRS WAN Connection

The following steps describe how to set up an Internet data connection using a GSM cellular telephone with *Bluetooth*. The Omnii communicates via *Bluetooth* to the cell phone, which then accesses a WAN (Wide Area Network) and transfers data using GPRS.

1. Enable the *Dial-Up Networking service* in the cell phone.

2. Make the phone *discoverable*.

3. Pair the phone service with the Omnii Dial-Up Networking service using the *Bluetooth Manager*. (For instructions on pairing devices, refer to .)

4. To set up the Internet parameters, choose the **Network And Dial-up Connections** icon from the *Control Panel*.

Network and Dial-u...

5. Tap on **Make New Connection**.
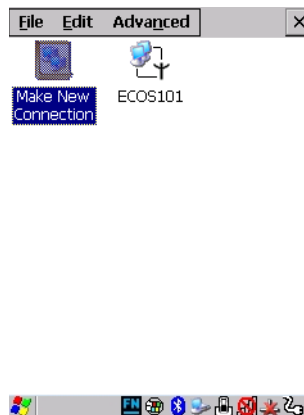
6. In the *Make New Connection* dialog box, choose **Dial-Up Connection**. Enter a name for your GPRS network connection.
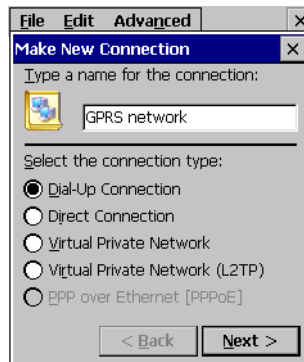
7. Choose the **Next** button to display the *Modem* dialog box.

8. In the drop-down menu labelled *Select a modem*, choose the name of the modem with which you want to connect, and then choose the **Configure** button to display the *Device Properties* dialog box.

    The Omnii communicates via *Bluetooth* to your *Bluetooth* equipped cellular telephone and retrieves the parameters for the *Device Properties* dialog box. Omnii then disconnects.
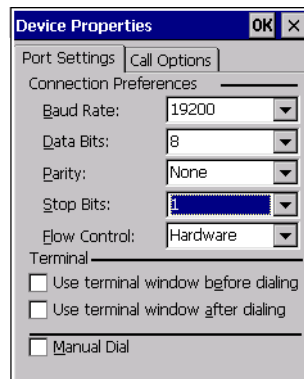
9. Under the *Call Options* tab, turn off **Cancel the call if not connected within,** and press [Enter] to save your changes.
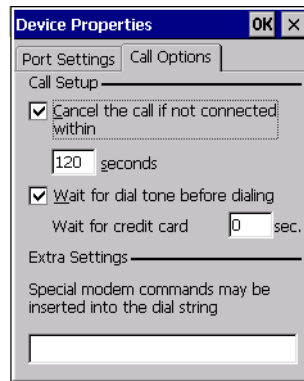
10. In the *Modem* dialog box, choose the **Next** button to display the *Phone Number* dialog box.

The phone number you enter is network carrier dependent. Once you've specified all the necessary information, choose the **Finish** button.

11. In the *Control Panel*, choose the **Dialing** icon.

12. The values in the *Dialing Properties* dialog box need to be edited according to your network carrier specifications.

Once you've edited this dialog box to reflect your network carrier requirements, press **[Enter]** to save your changes.

13. At this point, return to the *Control Panel,* and choose the **Network and Dial-up Connections** icon.

14. In the network connection window, the new network configuration — in this case, *New Connection* is displayed. Tap on the **new** icon.
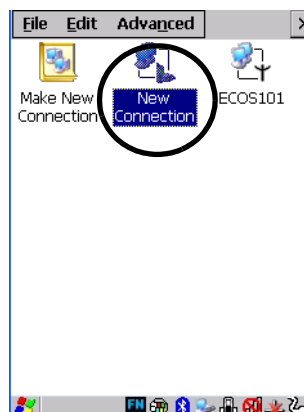
When you tap on your new connection, an onscreen message indicates the status of your connection: *connected*, *disconnected*, *error messages*, and so on.

Certificates

This program provides access to the Certificate Manager and Stores. The Certificate Manager displays the certificates in the Windows Certificate Store, and allows you to import, delete, and view these certificates. Omnii checks that the certificate has been digitally signed by a certification authority that the Omnii explicitly trusts. This option is used in conjunction with 802.1x authentication to enhance Omnii security.

- In the *Control Panel*, choose the **Certificates** icon.

Certificates

Your Omnii has certificates preinstalled in the computer. *My Certificates* is the repository for the device's personal certificate store, *Other Authorities* is the repository for the intermediate certificate store, and *Trusted Authorities* is the repository for the Trusted Root certificate store.

You can import or remove certificates, and view certificate information for any listing, including names, dates, serial numbers, etc.

For a detailed description about Certificate setup for both the server and client-side devices (Omnii Hand-Held Computers), refer to the following website:

http://technet.microsoft.com/en-us/windowsserver/dd448615.aspx

Compass

Like all compasses, the Omnii digital compass indicates the direction in which the unit is pointed. If you find that the compass is inaccurate, you may need to calibrate it.

- In the *Control Panel*, choose the **Compass** icon.

Compass

- Tap on the **Calibrate** button and follow the directions to calibrate the compass. Make certain that you perform the figure *8* indicated in the instructions in a fairly wide loop to better ensure successful calibration.
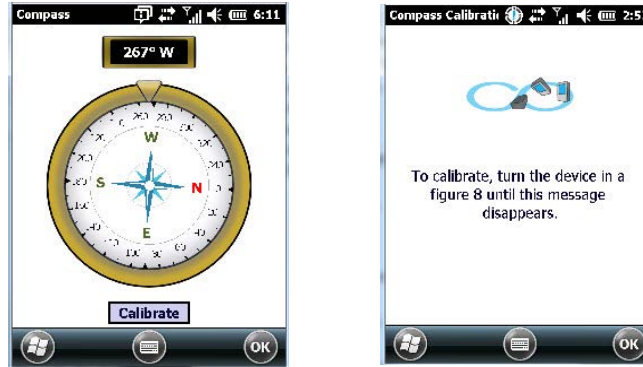
When the compass recalibration is complete, a message appears on the Omnii screen indicating successful calibration.

> ✓ **NOTE**   The accuracy of the digital compass is affected by the following:
>
> a) close proximity to large magnets or metal structures, and
>
> b) internal scanner/imager activation.

Data Transfer between Omnii and a PC

Data transfer options vary slightly depending on the type of operating system installed in your PC.

For Windows XP SP2 operating systems or earlier, Microsoft® ActiveSync® connectivity software can be used to connect your Omnii to PCs.

If the Windows Vista®, Windows 7 or later, operating system is installed in your PC, ActiveSync is not required to transfer data between your Omnii and your PC.

By using a Snap Module or Desktop Docking Station with your Omnii, you can connect to a PC with a cable to:

- View Omnii files from Windows Explorer.
- Drag and drop files between the Omnii and the PC in the same way that you would between PC drives.
- Back up Omnii files to the PC, restore them from the PC to the hand-held again, etc.

Uploading Data in a Docking Station

The Desktop Docking Stations allow your hand-held to upload transaction data to a server computer when a radio link is not available. When the Omnii is properly inserted in a docking station, a dock icon is displayed in the taskbar at the bottom of the unit screen. For detailed information, refer to Desktop Docking Stations - Models ST4002 and ST4003 on page 4-9.

Using Microsoft ActiveSync

✓   *NOTE*   If you use a serial port to connect devices like the Omnii to your desktop computer, the connection may not succeed because ActiveSync has trouble connecting at non-default baud rates.

To work around this problem, set the ActiveSync baud rate on the desktop to use the same baud rate as the device. You can set the baud rate by editing the registry on the desktop host computer, as detailed in the steps outlined at the following website:

http://support.microsoft.com/kb/324466

To install ActiveSync, follow the step-by-step instructions provided with the program setup wizard. For details, go to the following website and type the name into the search box:

http://www.microsoft.com/downloads/en/default.aspx

Using Windows Mobile Device Center

If you are running *Windows Vista*, *Windows 7,* or later, your data transfers do not require ActiveSync. Instead, you will need to download *Windows Mobile Device Center*. For instructions, go to the following website and type the name into the search box:

http://www.microsoft.com/downloads/en/default.aspx

To transfer data between your PC and your hand-held:

- Tap on **Start>Computer** to display the drives. The Omnii will be visible here.

- Open drives, files and folders as you would on your PC.

Display Properties

- In the *Control Panel*, choose the **Display** icon.

Background

- In the *Display Properties* dialog box, open the **Background** tab. This dialog box allows you to customize your background image.
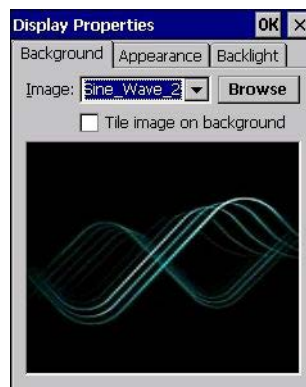
Appearance

- In the *Display Properties* dialog box, open the **Appearance** tab. This dialog box allows you to customize the display colour scheme.

Backlight

The backlight is activated for a configurable amount of time. The *Display Properties* dialog box in the *Control Panel* allows you to specify the intensity of the backlight along with how long the backlight remains on when the unit is not in use (no key press, scanner trigger, etc.).

✓   *NOTE*   Keep in mind that this option may be restricted to supervisory use only.

- In the *Display Properties* dialog box, open the **Backlight** tab.
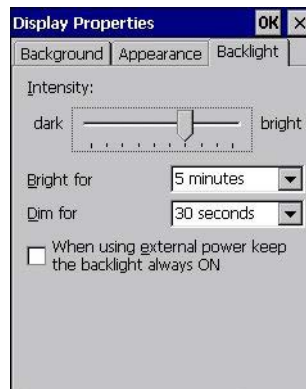
✓   *NOTE*   Backlight changes take effect immediately. You do not need to reset the unit.

To maximize battery run time, keep the display backlight brightness and active durations as low as possible.

Intensity

This parameter is used to adjust the light intensity of the Omnii backlight. Sliding the bar to the left lowers the light intensity, and sliding it to the right raises the intensity.

Bright For

The value chosen from this drop-down menu determines the duration of time that the backlight stays on at the configured intensity after the last user action (keypress, scan trigger).

Dim For

The value chosen from this drop-down menu determines the duration of time that the backlight stays on at half the configured intensity (dimmed backlight) after expiration of the Bright For delay and as long as no user action takes place (such as a keypress or scan trigger). At the expiration of the Dim For duration, the display backlight shuts off.

External Power Check Box

When you select the check box next to *When using external power keep the backlight always ON*, the back-light remains ON at the configured intensity when the Omnii is operating with external power (not battery power). If the Omnii is drawing power from its battery, this option is ignored and the other parameters defined in *Display Properties* dialog box take effect.

Dr. Debug

Dr. Debug is an error diagnostic and troubleshooting tool.

• Tap on **Start>Settings**>**Control Panel**. Tap on the **Dr. Debug** icon.

Dr. Debug
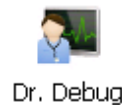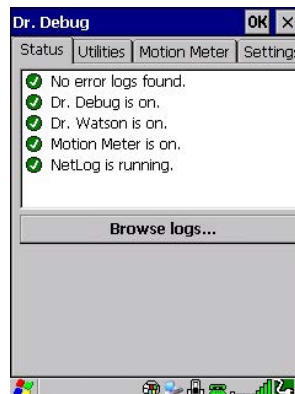
Status

This tab indicates the status (on/off) of the debug engines. Tapping on **Browse logs** displays error logs for your review. The logs should be used as reference when working with Technical Support personnel.

Utilities

The *Utilities* tab can be used to log network traffic. When you tap on the **Start** button, debug data is collected so that, if necessary, it can be forwarded to a technician for evaluation.
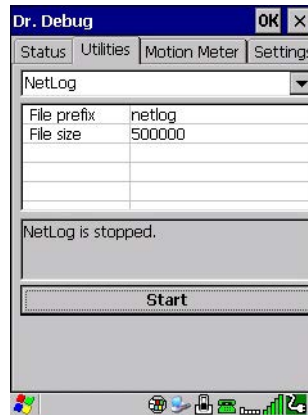
The *Utilities* tab can also be used to log heater control logic board information.
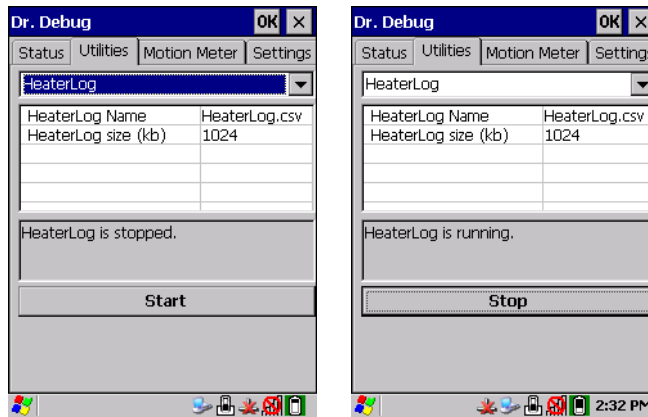
Motion Meter
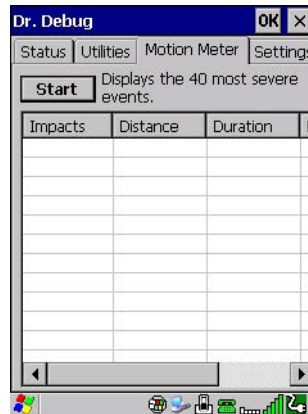
Tapping on the *Start* button enables the *Motion Meter* feature. Once enabled, this applet records the number of impacts the Omnii has sustained, the distance of the fall in meters, the duration in 10^{ths} of a second, and the date and time that the event occurred. The top 40 events are logged in a non-volatile location and can be used for diagnostic purposes by us or the site administrator.

Settings
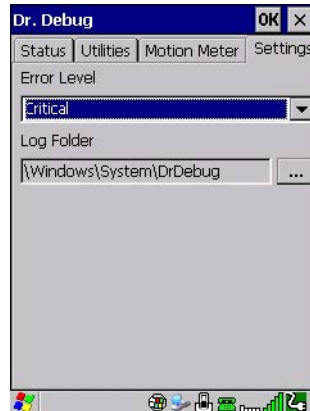
- Choose an **Error Level** from the drop-down menu.

- To change the location where debug information will be stored, tap on the button to the right of the *Log Folder* option.

Error Reporting

Error Reporting allows you to enable or disable Microsoft error reporting prompts.

- Tap on **Start>Settings**>**Control Panel**>**Error Reporting** icon to access your options.

GPS (Global Positioning System) Settings

This applet allows you to define how the GPS module operates. You can determine when the GPS module is powered and operating, and choose from a set of GPS profiles built into the modem. You can also set up the AGPS Manager (an assisted GPS utility).

- Tap on **Start>Settings>Control Panel>GPS Settings** icon.
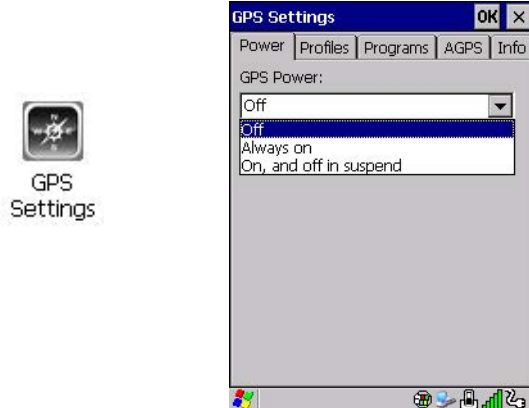
Power

This tab allows you to dictate how the GPS module behaves. The *GPS Power* drop-down menu is used to control when the GPS is powered on and off.

• *Off* – the GPS module is left off, always.

• *Always on* – the GPS module is powered on at all times regardless of the power state of the hand-held (suspend).

• *On, and off in suspend* – the GPS module is powered on, but if the Omnii is in suspend mode, the GPS module is turned off.

