## **RS700 Smart RFID Fixed Reader**



### **User's Manual**

400682G Version 1.0

## Preface

## **About This Manual**

This manual explains how to install, operate and maintain the RS700 Smart RFID Fixed Reader.

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Microsoft\* Unitech RFID readers support Microsoft BizTalk BizTalk\* Server 2006 R2 Server for data collection.

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### **Regulatory Compliance Statements**

#### **Federal Communication Commission Interference Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit that is different from the connected receiver.
- Consult the dealer or an experienced radio/television technician for help.

#### **FCC Caution:**

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device and its antenna(s) must not be cohabited or operate in conjunction with any other antenna(s) or transmitter(s).

#### **FCC Radiation Exposure Statement**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. Please follow the operation instructions in this manual to main compliant with FCC RF exposure compliance requirements. This fixed RFID Terminal meets FCC RF exposure guidelines when used in fixed RFID operation.

#### **RoHS Statement**



This device conforms to RoHS (Reduction Of Hazardous Substances) European Union regulations that set maximum concentration limits on hazardous materials used in electrical and electronic equipment.



### **Battery Notices**

The RS700 is equipped with a Lithium-Ion battery pack. However, the RS700 may not start without an external power source due to battery discharge after extended storage periods. To charge the battery to full capacity, connect the RS700 with the AC Adapter and charge the RS700 for at least 20 hours.

**NOTE:** Press the RS700 Backup Battery Switch before initially using the device.

#### **Battery charge notice**

It is important to consider the environmental temperature whenever the Lithium-Ion battery pack is charged. Charging is most efficient at room temperature or in a slightly cooler environment. It is essential that batteries are charged within the temperature range of 0°C to 50°C (23°F to 122°F). Charging batteries outside of this specified temperature range could damage the batteries and shorten their charging life cycle.

### Warranty

Unitech limited Warranty covers the following items:

- RS700 Smart RFID Fixed Reader 1-year limited warranty.
- Please contact a regional Unitech office for further information regarding Unitech's extended warranty package.

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## Chapter 1

## **Getting Started**

## Introducing the RS700

Thanks for purchasing the RS700 Smart RFID Fixed Reader. The RS700 is designed for inventory visibility in the warehouse.

The RS700 is a compact, Windows CE 5.0 based stationary data collection terminal with built-in Unitech RFID middleware that provides a Windows-based environment for remote reader control and data filtering functions.

### **Features**

#### **Powerful System**

- Microsoft Windows CE 5.0 Operating System.
- 520Mhz Intel PXA270 CE CPU.

#### **System Memory**

- 64 MB SDRAM.
- 64 MB Flash ROM.

#### **Power Supply**

- External Power: 12V DC, 3A.
- 3800mAh Rechargeable Lithium-Ion Battery.
- Power-over-Ethernet.

#### **RFID UHF Reader**

- EPCglobal Class1 Gen2 Compliant.
- UHF Frequency: 860 960Mhz.
- Built-in RFID Middleware.
- Four Antenna Ports (TNC Connector) and Eight Channels.
- Supports Dense Reader Mode (DRM).

#### Communication

- USB 1.1 Client.
- Serial RS232.
- Ethernet 10/100Base-T.
- IEEE 802.11b/g Wireless LAN, CCX Compatible.
- Relay Outputs (2): Control for Siren and Stacked Lamp.

#### **Mounting System**

- IP65 Environmental Sealing.
- Operation Temperature: -20°C -50°C (-4°F - 122°F).
- Storage Temperature: -30°C 70°C (-22°F - 158°F).
- Uses Din Rail for Wall Mount Installation.

## **Package Contents**

Please make sure the following contents are in the RS700 box. If anything appears missing or damaged, please contact a Unitech representative.

Main Unit.	AC Adapter.	Power Cord.	Ethernet Cable.
Power/RS232 Cable.	USB Cable.	GPIO Cable.	Two AS103-M-3 Wi-Fi Antennas.
Unitech CD-ROM (User Manual, Quick Reference Guide).	Unitech Software Development Kit (Optional).	GPX- 026XTPR8-763 RFID Antenna (Optional).	CFD200-NL Antenna Cable (Optional).

## A Tour of the RS700

The following sections describe the main components of the RS700:

#### **Front Panel**



No.	Component	Description	
1.	Status Indicators.	Indicates the RS700's terminal operation status (left to right):	
		DATA - Red LED status indicator for data collection.	
		<b>RFID</b> - Yellow LED status indicator for the Smart- Reader Server during normal operation.	
		<b>PWR</b> - Green LED status indicator for receiving external power. (Also dim green LED for receiving Backup Battery power.)	

#### **Top Panel**



No.	Component	Description
2.	Wi-Fi Antenna Ports.	Wi-Fi ANT1, Wi-Fi ANT2 