Profiles
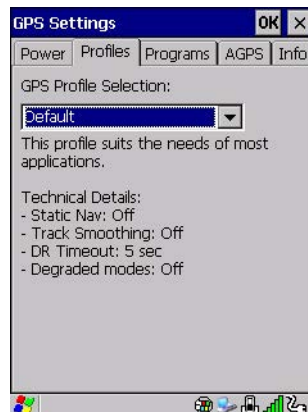
Tapping on the *GPS Profile Selection* drop-down menu allows you to choose an appropriate profile: *Default*, *Automotive* or *Pedestrian*.

• *Default* profile is a good general profile suitable for most uses.

• *Automotive* profile is designed for in-vehicle use, providing quick location updates as the vehicle moves. When the GPS module is set to this profile and the vehicle enters an area such as a tunnel where satellite coverage is interrupted, it *will* attempt to predict the vehicle position.

• *Pedestrian* profile is designed for those using the GPS module while walking. It takes into account the slower pace of the pedestrian when mapping the location of the user. When the GPS module is set to this profile and the operator moves into an area where satellite coverage is interrupted, the GPS module *will not* attempt to predict the operator's movement.

Programs

Tap on the GPS Program Port drop-down menu to choose the communication (COM)

port that the GPS software will use to communicate with the GPS receiver.
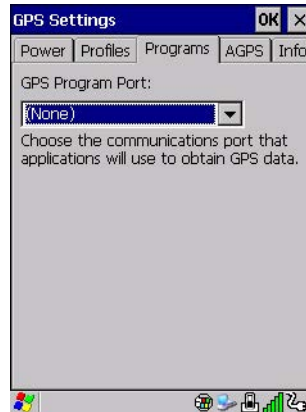
AGPS

To determine your location, a GPS module receives data from three or more GPS satellites in fixed orbit around the Earth. The GPS module triangulates your location based on the time it takes for signals to get to and from the satellites. This works well in fairly clear areas, outdoors for example. However, if you're attempting to triangulate your location in city centres where signals bounce off tall concrete buildings or from within a building, the GPS module will have greater difficulty calculating a fix.

AGPS reduces Time To First Fix (TTFF) and increases the likelihood of finding and keeping a fix in poor coverage areas such as indoor sites. AGPS downloads satellite ephemeris (orbital) data to the Omnii periodically through Wi-Fi or WWAN. The downloaded data is used by the GPS module to speed the process of getting a fix.

Update

• Click on the **Update** button to download *Extended Ephemeris (EE)* files from a secure host on the Internet using any interface that has an Internet connection. These files contain several days worth of ephemeris (orbital) data that can be used if the satellite broadcast ephemeris is not available.

The *Status* field above the *Update* button displays the progress of the download, and once successfully downloaded, the *Status* field will read *Idle.*

Settings

• Click on the **Settings** button to define the *AGPS server connection settings.*

The *AGPS server connection settings* drop-down menu allows you to choose from two settings: *Use default settings* and *Use custom settings.*

The *Use default settings* option is generally acceptable for most applications. Note that aside from the *Update* field in which you can choose how long the fix is stored in your Omnii, the field values cannot be edited.

The *Use custom settings* option is generally used to configure devices that will have access only to an *intranet* rather than the *Internet* and should only be altered with the assistance of qualified personnel. They will be able to help you configure our devices and web server to retrieve the ephemeris data.

Info
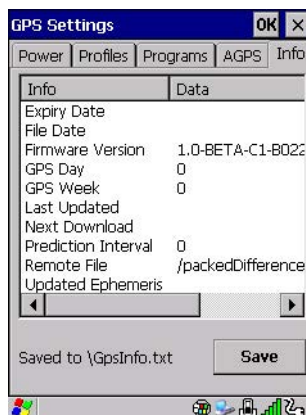
This tab provides general information about the GPS module such as the firmware version, the date on which files were last updated, and so on. If GPS module support service is required, you may be asked to tap on the **Save** button in this tab and forward the information to our support staff.

Imager & Camera Settings

The Imagers applet is used to create, modify, delete, and activate imager and camera settings. The principle uses of the applet are to decode barcodes and to capture images. A *Demonstration Application* is provided to demonstrate how the imager works. Refer to for details.

Refer to for configuration details.

- In the *Control Panel*, choose the **Imagers** icon.

NOTE   This icon is only displayed when the appropriate imager is installed in your Omnii. If there is an imager installed but this icon is not present, additional software (ICS) may need to be installed.

To enable a newly-installed imager, Press and hold down the **[FN]** key and the **[Enter/Power]** key simultaneously for a minimum of three seconds.
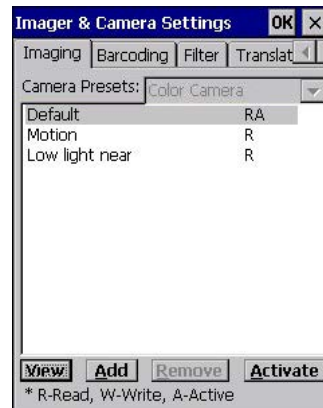
Input Panel

The Omnii is equipped with a Soft Input Panel (SIP). Shown below is the standard Microsoft SIP, accessed from the Control Panel.
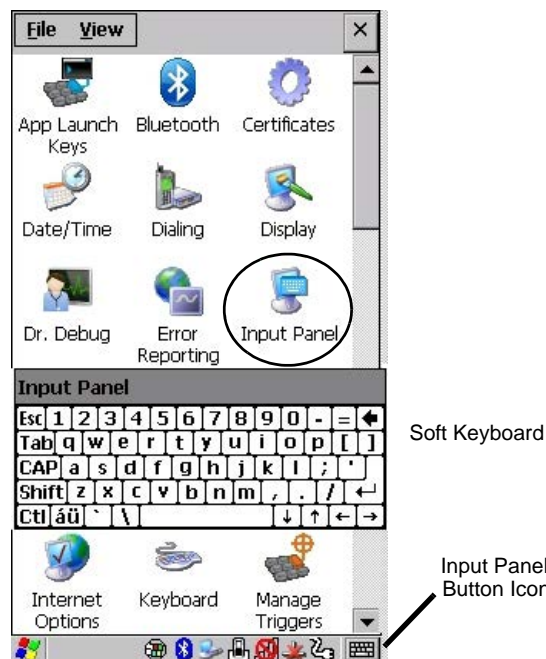
Tapping on the Input Panel button displays a soft input panel (soft keyboard) that can be customized using the Input Panel dialog box.

IMPORTANT   If the Input Panel button icon is not visible in the taskbar, from the *Start* menu, tap on *Settings>Taskbar* and *Start Menu*. Tap the check box next to *Show Input Panel Button*. To remove this icon from the taskbar, tap in the check box to erase the check mark.

Draft #4 for review

The soft keyboard operates just like a standard keyboard except that rather than pressing a key, you tap on letters, numbers, modifier keys, etc. on the Omnii screen.

To customize the appearance and behaviour of the soft keyboard:

Tap on the **Input Panel** icon in the *Control Panel*.

Figure 3-2 *Input Panel Properties*
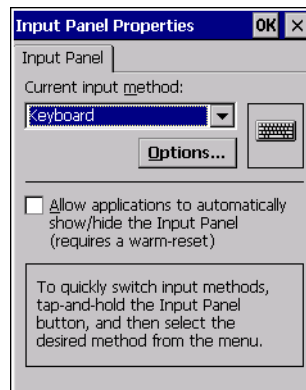
- Tap on the Options button to change the appearance of your soft keyboard.

✓   *NOTE*   You can also display this dialog box by double-tapping on the Input icon in the far-right corner of the taskbar.

Figure 3-3 *Soft Keyboard Options*
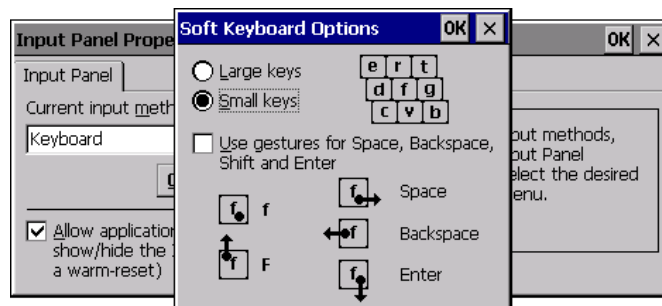
Keyboard Properties

This icon displays the *Keyboard Properties* dialog box in which you can adjust the repeat rate of the keys, the intensity of the keyboard backlight and the behaviour of the [FN] and [SYM] modifier keys. This dialog box also allows you to define macro keys and Unicode characters.

- In the *Control Panel*, choose the **Keyboard** icon.

Keyboard

Key Repeat

✓   *NOTE*   These settings apply when a key is held down continuously.

- In the *Keyboard Properties* dialog box, open the **Repeat** tab.
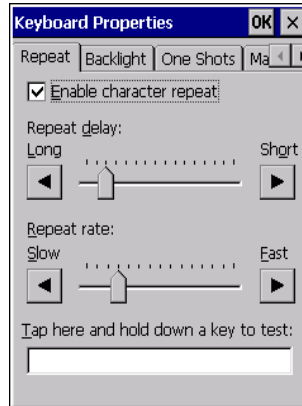
Repeat Delay

The value assigned for this parameter determines the delay in milliseconds between repeat characters. Sliding the *Repeat Delay* bar to the left increases the delay between key repeats, and sliding the bar to the right shortens the repeat delay time.

Repeat Rate

The value assigned for the *Repeat Rate* parameter determines how quickly the key you press repeats and is measured in characters per second (cps). Sliding the bar to the left slows the repeat rate, and sliding the bar to the right increases the repeat rate.

✓   *NOTE*   Use the field at the bottom of this dialog box to test the repeat delay and rate settings you've chosen.

Keyboard Backlight

- In the *Keyboard Properties* dialog box, open the **Backlight** tab.
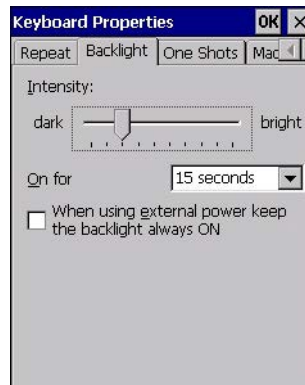
Intensity

This parameter is used to adjust the light intensity of the Omnii keyboard backlight. Sliding the bar to the left darkens the keyboard backlight intensity, and sliding it to the right lightens the intensity.

✓   *NOTE*   The keypad backlight maximum brightness will decrease over time as it ages. Use mid-range intensity settings when possible to extend the backlight lifespan. When the backlight starts to dim, use this parameter to make it brighter.

ON For

The value chosen from this drop-down menu determines the duration of time that the keyboard backlight stays on after the last user action (keypress or scan trigger).

✓   *NOTE*   Tapping in the check box next to ***When using external power, keep the backlight always ON*** forces the keypad backlight to remain on when the unit is operating with external power.

Keyboard One Shot Modes

- In the *Keyboard Properties* dialog box, open the **One Shots** tab.

The options in this tab allow you to determine how modifier keys on your Omnii behave. For each modifier key — [ALT], [SHIFT], [CTRL], [FN], and [SYM] — you have the following options in the drop-down menu: *Lock*, *OneShot*, and *OneShot/Lock*.

✓   *NOTE*   Keep in mind that checking the taskbar lets you know whether or not these keys are locked on. For example, if the [FN] key is locked on, the taskbar at the bottom of the screen displays it underlined. If this key is displayed without the underline in the taskbar, you'll know that the key is not locked. It will become inactive following a key press.

⚠   *IMPORTANT*   Once you've assigned a One Shot mode to a modifier key, you need to tap on the OK button at the top of the tab to activate your selection.

Lock

If you choose *Lock* from the drop-down menu, pressing a modifier key once locks it on until you press the modifier key a second time to unlock or turn it off.

OneShot

If you choose *OneShot*, the modifier key remains active only until the next key is pressed.

OneShot/Lock

OneShot/Lock allows you to combine these functions. When you choose this option and you press the modifier key once, it remains active only until the next key is pressed.

If you press the modifier key twice, it is locked on, remaining active until the modifier key is pressed a third time to turn it off.

Keyboard Macro Keys

- In the *Keyboard Properties* dialog box, open the **Macros** tab.
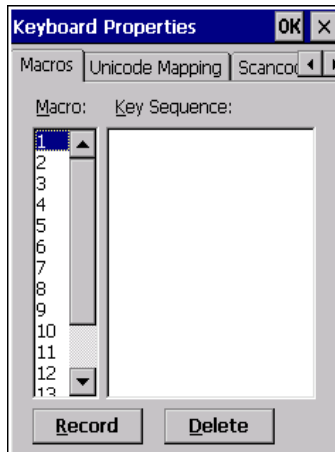
A macro has 200 programmable characters (or "positions"). The macro keys can be programmed to replace frequently used keystrokes, along with the function of executable keys including [Enter], [BACKSPACE] and [DEL] ([FN]-[BACKSPACE]), function keys and arrow keys.

Recording and Saving a Macro

You can program up to 6 physical macro keys, depending on your keyboard layout. You can also increase the number of virtual macro keys up to 15 using *Scancode Remapping* (for details, see Scancode Remapping on page 3-33).

- In the *Macro* menu highlight a macro key number, for example macro 1, to assign a macro to macro key [M1]. Choose the **Record** button.

A message screen is displayed instructing you to *Enter Key Strokes to Record*.

- Type the macro sequence you want to assign to the Macro key. You can type text and numbers, and you can program the function of special keys into a macro.

- When you've finished recording your macro sequence, press the key sequence: [CTRL] [ALT] [Enter], or choose the **Stop Recording** button.

A new screen *Verify Macro* displays the macro sequence you created. The *Save* button is highlighted.

- Press **[Enter]** to save your macro, or highlight CANCEL and press **[Enter]** to discard it.

Executing a Macro

To execute a macro:

- Press the macro key to which you've assigned the macro.

Deleting a Macro

To delete a macro:

- In the *Macros* tab, highlight the *macro number* you want to delete.
- Choose the **Delete** button.

Unicode Mapping

- In the *Keyboard Properties* dialog box, open the **Unicode Mapping** tab.
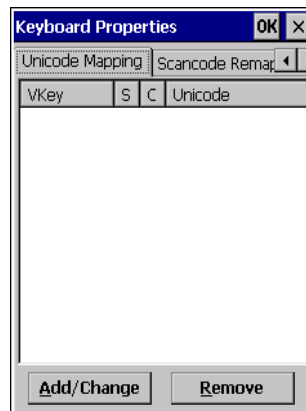
The *Unicode Mapping* tab is used to map combinations of virtual key values and [CTRL] and [SHIFT] states to Unicode™ values. This tab shows the configured Unicode character along with the Unicode value. For example, the sample screen above shows "a (U+0061)" indicating that the character "a" is represented by the Unicode value "0061", and so on. Keep in mind that Unicode configurations are represented as hexadecimal rather than decimal values.

All user-defined Unicode mappings are listed in the *Unicode Mapping* tab in order of virtual key value, and then by order of the shift state. If a Unicode mapping is not listed, the Unicode mapping is mapped to the default Unicode value.

Adding and Changing Unicode Values

⚠️ *IMPORTANT*   Changes to Unicode mappings are not saved until you exit the Keyboard Properties dialog box.

- Choose the **Add/Change** button.
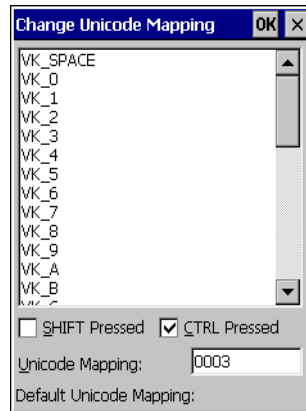
- Highlight a value in the Unicode mapping list. In the sample screen above, a value will be assigned to virtual key 0 (VK 0).

- Position the cursor in the *Unicode Mapping* field, and type a **Unicode value** for the highlighted key.

✓   ***NOTE***   To add a shifted state, [SHIFT] and/or [CTRL], press [TAB] to position the cursor in the check box next to *SHIFT Pressed* and/or *CTRL Pressed*. Press [SPACE] to select the shift state you want to assign.

Removing Unicode Values

- In the *Unicode Mapping* tab, highlight the item you want to delete, and choose the **Remove** button.

Scancode Remapping

A scancode is a number that is associated with a physical key on a keyboard. Every key has a unique scancode that is mapped to a virtual key, a function or a macro. *Scancode Remapping* allows you to change the functionality of any key on the keyboard. A key can be remapped to send a virtual key (e.g. VK_F represents the *F* key; VK_RETURN represents the [Enter] key, etc.), perform a function (e.g. turn the scanner on, change volume, etc.) or run a macro.

There are three different tables of scancode mappings: the *Normal* table, the *FN* table and the *SYM* table.

✓   ***NOTE***   When using the Mobile Devices SDK Developers' Guide (PN 8100016), note that the [ORANGE] key is interchangeable with the [SYM] key. Similarly, in the context of the scancode mapping tables, Orange is interchangeable with SYM.

The *Normal* table defines unmodified key presses; the *FN* table defines key presses that occur when the [FN] modifier is on; the *SYM* table defines key presses that occur when the [SYM] modifier is on. The default mappings of these scancodes can be overwritten for each of these three tables using the *Scancode Remapping* tab accessed from the *Keyboard Properties* dialog box.
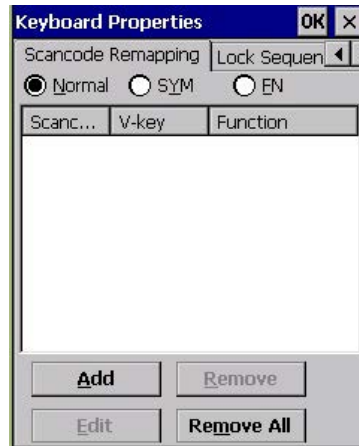
The first column in the *Scancode Remapping* tab displays the scancodes in hexadecimal. If the scancode is remapped to a virtual key, that virtual key is displayed in the next column labelled V-Key. A virtual key that is Shifted or Unshifted is displayed in the third column labelled Function.

If the scancode is remapped to a function or a macro, the first and second columns remain blank while the third column contains the function name or macro key number (e.g., Macro 2).

Adding a Remap

To add a new remapping:

• Choose the **Add** button at the bottom of the dialog box.

The *Remap Scancode* dialog box is displayed.
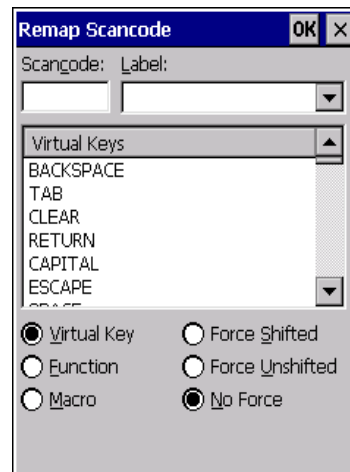
• Type the scan code in hexadecimal in the field labelled *Scancode*.

✓   *NOTE*   The Label field displays the default function of the scancode you are remapping.

Virtual Key, Function and Macro

The radio buttons at the bottom of the dialog box allow you to define to what the scan code will be remapped: Virtual Key, Function or Macro.

When *Virtual Key* is selected, you can choose to force [SHIFT] to be *on* or *off* when the virtual key is sent. If *No Force* is selected, the shift state is dependent on whether the shift state is on or off at the time the virtual key is sent.

When *Function* is selected, a list of valid functions appears in the dialog box.

When *Macro* is selected, the macro keys available on your unit are listed in the dialog box.

- Choose **Virtual Key**, **Function** or **Macro**.

- Choose a function from the *Function* list in the dialog box, and tap on **OK**.

Editing a Scancode Remap

To edit a scancode:

- In the *Scancode Remapping* tab, tap on the remap you want to edit.

- Tap on the **Edit** button, and make the appropriate changes.

- Tap on **OK** to save your changes.

Removing a Remap

To delete a remap:

- In the *Scancode Remapping* tab, highlight the scancode you want to delete, and tap on the **Remove** button.

- Tap on **OK**.

Lock Sequence

The *Lock Sequence* menu allows you to lock the Omnii keyboard to prevent keys from being pressed accidentally when, for example, the unit is inserted in a holster.
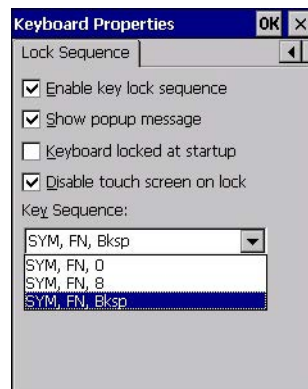
- To lock the keyboard, tap in the check box next to *Enable key lock sequence*.

- Tap in the check box next to *Keyboard locked at startup*.

- In the *Key sequence* drop-down menu, choose the key sequence you will need to type to unlock the keyboard.

> ✓ **NOTE** It is useful to leave the *Show popup message* enabled (default) so that anyone attempting to use the keyboard will see the key sequence they will need to enter to unlock the keyboard displayed on the screen.

A *locked keyboard* icon is displayed in the softkey bar when the keyboard is locked.

Locked Keyboard
Icon
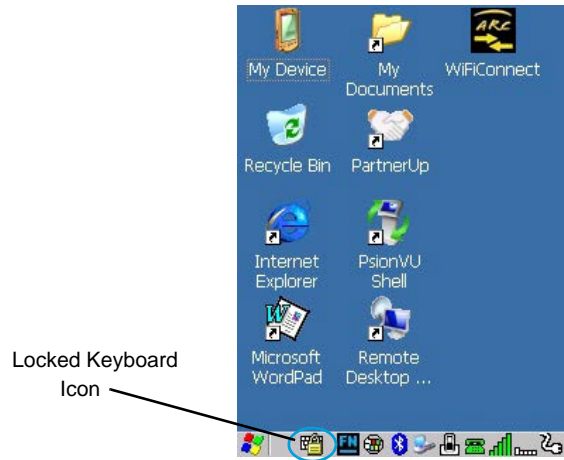
- Type the key sequence to unlock the keyboard.

Manage Triggers

Allows users to configure how barcode scanners and other devices such as RFID readers are triggered. You can configure the trigger ID for each trigger button for both single- and double-click, and the double-click time.

- In the *Control Panel*, choose the **Manage Triggers** icon.

- In the *Manage Triggers* screen you'll see a list of trigger mappings.
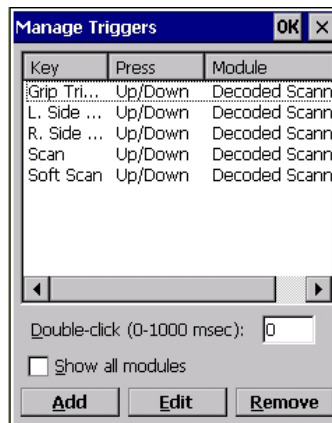
Trigger Mappings

A trigger mapping is an association between a particular key on the keyboard and a driver or application, the module(s) — sometimes referred to as trigger consumer(s) — of the trigger source. Along with keyboard keys, the external trigger (scan button) is software-based. When the specified key is pressed, the owner (for example, a decoded scanner) is sent a message.

⚠ *IMPORTANT*   It is not possible to have two or more identical mappings — for example [F1] cannot be mapped to the Non-Decoded Scanner twice — even if the trigger type is different.

A keyboard key that is used as a trigger source will no longer generate key data, or perform its normal function. For example, if the space button is used as a trigger source, it will not be able to send space characters to applications.

Double-Click

When a key is pressed and released, then pressed again within the configured time (between 0 to 1000 msec), a double-click occurs. See also Trigger-Press Type on page 3-38.

Show All Modules

By default, the trigger mapping list only shows active mappings. Mappings for drivers or applications that are not currently active are not normally displayed. By checking this check box, all mappings, both active and inactive, are displayed.

Add

Tapping this button brings up the *Add Mapping* dialog (see Add and Edit Trigger Mapping on page 3-37), so that you can add new trigger mappings.

Edit

Tapping this button brings up the *Edit Mapping* dialog (see Add and Edit Trigger Mapping on page 3-37), so that you can edit existing trigger mappings.

Remove

Tapping this button removes an existing mapping.

OK

The *OK* button in the top right of the *Manage Triggers* screen saves all changes made. If the cancel button *X* is tapped instead, or the [ESC] key is pressed, all changes made will be discarded.

Add and Edit Trigger Mapping

These dialogs allow you to add and edit trigger mappings.
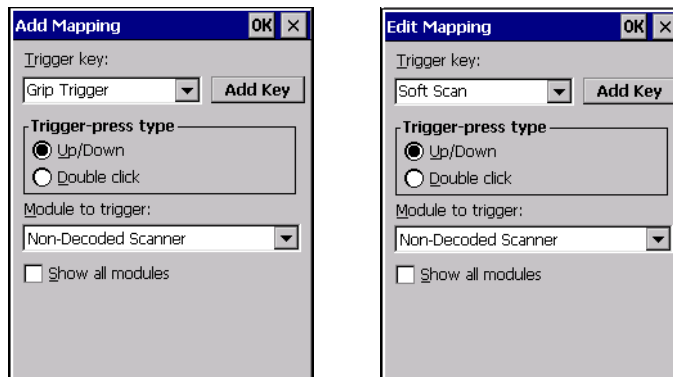
Trigger Key

This drop-down list allows you to specify the source of the trigger events, such as the *Soft Scan*, *Left Scan*, etc., for the trigger module selected.

> ✓ *NOTE* It is possible to map the same source to different modules (trigger consumers) — for example, to both the Imager and Non-Decoded Scanner. If so, both devices/operations will occur simultaneously. This is not recommended in most cases, especially with devices such as Imagers or RFID Readers.
>
> It is also possible to map different sources to the same module (trigger consumer) — for example, two different trigger keys can be mapped to the RFID File System.

Add Key

Only existing trigger sources are shown in the Source combo-box. To add a new source to this list, tap on the **Add Key** button. A dialog will pop up and allow you to select the keyboard key to use as a trigger source.
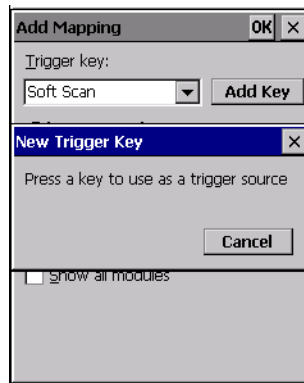
Trigger-Press Type

You can enable either an *Up/Down* or *Double Click* response to a trigger press. Normally, when a trigger (keyboard key, etc.) is pressed and released, a "trigger down" event is sent to the owner — that is, the application receiving the trigger press information — followed by a "trigger up". If *Double Click* is chosen in this menu, when the trigger is pressed, released, and then pressed again, a "double-click" event will have occurred. If a mapping with the type *Up/Down* has also been configured for the same source, it will only receive the first set of trigger events.

Module Trigger

This identifies the driver or application receiving the trigger presses.

Show All Modules

By default, inactive owners are not shown. By checking this check box, all owners, both active and inactive, are displayed.

Microphone

• In the *Control Panel*, choose the **Microphone** icon. Use this dialog box to adjust the gain for the specific microphones associated with your hand-held.
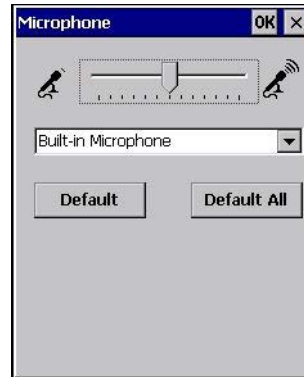
- Tap on the drop-down menu, and choose the microphone for which you want to adjust the gain.

- Slide the microphone tab to the left to decrease the gain and to the right to increase the gain.

Tapping on the *Default* button sets the current microphone you've chosen to the default gain. Tapping on *Default All* sets *all* microphones listed to their default gain.

Open TekTerm

Open TekTerm is a powerful emulation application ideally suited for real time data transaction applications associated with mainframes and servers. The Omnii includes unique features that support Open TekTerm, an application we have designed that has the ability to maintain multiple simultaneous sessions with a variety of host computers. For detailed information, please refer to the *Open TekTerm Software User Manual*, PN 8000073.

PartnerUp

This app displays a number of pre-loaded applications. Tapping on an app in the list takes you to an associated web site.

The operator can then install the application. If a license is required, it can be obtained by sending an e-mail to the software license mailbox or by contacting a Sales Representative from our contact web page.

http://www.motorolasolutions.com/US-EN/Pages/Contact_Us/?WT.mc_id=psion_us_about_contact_p-sion-offices

Additional pieces of software such as a server must be obtained through us.

Tapping on a preloaded client in the PartnerUp screen displays a drop-down menu from which the operator can choose from an array of related options.

Pocket PC Compatibility

The Omnii supports the AYGShell API set that allows Pocket PC-compatible applications to run on the hand-held. Windows Embedded CE includes application programming interface (API) compatibility support for the Microsoft Windows Powered Pocket PC 2002 shell in units running Windows Embedded CE.

The website listed below describes the APIs exposed through AYGShell and the application compatibility between Windows Powered Pocket PC 2002-based applications and Windows Embedded CE based devices:

http://msdn.microsoft.com/library/default.asp?url=/library/en-us/dncenet/html/WINCENET_CEPCC_App.asp

Power Properties

This icon displays a Power Properties dialog box that indicates the unit's battery capacity and allows you to manage battery use.

• In the *Control Panel*, choose the **Power** icon.

Power

Battery Capacity

• In the *Power Properties* dialog box, open the **Battery** tab to view battery details.

Power Saving Suspend

• In the *Power Properties* dialog box, open the **Suspend** tab.
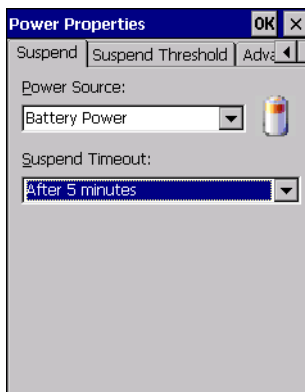
Power Source

This drop-down menu allows you to specify whether the unit is using *AC Power* or *Battery Power*.

Suspend Timeout

⚠️   *IMPORTANT*   We recommends setting the Suspend value to 3 minutes. To further reduce power consumption, carefully consider the duration of time that the display backlight is on (see Backlight on page 3-20).

When the Omnii is idle — not receiving any user input (a key touch, a scan, and so on) or system activity (serial data, an activity initiated by an application, and so on) — the hand-held uses the value assigned in the *Suspend Timeout* field to determine when the unit will go to sleep (appear to be off).

When the time in the *Suspend Timeout* field elapses without any activity, the unit enters *suspend* state. In suspend state, the Omnii CPU enters a sleep state, and wireless communication is shut off. The state of the device (RAM contents) is preserved. Pressing **[Enter]** wakes the system from suspend state.

Suspend Threshold and Estimated Battery Backup
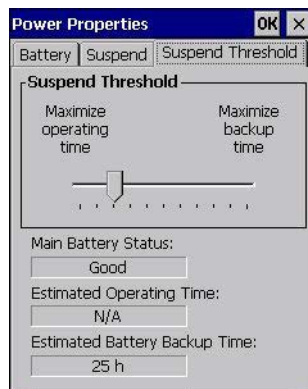
The *Suspend Threshold* adjustment tells the system when to shut down when the battery drains. If you choose *Maximum Operating Time*, the unit will run until the battery is completely empty; the RAM is only backed up for a short period of time. If you choose *Maximum Backup Time*, the hand-held shuts off with more energy left in the battery so RAM can be backed up for a longer period of time.

⚠️   *IMPORTANT*   Selecting Maximum backup time will reserve approximately 20% of the battery capacity for memory backup. Once the battery is drained, the system RAM memory is lost and the unit must cold boot.

In most real-time transaction environments this is not a problem (it only takes a few seconds to cold boot). Batch transaction environments, where data is not saved to a non-volatile memory (such as an SD FLASH card), may need to pay particular attention to this parameter. We do not recommend the storage of any valuable data in system RAM.

The Omnii Windows Embedded CE 6.0 environment does not store any critical data in RAM (such as the registry or file system).

If your application does not save data to RAM, we recommend keeping the Suspend Threshold setting as low as possible to maximize battery run time.

The *Estimated Battery Backup* is the amount of battery power that has been reserved or set aside to protect data until a charged battery can be installed in the hand-held. When the battery capacity is depleted up to the *Estimated Battery Backup* reserve specified in the *Suspend Threshold* menu, the Omnii shuts off automatically and uses the reserve power to preserve the data stored on the computer. Once the Omnii shuts down, it cannot be switched on until a fresh battery is installed, or the unit is inserted in a docking station or cradle.

- Slide the **Suspend Threshold** button to the right to increase the battery capacity reserved for backup pur-
poses. Data will be preserved to a maximum of 124 hours.

- Slide the **Suspend Threshold** button to the left to decrease the power reserved for backup purposes; this
increases the Omnii operating time — the amount of time the unit will operate before shutting down — but
reduces the power reserved for backup purposes to a minimum of 24 hours.

Internal super-capacitors will protect the data stored in the computer while the battery is swapped for a fully
charged one.

⚠️ *IMPORTANT*   Once the battery is removed, the super-capacitors will preserve the data stored on the
Omnii for approximately 4 minutes. It is critical that you install a charged battery before this
time elapses.

Advanced

- In the *Power Properties* dialog box, open the **Advanced** tab.
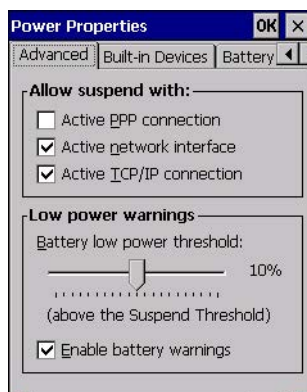
Allow Suspend With

This menu allows you to specify whether or not your unit will enter Suspend Mode while it is operating with an
active PPP connection, network interface or active TCP/IP connection.

Low Power Warnings

The sliding scale at the bottom of this menu allows you to specify the remaining battery capacity at which a
warning message is displayed on the Omnii screen, from 0% to 20%.

Built-in Devices

- In the *Power Properties* dialog box, open the **Built-in Devices** tab.

WWAN Power Mode

This menu allows you to enable power to your WWAN radio, and whether or not the radio will turn off when the Omnii enters Suspend Mode. To configure the radio, please refer to Appendix G: Wireless Wide Area Network (WWAN) Settings.

Battery Health

The Battery Health service provides an estimate of battery health based on a number of different measurements, beyond just capacity.

⚠️ *IMPORTANT*   Battery Health is an estimate and should not be depended on to provide a 100% account of battery condition.

- In the *Power Properties* dialog box, open the **Battery Health** tab.
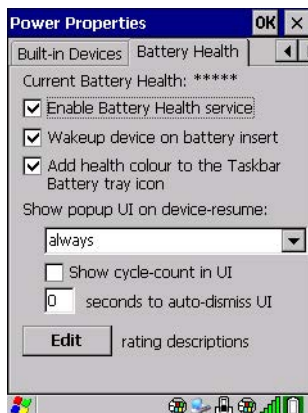
Current Battery Health Meter

The Current Battery Health Meter default values are shown here as ***** (Excellent), *** (Used), and * (Battery should be replaced). If you tap on the battery icon in the taskbar, a pop-up screen will show the state of the battery. The image below shows the default *Excellent* status screen.

Enable Battery Health Service

This option allows you to enable the service. To access the menus after enabling the service, you will need to either wait until a resume from Suspend or restart the Omnii.

Wakeup Device on Battery Insert

When this option is enabled, whenever the battery is replaced the Omnii is powered up from Suspend and the current health of the battery is displayed.

Add Health Colour to the Taskbar Battery Tray Icon

Enabling this option changes the background colour for the battery icon in the Taskbar, based on battery condition: *Green* (excellent), *Yellow* (used), and *Red* (battery should be replaced).

Show Popup UI on Device-Resume

You can decide when the battery status pop-up user interface (UI) will appear, for how many seconds, and whether the battery cycle count is displayed (**off** by default).

Edit – Changing Ratings Text

You can customize the ratings text with the *Edit* option. By enclosing your text within the html tag used for **Bold** <b> (or removing the tag to unbold the text), you can change the text that will appear in the pop-up battery status screen. For example, the default text "**Excellent**" can be changed to: "Battery is excellent, and will last one day shift."...
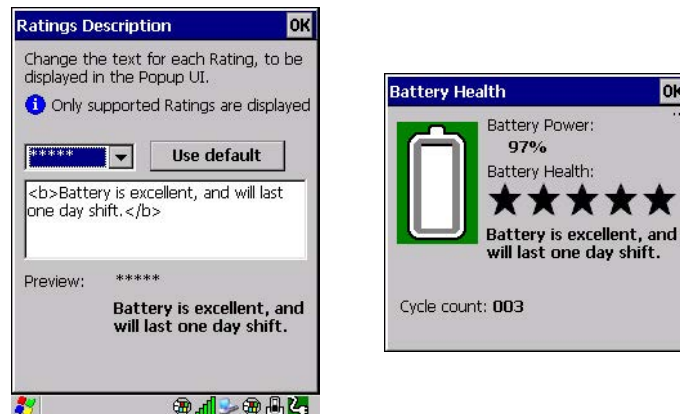
Kiosk Access

Kiosk Access enables you to customize your computer settings, remove or add shortcuts to the desktop and Control Panel, and limit access to various different components on the computer and the system tray icons for security.

✓   *NOTE*   The Desktop theme can be changed from the default Windows Classic Shell to the Kiosk Shell either in the **Kiosk Access** settings (see Other Shell Themes on page 3-47) or by tapping on the Desktop icon **Kiosk Shell** (see The Kiosk Desktop Shell on page 2-25).

•   In the *Control Panel*, choose the **Kiosk** icon.

When opening the *Kiosk* application, the *Kiosk Access* dialog will come up that enables you to either proceed to the *Kiosk Settings* menus, or change from you current Access mode to the other (Administrator or User). The computer must be reset following a change, and a confirmation will appear to enable you to continue or dismiss the change.
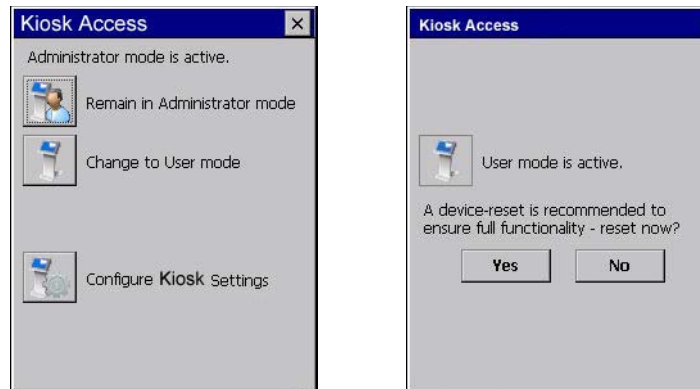
When opening the *Kiosk Settings* option, the following menus will be available:

Figure 3-4 *Kiosk Settings*

Administrator Password

By setting an Administrator Password, you can limit access to various different components on the computer and the system tray icons for security. The default security setting allows User access to all options, therefore restrictions and settings can be configured without setting a password.

✓ **NOTE** If a setting or restriction is configured without setting an Administrator password, the following message is displayed: "!Administrator password is currently not set." Once a password has been set, the message will disappear.

When an administrator password is set, the restricted options are accessed using a key combination. If a password has been set, the user would be prompted for the password.

The option *Show Password* changes the displayed password from hidden (***) to readable.

Shell Settings

The Shell Settings application has two menus: *Applications* and *Advanced*.

Applications
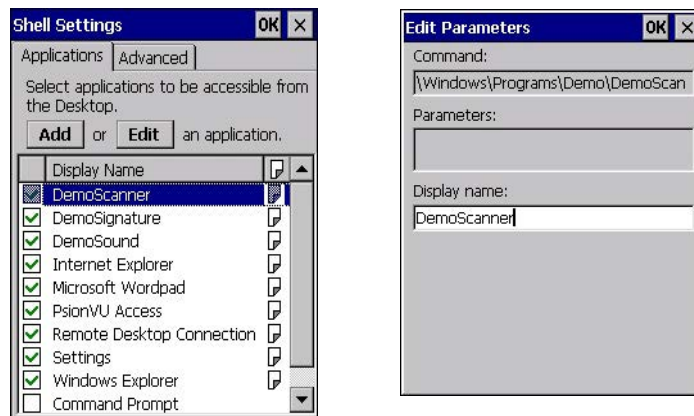
The Applications menu lists all the applications installed on the computer, alphabetically. The items checked in this view are shown on the Desktop.

The *Add* and *Edit* buttons allow you to search for and add an application to the list of items in the selection window. You can add a maximum of 18 applications, after which the Add option will be greyed out and the following message is displayed: "!Maximum 18 entries reached."

When you select an application and tap on Edit, you will see fields for Command, *Parameters*, and *Display Name*.

- **Command:** The *Command* field is prefilled with the path and name of the executable (*.exe*) or corresponding link (*.lnk*). If the selected file can't be found (e.g. external memory card has been removed, files have been deleted), a message will be displayed at the bottom of the screen: *These files cannot be found.*

- **Parameters:** The *Parameters* option provides the option of adding extra parameters to the application (for *.exe* files only, not *.lnk*). For example, if the Command field is running "pword.exe" (Microsoft Word-Pad), the Parameters field could specify a document to open.

- **Display name:** This is an editable field which is prefilled with the name of the application.

Advanced

The Applications menu allows you to enable or disable some device functions.

Windows Classic Shell
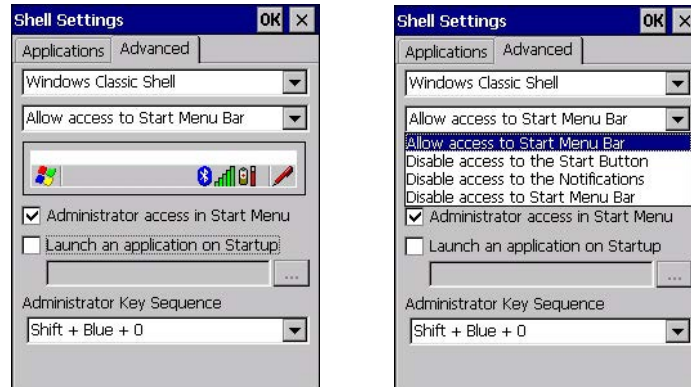
The following options can be enabled or disabled in the Windows Classic Shell Desktop theme:

- **Start Menu Bar**: If disabled, access to both Start Menu and Notifications are disabled. The Notification tooltips will still display. Any changes made will occur after a device reset.

- **Start Button:** If disabled, access to the Start Button and Notifications are disabled. The Notification tool-tips will still display.

✓ **NOTE** If "Disable access to the Start Button" is selected, but the "Kiosk Access by Key Sequence" remains unchecked, you will see the following status-message "!A Key Sequence is required when the Start Button is disabled.", the check box will be auto-checked, and the focus will be set to the key-sequence selection.

Notifications: If disabled, the Notifications tooltips will still display.

Administrator Access in Start Menu: When this box is checked, the *Kiosk Access* program will be shown in the *Start Menu>Programs* list.

The following item is not optional:

- **Administrator Key Sequence:** Sets the key sequence to open *Kiosk Access*.

Other Shell Themes
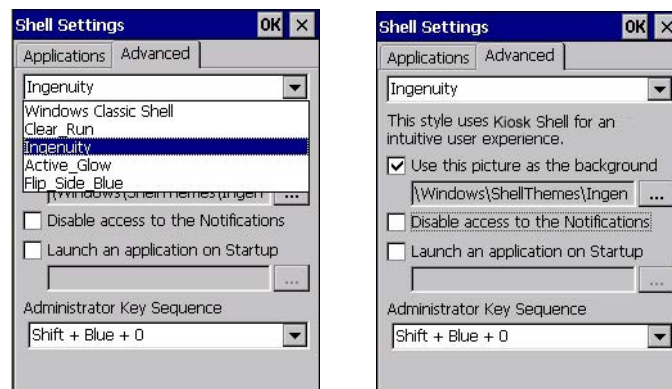
The following options can be enabled or disabled in the Kiosk Shell Desktop themes (shown in the drop-down list as *Windows Classic Shell, Clear_Run, Ingenuity*, *Active_Glow*, and *Flip_Side_Blue*):

✓   **NOTE**   The Desktop theme can be changed from the default Windows Classic Shell to one of the Kiosk themes shown here — but by tapping on the Desktop icon *Kiosk Shell* (see The Kiosk Desktop Shell on page 2-25), the "Ingenuity" theme is automatically loaded. The computer must be reset in order for the shell to change.

- **Use this picture as the background:** You can select a picture as the Desktop background.
- **Notifications:** If disabled, the Notifications tooltips will still display.
- **Launch an application Startup:** A window is displayed listing all of the installed and added applications. Any applications selected will startup after a reboot.

The following item is not optional:

- **Administrator Key Sequence:** Sets the key sequence to open *Kiosk Access*.

Restrictions

This section deals with items that are by default available to users but can be restricted by an administrator.

Advanced

The Advanced menu lists the system features you can restrict or block.

Notifications

The Notifications menu allows you to block or disable notifications.

Control Panel Settings

In these menus you can set which applets and tabs you want to *Hide* in Control Panel, and which applets and tabs will be *Accessible* as a shortcut icon from the Desktop.

- You have the option of setting the entire applet or specific tabs within the applet as hidden or accessible. Any applet that can't be set is greyed out.
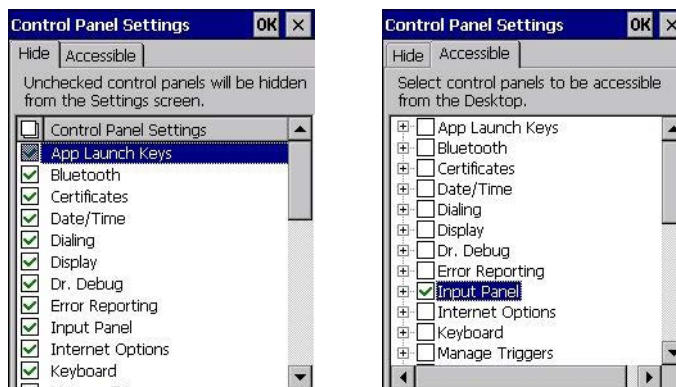
- You can add a maximum of 18 applications, after which the following message is displayed: "!Maximum 18 entries reached."

Import/Export to File

This option enables you to *Export* your settings file (*.xml*), and save it in the location of your choice. In addition, an Administrator has the option to *Import* these settings from one device to multiple devices *of the same operating system*.

⚠   *IMPORTANT*   A copy of this file should also be saved in a central repository for all our .xml files with a predefined name so that our other utilities can locate it.

Tapping on the **Export** button will display a "Save As" Export Settings dialog, with the default name *Kiosk_Settings.xml*, which the Administrator can change even after it has been saved.

The *.xml* file contains all of the Kiosk configured settings, including the *Administrator Password*. When the file is imported to a device, the new password is applied immediately.

- Whether choosing to import or export files, the same file location options under *My Device* will be listed. Following the action, a message stating the success of the operation and the location of the file will be displayed.

- With the exception of the password, changes made to settings will take effect only after a warm reset. If further changes to the configuration are made, they will overwrite the changes caused by the import operation. After importing a file, a dialog will appear to enable you to reset now or later.

Remote Desktop Connection

Remote Desktop Connection, located in **Start>Programs**, is an Omnii application used to connect to a Windows Terminal Server so that you can run a "session" on the Server machine, using the Omnii (Windows Embedded CE device).

Go to the following website to find information about setting up this connection:

http://www.microsoft.com/en-us/download/default.aspx

or contact support services. Locate the office closest to you at: http://www.motorolasolu-tions.com/US-EN/Support/Psion+Services+and+Support?WT.mc_id=psion__support_

Scanners

The *Scanners* icon in the *Control Panel* provides dialog boxes in which you can tailor barcode scanner config-uration and choose the barcodes your scanner will recognize. The parameters are preset with the default settings of the decoded scanner installed in the unit.

✓   ***NOTE***   To enable a newly-installed scanner, press and hold down the [FN] key and the [Power] key simultaneously for a minimum of three seconds.

You can test the scanner to ensure that it is operating properly by pointing the scanner window at a barcode that your scanner was designed to decode — for example, a 1D UPC barcode or 2D barcode. Press the **SCAN** key or pistol trigger, and check for a valid decode on the hand-held screen.

For a listing of available scanners and their specifications, please refer to Appendix E: Omnii Specifications.

Barcodes
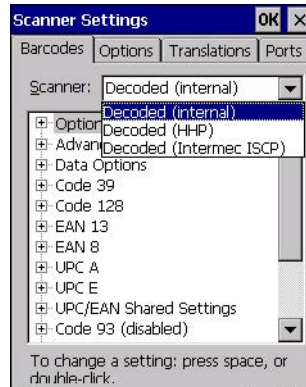
Scanner

The drop-down menu to the right of the *Scanner* option allows you to choose configurations for one of the following scanner types, depending on what is installed in/on your hand-held: *Decoded* (internal), *Decoded* (Intermec ISCP), *Imager* and *Non-decoded*.

The symbologies listed in the *Barcodes* tab change to reflect the scanner you choose and the barcodes it supports. Always defer to your barcode scanner's programming manual when in doubt about the availability or settings for any parameter.

✓ *NOTE* Your Omnii comes preconfigured from the factory for internal scanner types. The type of scanner installed can be determined from the *System* icon in the Control Panel, under the System Properties tab.

⚠ *IMPORTANT* To improve the decode speed and performance, enable (set to on) only those codes that are required by the application.

For information on configuring the barcode symbologies, see Appendix C: Scanner Settings.

Keep in mind that some barcode types are only available when an internal imaging scanner is installed. All internal scanners can be configured using these dialog boxes.

Restoring Default Settings

If you want to restore the factory defaults after making changes, the defaults can be applied to a selected parameter, sub-tree of parameters or all scanner parameters.

• Press and hold on a symbology (e.g., Code 128) to display a pop-up menu.
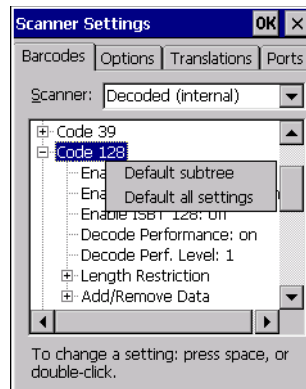
- Choose **Default subtree** to reset only the parameters in the symbology you selected, or choose **Default all settings** to reset all scanner parameters to default settings.

To reset a single parameter to its default setting:

- Press and hold on the parameter you want to reset.
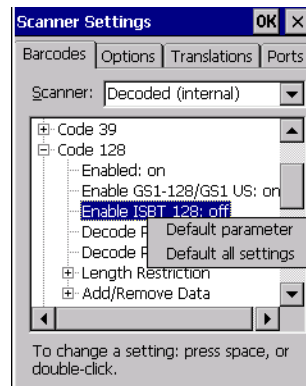
- Choose **Default parameter** to reset the parameter to the default setting.

Options

This tab allows you to tailor the double-click parameters, display, and data handling options associated with your scanner.
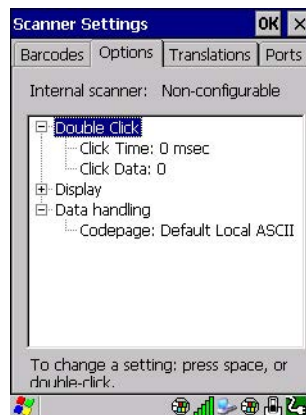
Double Click Parameters

Click Time (msec)

This parameter controls the maximum gap time (in milliseconds) for a double-click. If the time between the first and second clicks of the scanner trigger is within this time, it is considered a double-click. The allowable range is 0 to 1000. A value of zero disables this feature.

A double-click produces different results depending on whether or not a value is assigned in the "Click Data" parameter. When a value is not assigned for the "Click Data", double-clicking the scanner trigger overrides the target dot delay set in the "Dot Time" parameter and initiates a normal scan sweep. If a value is assigned for the "Click Data" parameter, double-clicking the scanner trigger inserts the "Click Data" value rather than initiating a scan.

Click Data

This parameter determines which character is sent to the application installed in your Omnii following a double-click. A dialog box appears, asking that you press the key you want to insert. The ASCII/Unicode key value of the keypress is displayed.

Pressing the [ESC] key in this dialog box resets the data to zero.

Display Parameters

Scan Result

When this parameter is enabled, the type of barcode and the result of the scan appear on the screen. Note that this information is only displayed after a successful decode and is visible only while the scanner trigger is pressed. When the trigger is released, this information is cleared from the screen.

Scan Indicator

When this parameter is enabled, the laser warning logo appears on the display whenever the scanner is activated.

Scan Result Time (sec)

The value assigned to the *Scan Result Time* parameter determines how long the scan results of a successful scan are displayed on the screen. Time is measured in seconds, and a value of 0 (zero) disables the parameter. When you choose this option, a dialog box appears where you can enter a value.

✓ *NOTE*   To remove the scan result from the screen before the "Result Time" has expired, point the scanner away from the barcode and press the trigger.

Good Scan Beep and Bad Scan Beep

These parameters determine whether or not the Omnii emits an audible scanner beep when a good (successful) scan or a bad (unsuccessful) scan is performed. Set these parameters to either **on** to enable the beeper or **off** to disable it.

Multiple Beep Tones

You can set the audible scanner beep to emit a series of three beeps instead of one. Set this parameter to **on** to enable the multiple beep tones.

Good Scan Vibrates and Bad Scan Vibrates
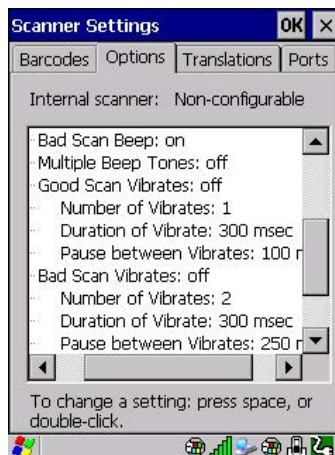
These parameters determine whether or not the Omnii creates a vibration when a good (successful) scan or a bad (unsuccessful) scan is performed. Set these parameters to **on** to enable the vibration. You can set the *Number* and *Duration* of vibrations, as well as the *Pause* between vibrations. The screen above shows the default settings.

Soft Scan Timeout

This parameter is used by the SDK "Scan" function (soft-scan: starting a scan session via the SDK function, instead of a physical user trigger press). The value assigned to this parameter determines the soft-scan timeout from *1* to *10 sec* (default is *3 sec*).

Scan Log File

If this parameter is enabled, the input barcode and the modified/translated output barcode are logged in the file *\Flash Disk\ScanLog.txt.* Keep in mind that if *Scan Log File* is enabled, there is a slight performance reduction when performing multiple scans since the log file is written to persistent storage.

Data Handling

Codepage

If you are encountering a scan failure because there is an unrecognized language character in the barcode, the Codepage option may correct the problem by allowing the *ISO-8859-1 Latin 1* codepage to be used. The default value is *Default Local ASCII*.

⚠️   *IMPORTANT*   Do not change this parameter from the default setting unless you are certain that it will correct your scan problem.

Translations

The *Translations* menu allows you to define up to 10 cases, each consisting of up to 10 rules in sequential order. Only one case will be applied to a barcode and a case will only be applied if all rules specified in the case are successful — if a rule within a case fails, the entire case fails.
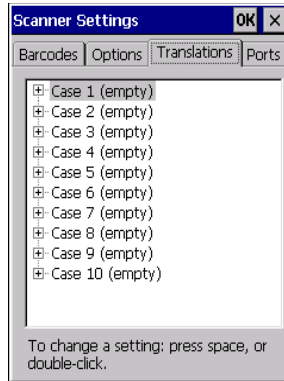
- In the *Translation* menu, tap on the **Case #** to create rules.
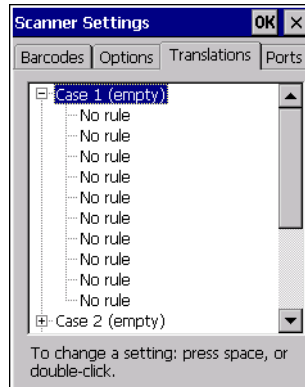
- Tap on the **No rule** drop-down menu to display the rules.
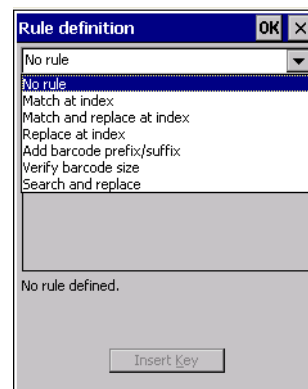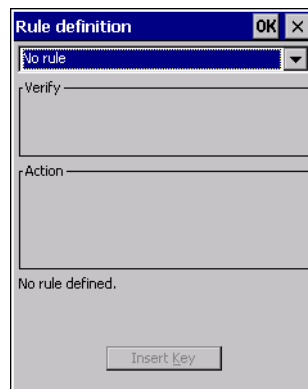
When you choose a rule, an associated screen is displayed in which you can define the rule.
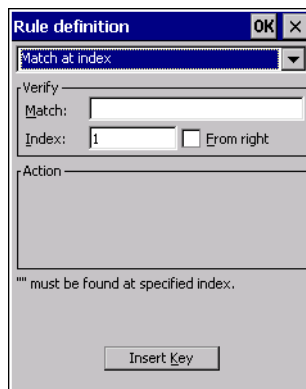
Case Rules

The case rules are defined as follows:

- **No rule** — ignored.

- **Search and replace** — replaces all instances of the match string. (Note that this rule cannot fail.)

- **Match at index** — matches the match string at a specified index.

- **Match and replace at index** — matches the match string at a specified index and replaces/changes it.

- **Replace at index** — replaces/changes unspecified data in a given range.

- **Add barcode prefix/suffix** — adds a global prefix or suffix.

- **Verify barcode size** — verifies the barcode size. This rule should generally be assigned first, before creating subsequent rules.

✓ **NOTE** Keep in mind that the effects of previously applied rules must be taken into account when creating subsequent rules. For example, if the barcode size is important, it should be checked before any rules that might change the size are applied.

Translation information about the status of each case/rule is displayed in the scan log file (see Scan Log File on page 3-54) when enabled. This is useful if a case fails, and you are trying to determine why a rule is failing.

Ports

Figure 3-5   *Console and Port Replicator Port Settings*
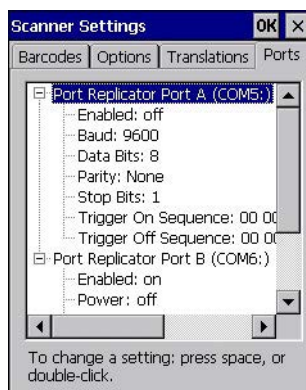
While you cannot configure the scanner, you can configure communications with a serial decoded scanner using the options in this tab.

Use these settings to ensure that the communication ports on the Omnii match the settings of the serial devices to which they are connected. If the settings do not match exactly, the devices may not function. Note that some devices can auto-detect serial port settings (such as baud rate), and in this case the Omnii will dictate the settings. Baud rates often have a direct impact on performance — they should be set as high as possible while still ensuring reliable communication.

Port Replicator Port A (COM5) and Port B (COM6)

Port Replicator Port A (COM5) and Port B (COM6) are standard RS-232 DE-9 DTE ports on the Omnii port replicator module, available on some snap modules and cradle types.

Enabled

This parameter must be set to ON in order for the Omnii to recognize the device connected to the Port Replicator 9-pin (COM5).

Power (COM6 only)

Pin 9 on the Omnii COM6 is reserved for 5V power out and is defaulted to OFF. This parameter must be set to ON to enable power to a Snap Module or Vehicle cradle.

Baud

Double-tapping on this parameter displays a pop-up window in which you can choose an appropriate rate of data transfer.

Figure 3-6 *Port Baud Rates*
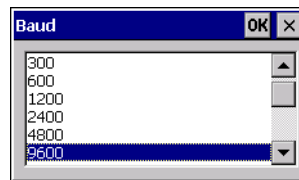
Data Bits

This parameter determines the number of data bits included in each asynchronous data byte. Most devices use 8-bit data bytes. Double-tapping on this option displays a pop-up window in which you can choose either 7 or 8 data bits.

Parity

This parameter determines the type of parity checking used on the data going through the port replicator port. Double-tapping on this option displays a pop-up window in which you can choose the appropriate parity.
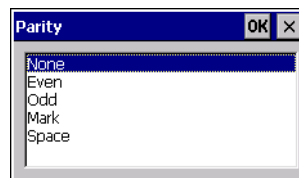
Stop Bits

This parameter specifies the number of stop bits — 1, 1.5 or 2 — used for asynchronous communication.

Trigger On Sequence And Trigger Off Sequence

If a SICK scanner connected to an Omnii port requires a serial stream of data bytes to trigger the scanner *on* and another to trigger the scanner *off*, the *Trigger On Sequence* and *Trigger Off Sequence* parameters allow you to define these serial streams.
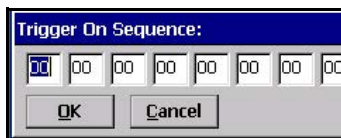
Double-tapping on *Trigger On Sequence* or *Trigger Off Sequence* displays a screen with a hex array of 10 elements.

These parameters work in conjunction with *Manage Triggers* sending on and off data streams to the trigger module you assigned. For example, suppose you launch *Manage Triggers* and choose *Decoded Scanner* as the *module to trigger*. Next, you assign a trigger key — for this example, . (period). To define the serial stream of data bytes to control the *on* and *off* function of the *trigger key*, enter a hex value in the *Trigger On Sequence* and the *Trigger Off Sequence* fields. When you press the trigger key, the *Trigger On Sequence* is sent and when you release the trigger key, the *Trigger Off Sequence* is sent, turning the trigger key *on* and *off*.

Screen Rotation

This option allows you to determine how your Omnii screen will behave depending on how the unit is oriented.

- Tap **Start>Settings>Control Panel**, and then tap on the **Screen Rotation** icon.
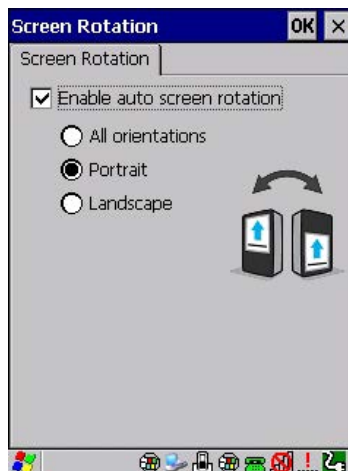
To Maintain Screen Orientation

Choose either the **Portrait** or **Landscape** radio button and uncheck the **Enable auto screen rotation** box. Your screen will appear in that mode without rotating when the Omnii is moved about.

To Enable Screen Rotation

Check the *Enable auto screen rotation* box and the orientation you want. Your screen will flip vertically (Portrait mode) or horizontally (Landscape mode) as you rotate the Omnii. If you choose **All orientations**, the screen rotates to portrait or landscape to match the orientation of the Omnii.

✓   **NOTE**   Your screen orientation option starts once you press **OK** and then exit Control Panel.

The Control Panel screen itself is always in upright Portrait mode.

Storage Manager

The Storage Manager allows you to view information about the storage devices that are present in the Omnii, such as SD-MMC flash cards and Compact Flash cards.

Storage
Manager

Formatting a Memory Card

Formatting a memory card bulk-erases it. Once a card is erased, partitions may be created in it, similarly to those on a hard drive. Memory-card devices are normally mounted (made available to the system) automatically when they are inserted. They must be dismounted before they can be formatted.

To format an entire memory card:

1. Select **Start> Settings>Control Panel**.

2. In Control Panel, double-click on the **Storage Manager** icon. The Storage Manager menu opens:

1. Select the memory card from the drop-down list.

2. Press the **Dismount** button to dismount the memory card. All partitions on the card will be dismounted.

3. Press the **Format** button to format the memory card.

All partitions and information on the card will be erased during the formatting process.

Creating Partitions

Once the card is formatted, new partitions can be created in it. The default is to create one partition that occupies the whole card, but a card can be divided into more than one partition if desired. Each partition appears as a separate folder in Windows Explorer.

To create new partitions:

1. Press the **New** button next to the *Partitions* list box. The Create New Partition dialog box appears:
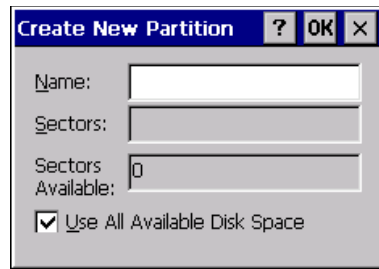
2. Type a name for the partition.

3. If more than one partition is desired, uncheck the *Use All Available Diskspace* check box, then specify the desired number of sectors to be used by the partition.

4. Press **OK**. The new partition appears in the *Partitions* list.
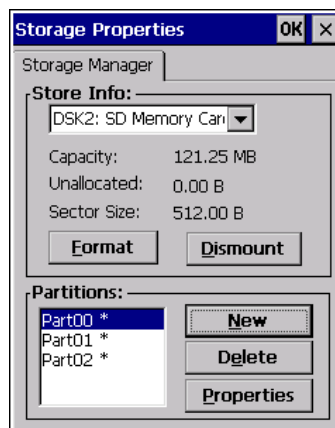
The new partition is automatically mounted. This is indicated by an asterisk (*) next to its name in the partition list. Any unallocated space on the card is indicated at the left, and additional partitions can be created in it.

Partition Management

Partitions can be individually dismounted, mounted, deleted, or formatted as well. These and additional tasks are available from the *Partition Properties* dialog:

To dismount a partition:

1. Choose the desired partition.

2. Tap the **Properties** button. The *Partition Properties* dialog appears.

3. Tap the **Dismount** button. The partition is dismounted. The asterisk disappears next to its name in the partitions list.

To delete a partition:

1. Select the desired partition.

2. Tap the **Delete** button. A warning dialog appears.

3. Tap the **OK** button. The partition is deleted.

To format a partition:

1. Choose the desired partition.

2. Tap the **Properties** button. The *Partition Properties* dialog appears.

3. Tap the **Dismount** button. The partition is dismounted. The asterisk disappears next to its name in the partitions list.

4. Tap the **Format** button. The *Format* dialog appears:
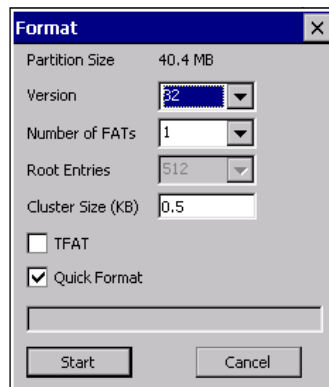
5. Choose your format options. These options include:

   • Version of file system (FAT-16, for devices holding up to 4 GB; or FAT-32, for devices containing up to 32 GB).

   • Number of FATs (File-Allocation Tables).

   • Number of entries allowed in the root directory.

   • Cluster size (.5 KB to 64 KB).

   There are also two check boxes, which govern:

   • Whether to use the transaction-safe FAT file system (TFAT). This file system keeps multiple copies of the file-allocation table, changing one while maintaining another as a backup.

   • Whether to perform a quick format. Quick formatting removes all reference to data in the partition without erasing the actual partition. The partition will be treated as empty, and new data will overwrite it.

6. Tap **Start**. The partition is formatted.

To mount a partition:

1. Choose the desired partition.

2. Tap the **Properties** button. The *Partition Properties* dialog appears.

3. Tap the **Mount** button. The partition is mounted. The asterisk appears next to its name in the partitions list.

The Partition Properties dialog has buttons for additional functions. Partitions can be defragmented, and their file structure can be scanned.

Stylus Properties

✓ *NOTE*   Touchscreen calibration may not be enabled on your unit. If your screen appears to require recalibration, contact your supervisor.

- In the *Control Panel*, choose the **Stylus** icon.

Stylus

Double-Tap

- In the *Double-Tap* menu, follow the directions to tailor the sensitivity of the stylus when you tap on the touchscreen.
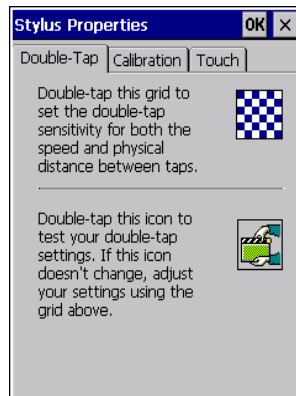
Calibration

Touchscreens rarely require recalibration. However, if your touchscreen has never been calibrated or if you find that the stylus pointer is not accurate when you tap on an item, follow the directions below.

- Choose the **Calibration** tab, and then tap on the **Recalibrate** button.

- Follow the directions in the *Calibration* tab to recalibrate the screen You will be prompted to save the calibration data.

⚠ *NOTE*   If you do not receive a prompt to save your data, there could be a problem with your touchscreen hardware. Contact your representative.

Touch

This tab allows you to disable the touchscreen.

• Choose the **Touch** tab. Select the check box next to *Disable the touch panel*.

System Properties

This program identifies the computer software and hardware components, indicating which components are installed, their identification, version or part numbers, and whether they are enabled or disabled.

• In *Control Panel*, choose the **System Properties** icon.
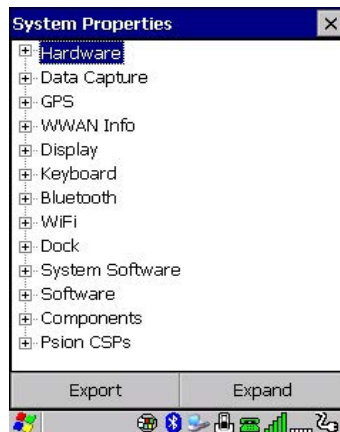
• By choosing the *Export* button, you can create a log (*SystemProperties.xml*) of your current components, which will be placed in the *My Device* folder in Windows Explorer.
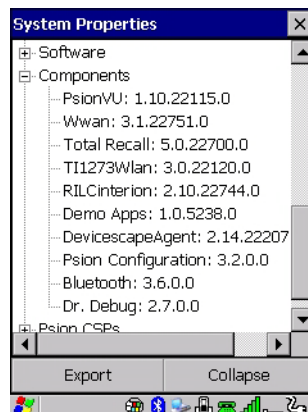
• Instead of expanding each section of items individually, you can also choose to open all the lists at once by choosing the *Expand* button, which will then change to a *Collapse* button to enable you to collapse all the sections as well.

Total Recall

Total Recall is a utility we developed to maintain applications and settings during a cold boot, as well as clone settings to other devices. This utility creates a restore point of a device at a known state. This can be used as a backup of the device (the administrator can clean the terminal and restore the profile at any time), or a clone (the administrator can store different configurations for different uses to clone to other hand-held computers).

✓   ***NOTE***   Total Recall works differently (e.g. restore on cold boot or on clean boot) on different OS platforms and versions (e.g. Windows CE 5.0, 6.0, Windows Mobile, Windows Embedded Hand-held). For detailed information and other updates on Total Recall information, please go to the Ingenuity-Working website at:

http://community.psion.com/knowledge/w/knowledgebase/total-recall.aspx

• In the *Control Panel*, choose the **Total Recall** icon.
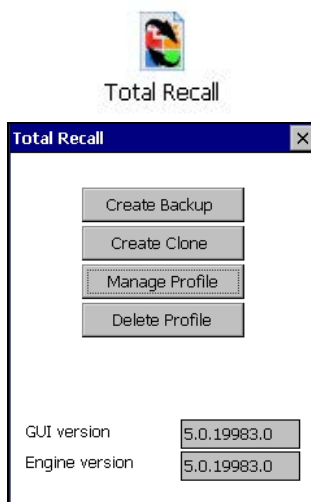
In the start up screen, you can choose from four options: *Create Backup*, *Create Clone*, *Manage Profile,* and *Delete Profile*.

Creating a Backup

• Tap on the **Create Backup** button to begin the process.

This dialog box displays the Profile Name and the storage destination for the profile file.

• In the *Profile Name* field, type a name for a profile.

- If you want to choose another location for your backup file (optional), tap on the **[...]** button to the right of the *Profile Location* field and choose one of a number of folders.

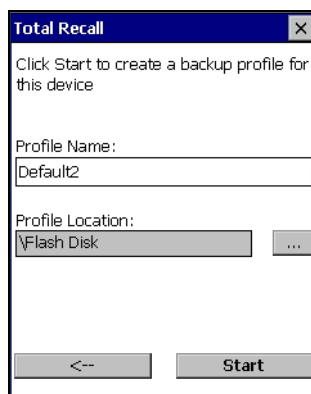⚠️ *IMPORTANT*   Any profile not stored in persistent memory (Flash Disk, external USB drive) will be erased during a clean boot, therefore you should store profiles on a persistent drive.

When performing an autorestore, the program only searches for the profile located in the \Flash Disk\TotalRecall folder. If you store your profile anywhere else it will not be restored. Only one profile can reside in that folder.

- Tap on **Start**. A backup of the current settings will be created and saved to the specified location. The unit will then reboot.

To view profiles and choose restore options, refer to .

Creating a Clone

Cloning allows you to copy settings or configurations from one computer to another. There are two types of clones to choose from: a *Full Clone* and a *Settings Only Clone*.

A *Full Clone* contains all files, most of the registry, and the settings files.

⚠️ *IMPORTANT*   The target device for a Full Clone MUST have the same model type and OS build as the source, otherwise problems can occur. For example, if the target device has a newer build of the OS, the new build may have a different set of registry keys that may conflict with the source.

A *Settings Only Clone* can be copied to a wider array of devices, but it should not be used as an autorestore profile.

- Tap on the **Create Clone** button to begin the process. Your Omnii model type and OS will be identified in the cloning statement to ensure that you target devices of the same type. Give the clone profile a name and location, then tap on **Next**.

- In this menu, select **All** for a *Full Clone*, or **Selected Options** for a *Settings Only Clone*. If you choose *Selected Options*, a menu will open to enable you to decide which options you want cloned.
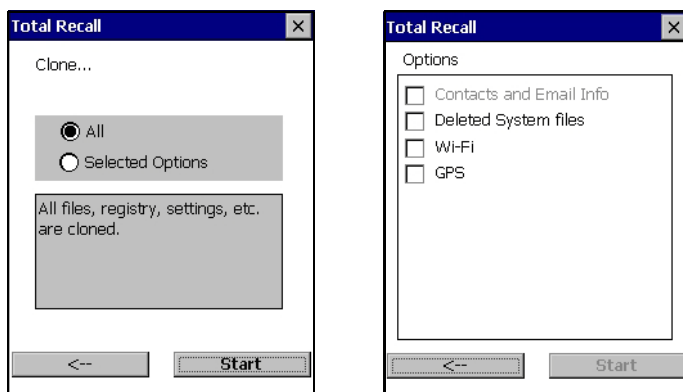
Managing Profiles

You can view profiles and choose profile options from the menus in this section.

Viewing a Profile

- Tap on the **Manage Profile** button to see your list of profiles. Highlight a profile, and then you can choose to **View** the Profile Summary and go on to the next menu, Profile Details.

List of profiles   Profile Summary   Profile Details
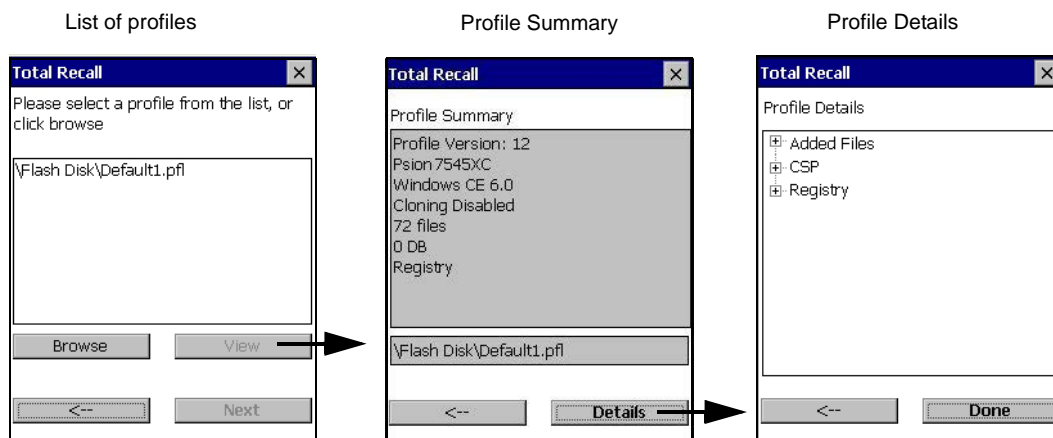
Profile Options

- Tap on the **Manage Profile** button to see your list of profiles, as shown above. Highlight a profile, and tap on the **Next** button to choose from options to restore or clone the profile. You can choose from four profile options: *Restore Now*, *Set for Autorestore*, *Upload to A.R.C.,* and *Clone to USB*.
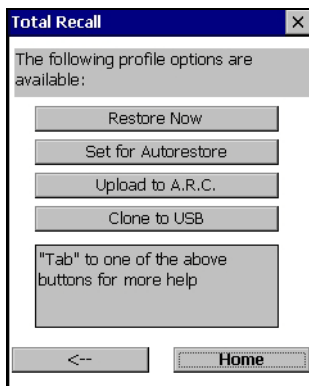
- Next, tap on the option button you want to use:

- *Restore Now* – restores the profile immediately. If you are restoring a profile that is a backup or Full Clone, the computer will clean reset first; if the profile is a Settings Only Clone, it will not.

- *Set for AutoRestore* – creates a profile that is automatically restored following a cold reset or a clean start. The profile is stored in the *\Flash Disk\TotalRecall* folder.

⚠️ *IMPORTANT*   After setting an autorestore profile, that profile will overwrite any other profile already placed in the \Flash Disk\TotalRecall folder.

In an autorestore, Total Recall only restores the profile located in the \Flash Disk\TotalRecall folder. If you store your profile anywhere else it will not be restored.

- *Upload to A.R.C* – uploads the profile to the Active Remote Configuration server. After you tap on **Send**, a message will come up either confirming that the upload was complete or that the connection to the server failed.
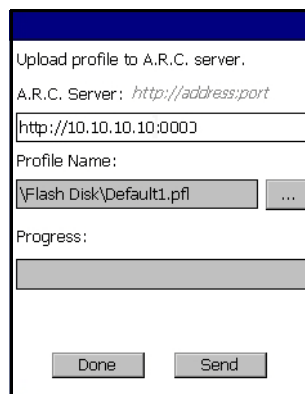
- *Clone to USB* – writes a clone of the profile to the USB drive. After you tap on the button, a message will come up either confirming that the USB drive is ready for deployment, or that it is not available.

- When you are ready to install the profile on another unit, turn on the next computer to be cloned and insert the USB key. The profile will be automatically installed to the computer *\Flash Disk\TotalRecall* folder. There is a short delay in deployment so that you can cancel the process if needed.

USB drive prepared for cloning
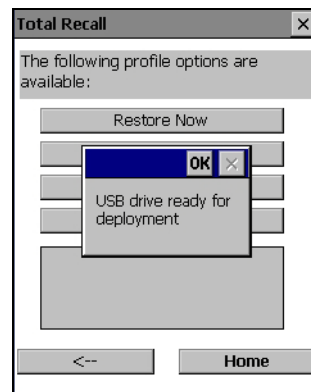
Autorun installation on next Omnii
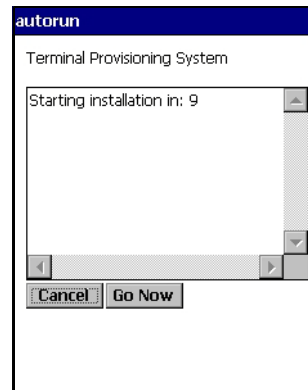
Deleting a Profile

- In the *Total Recall* home screen, tap on **Delete Profile**.

- In the next screen, locate your backup file, and tap on **OK**.
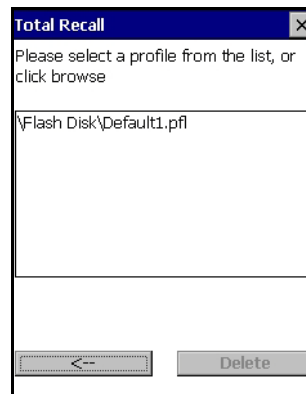
A warning pop-up screen appears asking if you're certain that you want to delete this file.

- Tap on **Yes** to delete the file.

TweakIt

TweakIT
Settings

This utility allows you to *tweak* or adjust *Advanced* system settings (interface, network, servers, driver, and radio) and provides a *Registry Editor*.

Draft #4 for review

Advanced

Advanced CE Services Settings
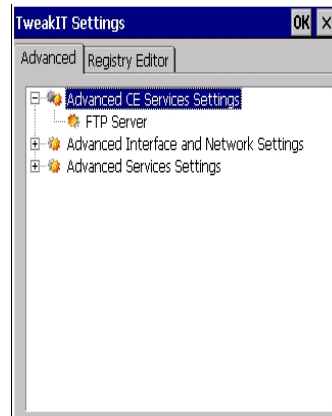
FTP Server

This option is enabled by default to allow file transfers. Keep in mind that data transfer in either direction is restricted to the Temp folder — that is, data are always loaded from the *FTP Server* to the *Temp* folder and from the *Temp* folder to the *FTP Server*.

If this option is disabled, a warm reset must be performed to accept the change.

Advanced Interface and Network Settings
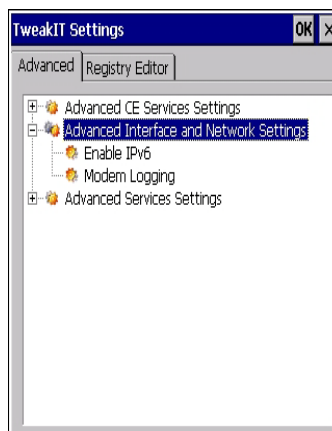
Enable IPv6

This option allows you to enabled Internet Protocol specification, version 6, that has been published to enable 128-bit IP addresses (replacing version 4).

Modem Logging

When this option is enabled, the Omnii logs AT commands (e.g., dial-out information, password string, etc.) that the administrator can monitor for debugging purposes. Modem commands are stored in: \MdmLog.txt.

Advanced Services Settings
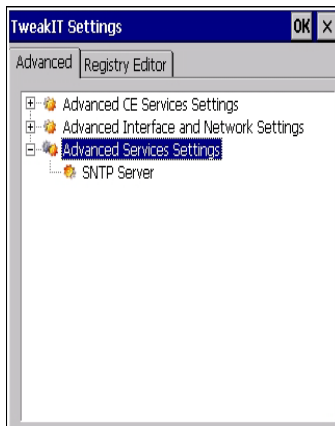
SNTP (Simple Network Time Protocol) Server

The *SNTP Server Name* typed in this dialog box is used to synchronize Omnii time with the server time. A warm reset must be performed once the server name as been entered.

Registry Editor
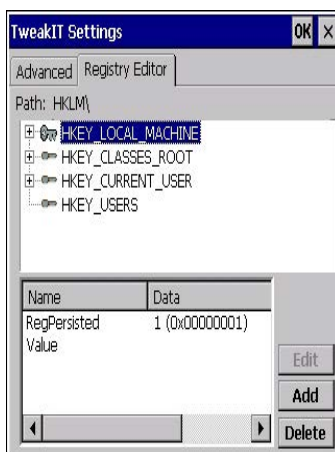
This option is reserved for senior administrators who have a strong understanding of registry keys and values.

⚠️   *WARNING!*   **Careless registry editing can cause irreversible damage to the Omnii.**

Voice – Using the WWAN Phone Dialer

If the WWAN modem is installed and enabled, the *Phone icon* and the *GSM signal strength icon* will appear automatically on the taskbar.

- Double click on the **Phone icon** to access the phone dialer.

✓   *NOTE*   On 55- and 66-key Omnii keyboards, you can also press the [Talk] key to display the phone keypad providing it has been activated. The [Talk] key is labelled with a green telephone receiver icon. Refer to Sending and Ending Calls Using the Omnii Keyboard on page 3-71 for details.

You can also follow the steps below to access the phone dialer:

- To access the dialer, tap on **Start>Settings>Control Panel**.

- Tap on the **Wireless WAN icon**, and then tap on the **Voice** tab.

The *Voice* tab displays a phone dialer used to dial phone numbers. The *Voice* menu provides commands which allow you to manage your phone contacts, view your phone history, and so on.

Dialing a Number

To make a phone call:

- Type the recipient's phone number in the phone number entry field.

    Send button – tap to dial the number you typed.

    Backspace button – tap to erase characters in the phone number entry field.

    End button – tap to disconnect the phone call.

    Mute button – During a phone call, tap to mute sound transmission. Tap again to restore sound.
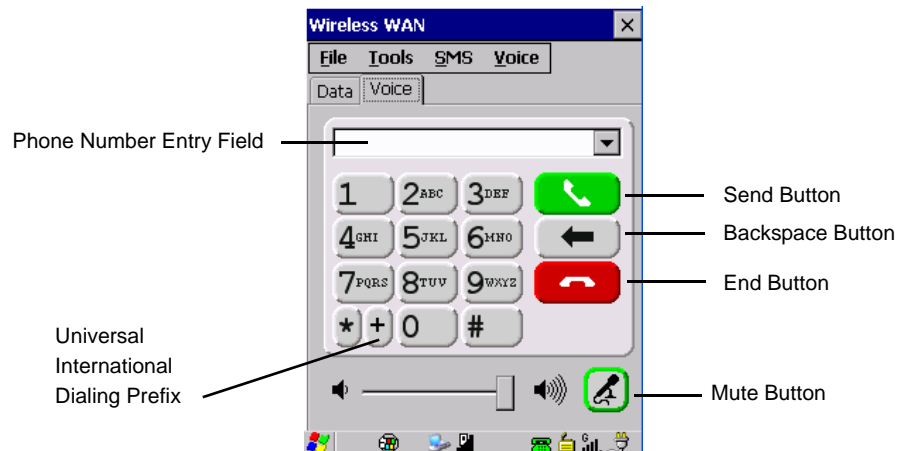
    + button – When making an international call, the + sign can be used as a universal substitute for any international dialing prefix and is guaranteed to work worldwide. The entry sequence must be as follows: *+ country code* followed by *phone number.*

    Example: A standard phone number: 011 36 30 275 28466 using the + substitution is typed as follows: +36 30 275 28466

    The + symbol replaces the universal dialing prefix 011.

Sending and Ending Calls Using the Omnii Keyboard

The 55-key and the 66-key Omnii keyboards come equipped with phone keys — each has a [Talk] and an [End] key on the physical keyboard.

- Press the **[Talk]** key to answer a call or to display the onscreen phone keypad so you can initiate a call.

- Press the **[End]** key to terminate a phone call.

[Talk] key   [End] key

Receiving an Incoming Call

To answer an incoming call:

- Tap on the **[Talk]** button; it's labelled with a *green* phone receiver.
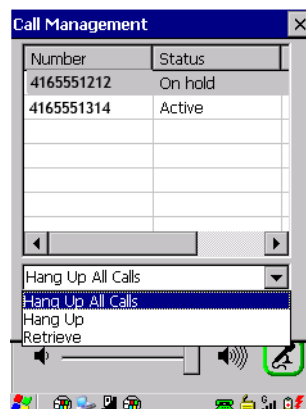
Voice Menu

This menu allows you to manage calls, view your call history, and if required, assign a call forwarding service to your hand-held.

Call Management

The *Call Management* option only becomes available in the *Voice* menu when at least one phone call is either *On hold* or *Active*. When you choose this command, the currently active phone call is listed in a dialog box.

Using the drop-down menu, you can choose to:

Hang Up All Calls - This option only appears when more than one call is listed.

Hang Up - This option disconnects only the call you've highlighted in the list.

Hold - This option places the call you've highlighted on hold.

Retrieve - This option is only available when a call is on hold, and choosing it retrieves the call you have highlighted from hold.

- In the *Call Management* list, highlight the phone number to which you'd like to apply a command.

- Choose a command from the drop-down menu, and tap on **Execute** to carry out the command on the highlighted phone number.

If you have two active calls on your hand-held, one *On Hold* and one *Active*, you can set up a conference call between yourself and the other callers. To set up a conference call:

- Highlight the phone number that is currently *On Hold*, and choose **Retrieve**. Tap on **Execute**.

Both calls will be listed as *Active* in the *Call Management* list. All calls are now conferenced so that you as well as your callers can speak to one another.

Call Lists
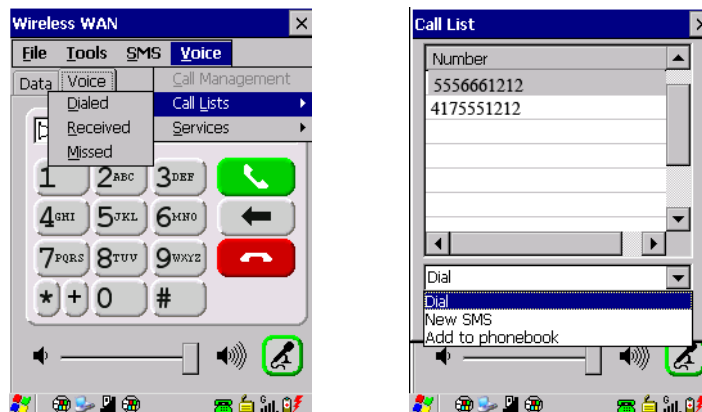
The *Call List* command manages your call history, listing calls you've *Dialed*, *Received* and *Missed*. When you choose one of these commands, a dialog box lists the phone numbers.

A drop-down menu provides a list of commands you can execute on a phone number in the *Call List*. You can choose to:

- Dial the number,

- Send a New SMS, or

- Add to phonebook to add the highlighted phone number to your phonebook. (Refer to for details additional details about the Phonebook.)

In the *Call List*:

- Highlight the **phone number** with which you want to work.

- Choose a command in the drop-down menu.

- Tap on the **Execute** button to carry out the command.

Services

The *Service* menu offers several options for your hand-held to customize the behaviour of your phone. You can, for example, bar incoming calls, tailor to whom your caller ID will be transmitted, set up call forwarding, enable the hearing aid service, and so on. If you choose an option, it may take a number of seconds for your unit to read the network settings.

✓ **NOTE** Keep in mind that some services may not be supported by your network, or they may not have been subscribed to.

• Tap on the **service** you want to enable.

The *service* dialog boxes allow you to tailor your available services to meet your requirements.

Voicemail Access

If your service includes *Voicemail,* choosing this option for the first time displays a screen in which you can enter your voice mail provider phone number.

File Menu – Phonebook Management

Tapping on the *File* menu provides access to your *Phonebook.*

Phonebook

The *Phonebook* allows you to store frequently used phone numbers. When no numbers have been added to your phonebook, the only command available to you is *New Entry*.
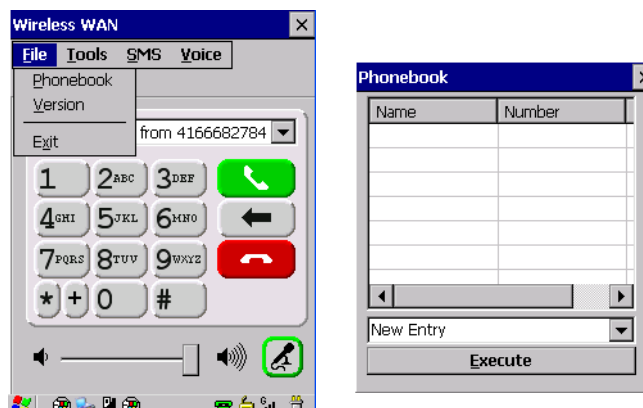
To add a new phone number to your phonebook:

• Choose *New Entry* in the drop-down menu, and tap on **Execute**.

- Type the name corresponding to the phone number you want to add.

- Press **Tab** and type the phone number you want to store.

- Tap in the check box next to *Store in SIM* to save the phone number there, or leave this check box blank if you prefer not to store the number on the SIM card.

- Tap on the **Execute** button to save the phone number in your *Phonebook*.

Phonebook entries are saved even after you exit Wireless WAN.

Once you've added a phone number to the *Phonebook*, a list of new commands is available in the drop-down menu.

You can choose one of the following:

- *New Entry* to add another phone number,
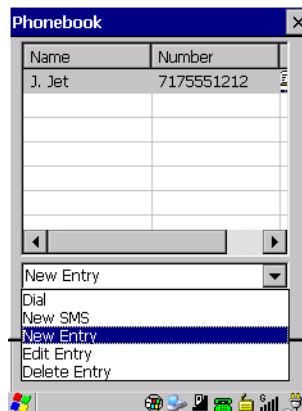
- *New SMS (Short Message Service)* to send a new SMS,

- *Edit Entry* to change an existing name and/or phone number, *or*

- *Delete Entry* to erase an existing phone entry.

In the *Phonebook*:

- Highlight the entry with which you want to work.

- Choose a command from the drop-down menu, and tap on **Execute** to carry out the command.

Volume & Sounds Properties

The Omnii supports several audio options, including *Bluetooth*. The beeper is used for the standard sounds: key clicks, screen taps, and scanning. The optional rear speaker can be used for system (Windows) sounds and *.wav* files. When a rear speaker is absent, those sounds are routed to the front receiver.

- In the *Control Panel*, choose the **Volume & Sounds** icon.

Volume Adjustments
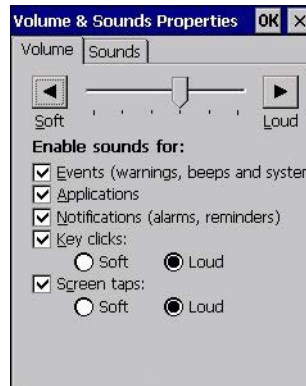
- Slide the volume button to the left to lower the volume or to the right to increase the volume.

- Under the heading *Enable sounds for*, enable the conditions under which you want the hand-held to emit a sound.

Sound Adjustments

This dialog box allows you to assign sounds to identify particular actions. For example, you can choose the sound your hand-held will emit when you close a program and choose another sound for a failed scan, etc.

Wi-Fi Config

The *Wi-Fi Config* application is used to configure the Omnii 802.11a/b/g/n radio for one or more wireless network profiles. A network profile contains settings for SSID (Service Set Identifier) and security options.

✓ **NOTE**   In most situations, the configuration of your 802.11 radio will require parameter setting and access keys from a network administrator.

To launch the *Wi-Fi Config* application:

• Tap on **Start>Programs>Wi-Fi Config**.

The *Wi-Fi Config* screen is displayed.

Wi-Fi Config: Status

The *Status* tab displays information about the wireless network to which the Omnii is configured to connect. When there are no network profiles configured, this tab is not populated.

Disable/Enable Radio: This button toggles between *Disable Radio* and *Enable Radio* depending on whether the radio is turned off or on.

Wi-Fi Config: Configure

• To configure the radio for a wireless network, tap on the **Configure** tab.
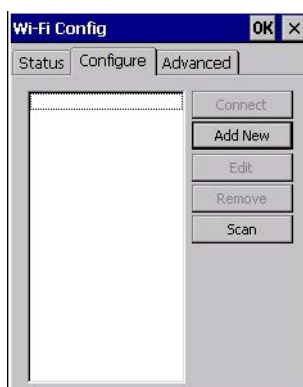
Connect: Used to connect to an already existing wireless network configuration.

Add New: Used to create a new wireless network configuration.

Edit: Used to change values in an already existing wireless network configuration.

Remove: Used to delete a wireless network configuration.

Scan: Used to detect and list available wireless networks. You can highlight a network in the list, and tap on *Add New* to activate the network.

There are two methods available when configuring a radio network — you can either scan for an existing network or manually create a network. If you tap on the **Scan** button, a list of networks detected by the radio is displayed. Highlighting one of the listed networks and tapping on the *Add New* button creates a new profile that is completed based on the security capabilities detected by the radio. You may need to add additional information, depending on your network requirements.

Manually Creating a Network

If you tap on the **Add New** button rather than the *Scan* button, you can create a network manually.

⚠️ *IMPORTANT*   The steps below describe how to manually create a network. Keep in mind that this is intended only as an <u>example</u> and may vary from your own network requirements. If, for example, you are using a different type of security for your network, the fields you complete may not match those described here.

- Enter the **SSID** (Service Set Identifier) for your network.

Authentication Mode

The Omnii supports several classes of authentication — *Open*, *WEP*, *WPA/WPA2 (Personal PSK, Enterprise, CCKM-WPA, CCKM-WPA2)*, and *802.1x with EAP*. Tapping on the *Auth. Mode* menu displays your authentication options.

> ✓ *NOTE*   Each Auth. Mode has a unique *Configure Profile* screen attached to it with fields appropriate to the authorization mode you've chosen.

Open Authentication

Open authentication does not provide security. When this option is chosen, the Omnii will connect to wireless networks which do not use authentication or encryption.

WEP (Wired Equivalent Privacy)

WEP provides static security to prevent others from accidentally accessing your network. If you choose this option, you can specify the type of WEP authentication — *Open* or *Shared*, the WEP security key length — *64 bit* or *128 bit* and the key type — *ASCII* or *Hex*. WEP *Key* fields are also provided where you can specify a 5 or 13 ASCII character sequence or an equivalent 10 or 26 Hexadecimal digit sequence that matches the active WEP key on the access point.

### WPA & WPA2 Personal PSK (Pre-Shared Key)

When PSK is selected, either *WPA Personal PSK* or *WPA2 Personal PSK* — a shared key must be configured on both the access point and the hand-held computer. One of the following can be chosen from the *Encryption* drop-down menu: *TKIP*, *AES* or *TKIP+AES*.

802.1X, WPA & WPA2 Enterprise, CCKM-WPA & CCKM-WPA2

These authentication modes use *802.1X* with *EAP* authentication. When *802.1X* is selected, the Omnii uses *WEP* encryption with automatic (as opposed to static) keying. For the others, the user may choose *TKIP*, *AES* or *TKIP+AES* encryption.

Encryption

The *Encryption* menu allows you to choose the type of encryption that will be used to protect transmitted data. Choose an *Encryption* method valid for your network from the drop-down menu. Only the *Encryption* options that are compatible with the type of *Auth. Mode* you've chosen will be listed. In fact, in some cases, this menu will not be available at all.
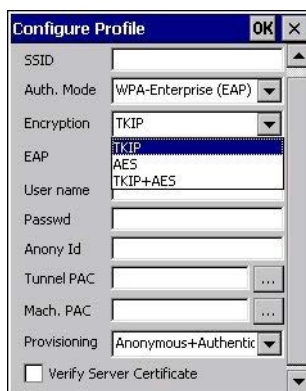
EAP

This menu allows you to choose the *EAP* (Extensible Authentication Protocol) type used for 802.1x authentication to an access point.
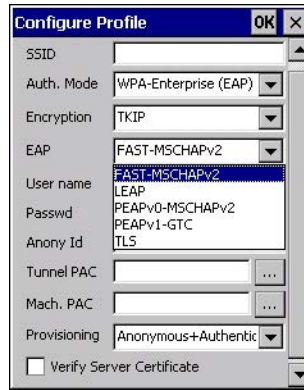
The following EAP types are supported by *Wi-Fi Config*:

- **TLS:** Provides strong security via the use of client certificates for user authentication.

- **PEAPv0-MSCHAPv2:** Provides secure user authentication by using a TLS tunnel to encrypt EAP traffic. *MSCHAPv2* is used as the inner authentication method. This is appropriate for use against Windows Active Directory and domains.

- **PEAPv1-GTC:** PEAP authentication using GTC as the inner method which utilizes one time passwords (OTPs) for authentication against OTP data bases such as SecureID.

- **LEAP:** Is an authentication method for use with Cisco WLAN access points. LEAP does not require the use of server or client certificates. LEAP supports Windows Active Directory and domains but requires the use of strong passwords to avoid vulnerability to off-line dictionary attacks.

- **FAST-MSCHAPv2:** Is a successor to LEAP and does not require strong passwords to protect against off-line dictionary attacks. Like LEAP, EAP-FAST does not require the use of server or client certificates and supports Windows Active Directory and domains.

- Complete the fields in the **Configure Profile** screen. If you're uncertain about some of the options, your system administrator will be able to provide the correct information for your wireless network.

- Once you've completed the necessary fields, tap on **OK**.

Verify Server Certificate

When the *Verify Server Certificate* box is checked, the Omnii will verify the certificate provided by the authentication server during the authentication process. This requires that an appropriate certificate be manually installed on the Omnii for the verification.

Enable OPMK

When used with compatible wireless infrastructure, Opportunistic Key Caching (OPMK) reduces the number of full authentications required when roaming. Only available with WPA2-Enterprise (EAP) authentication mode.

Connecting the Wireless Network

Your configured network is listed in the *Configure* tab. An *[X]* next to a network indicates that this is the network to which the Omnii will connect.
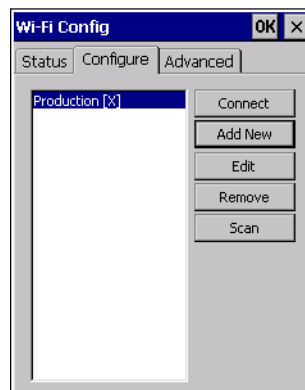
- Tap on the **Connect** button to activate your network.

The *Status* tab is displayed. The *Status field* displays *ASSOCIATING* while the 802.11a/b/g/n radio attempts to connect to the network. Once the association is complete, the *Status* tab is populated with the appropriate information about your network.

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Configuring TCP/IP

If your network is not using a DHCP server, you will need to assign an IP address.
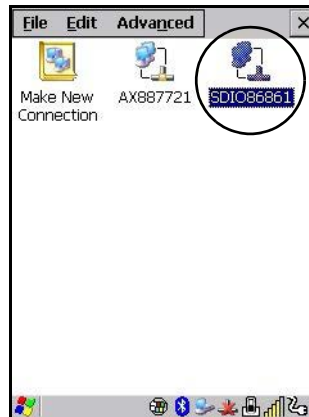
IP Address

To assign an *IP address* for your Omnii:

• Tap on the **radio icon** in the taskbar,

or

Tap on **Start>Settings>Network and Dial-up Connections**. Tap on the **radio icon**
for which you want to assign an IP address — in the sample screen below, the icon is labelled *SDIO86861*.

The *Wireless Statistics* screen is displayed.

• Tap on the **IP Information** tab.

Figure 3-7   *SDIO86861 IP Information*

✓ **NOTE** When DHCP is enabled, tapping the *Renew* button forces the Omnii to renew or find a new IP address. This is useful if, for example, you are out of communication range for a longer period of time and your hand-held is dropped from the network.

To define a static IP address:

• Tap on the **Configure** button.

• Tap on the radio button next to **Specify an IP address** to select it.
• Type an **IP, Subnet Mask** and **Default Gateway** address in the appropriate fields. Press **[Enter]** to save your information.

Name Server

✓ **NOTE** If DHCP is enabled, name server addresses are assigned automatically.

• In the *SDIO86861 IP Information* tab (see *Figure 3-7 SDIO86861 IP Information on page 3-83*), tap on the **Configure** button.
• Tap on the **Name Servers** tab.
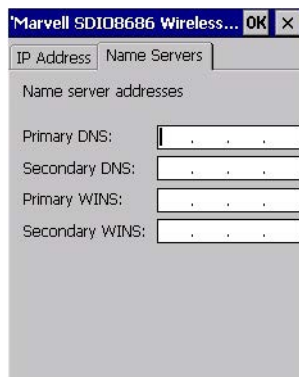
The DNS and WINS fields in the *Name Servers* tab allow you to specify additional WINS and DNS resolvers. The format for these fields is ###.###.###.###.

Wi-Fi Config: Advanced

Country Options

⚠️ *IMPORTANT*   *802.11d* is enabled by default for auto-country detection. If you are having difficulty associating with your access point, you may need to disable 802.11d and choose your country.

In the *Wi-Fi Config>Advanced* tab, choose **Country Option**. In the drop-down menu, choose your **country**.

Use Windows to configure my wireless settings

In the *Advanced* tab you can set Windows to configure the radio, using *Wireless Zero Config*.

• Tap on the check box to the left of **Use Windows to configure my wireless settings** to enable this option.

Tap here to add a checkmark to activate the Windows radio configuration.
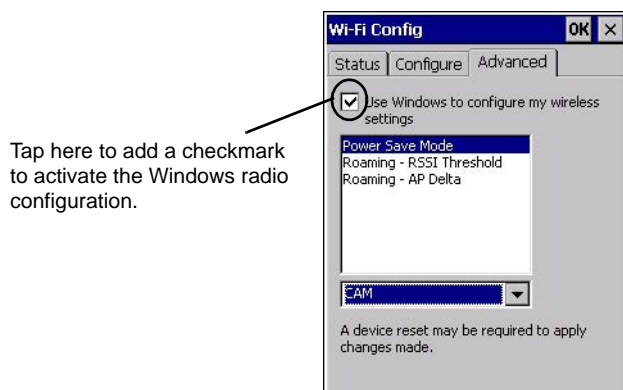
Power Save Mode

This allows you to set the 802.11 power saving mode of the radio to: *CAM* (continuous access — always on) (recommended); or *MAX_PSP* (maximum power saving mode).

Roaming - RSSI Threshold

This sets the RSSI threshold value, below which the radio will start scanning for new access points when roaming. Values range from *-55 to -90 dBm*.

Roaming - AP Delta

This sets how much greater (in dBm) the RSSI of a new access point must be than the RSSI of the currently associated access point in order for the hand-held to initiate a roam. Values range from *5 to 30 dBm*.

Concluding the Wi-Fi Configuration

If you've made changes in the Advanced menus, you will need to warm reset your Omnii.

- Choose **Start>Shutdown>Warm Reset**.

- A dialog box is displayed letting you know that you will lose all unsaved data. Tap on **OK**.

Once the reset is complete, if you checked the box next to **Use Windows to configure my wireless settings,** the *Wireless Zero Config* screen is displayed on the hand-held. Refer to Appendix H: Wireless Zero Config Settings for details.

Monitoring the Network Connection

The radio signal icon in the taskbar indicates the strength of the communication link with an 802.11 access point.

To access the radio signal icon:

- Tap on the radio icon in the taskbar to display the wireless statistics dialog box.

To access the radio signal icon using the keyboard:

- Press the [Windows] key to display the *Start Menu*.

- Highlight **Shortcuts** and then choose **System Tray** from the sub-menu.

- Use the [LEFT] and [RIGHT] arrow keys to highlight the **radio signal** icon in the taskbar.

- Press [Enter] to display the *Wireless Statistics* dialog box.

✓   *NOTE*   Moving in and out of the radio coverage area can have varying effects on a network session. At times, you may need to renew your connection by logging in again.

WiFi Connect A.R.C.

The WiFiConnectARC utility on the desktop provides a quick method to configure a device for use on a private network, primarily for use with Active Remote Configuration (A.R.C.).

When you click on this icon, WiFiConnect A.R.C. configures the default WiFi interface. The WEP key is set to **PsionPsion123**. The SSID is set to **Psion**. The default interface becomes the active interface. Keep in mind that you must configure the access point and the hand-held(s) to use the same settings.

Refer to the *Active Remote Configuration (A.R.C.) Administrators Guide*, PN 8000252, for details about updating devices on your network. This manual is available at:

http://community.psion.com/knowledge/w/knowledgebase/1189.a-r-c-active-remote-configuration.aspx

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CHAPTER 4   ACCESSORIES

Pistol Grips

Pistol Grip Description	Model Number
Pistol Grip Standard Pod Kit	ST6000
Pistol Grip Standard Back A Kit	ST6100
Pistol Grip Standard Back B Kit	ST6400
Pistol Grip Freezer Standard Back Kit	ST6500

Removing the Trigger Cover

Before installing the pistol grip, you need to remove the trigger cover.

Using a flathead screwdriver, gently and carefully pry the trigger cover off the hand-held.

Figure 4-1 *Removing the Trigger Cover*
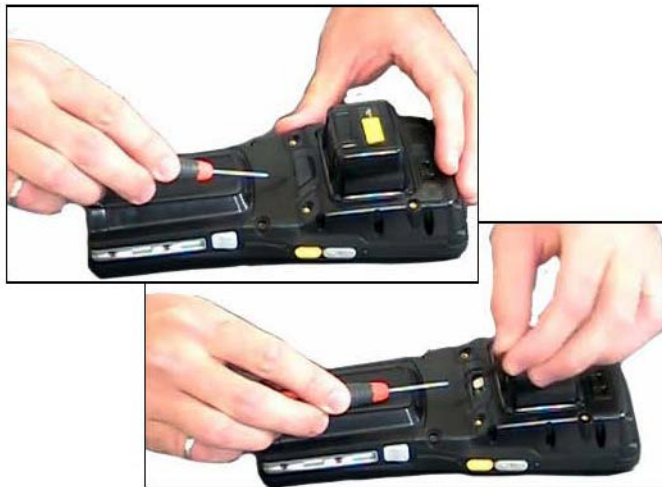
Attaching the Pistol Grip

✓   *NOTE*   Prior to installation, make sure the trigger mechanism is securely snapped into the pistol grip body and that the trigger operates properly.

The pistol grip is attached to the back of the Omnii using the four threaded inserts in the upper part of the Omnii casing (see Figure 4-2 Attaching the Pistol Grip on page 4-2). Four M3x6 Phillips head screws are provided.

- Position the pistol grip so that it fits snugly over the back of the unit and the holes in the pistol grip are aligned with the threaded inserts on the back of the hand-held.

- Using a Phillips screwdriver, tighten the screws to a torque of 3 lbs-in (3kgf-cm) to secure the pistol grip in place.

Figure 4-2 *Attaching the Pistol Grip*

Carrying and Protective Accessories

✓   *NOTE*   The Omnii Hand-Held Computer is a body worn device, and to maintain compliance with the FCC RF exposure guidelines, use a Motorola approved carrying case. Use of non-approved accessories may violate FCC RF exposure guidelines.

There are several Omnii carrying and protective accessories to help you work safely and comfortably.

Attaching Carrying Accessories

If your Omnii is not fitted with a hand strap, you can install it using the carrying accessory kit supplied. You'll need:

- A Phillips head screwdriver.

⚠️   *IMPORTANT*   Do not use adhesives such as Loctite to secure screws on carrying accessories. These chemicals may damage the plastic casing.

Accessory	Model Number
Wrist Strap	ST6040
Hand Strap	ST6025
Soft Shell Holster	ST6050
Hard Shell Holster	ST6055
Forklift Holster	ST6051
Carrying Case	ST6090
Pouch	ST6091
Screen Protector	RV6105
Rubber Boot:	
Yellow – Standard back covers A & B	ST6080
Grey – Standard back covers A & B	ST6081
Yellow – Expansion Back Covers	ST6082
Grey – Expansion Back Covers	ST6083
Yellow – Expansion Back Covers, WWAN End-cap	ST6084
Grey – Expansion Back Covers, WWAN End-cap	ST6085
Blue – Freezer Standard Back Covers	ST6086

The Hand Strap - Model ST6025

- Attach the strap to the two threaded inserts located at the back of the hand-held near the top of the unit (see Figure 4-3 Attaching the hand strap on page 4-3), using the two Phillips head screws provided with this accessory.

- Stretch the hands trap toward the base of the hand-held, and hook the clip at the bottom of the hand strap into the slot near the base of the battery pack.

Figure 4-3 *Attaching the hand strap*

Clip

Hand strap slot

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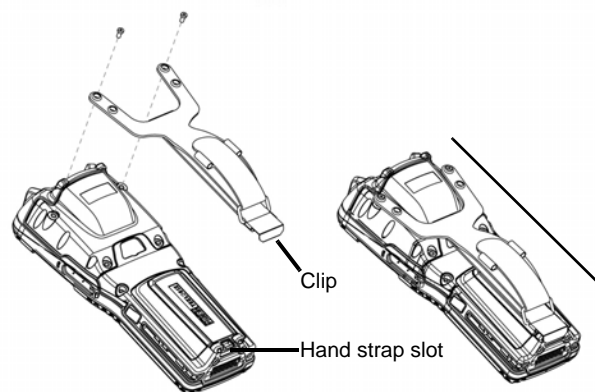
Protective Carrying Case - Model ST6090

A carrying case is available for the Omnii to shield the unit from damage. It is compatible with the hand strap. A variety of cases are available, depending on the type of end-cap attached to your unit.

Hard Shell Holster - Model ST6055

A hard shell holster that includes a belt, leg tie-down, and tether, can be used to hang the Omnii with a pistol grip from your waist, on either your left or right side.

- Feed the belt through the top panel of the holster, and adjust the belt as needed.
- If using the leg tie-down strap, wrap it around your leg and snap the buckle closed. Adjust the tightness of the strap for security and comfort.
- Place the Omnii into the holster with the grip extending back through the custom opening.
- If desired, attach the tether to the pistol grip.

Figure 4-4   *Hard Shell Holster (pistol grip tether not shown)*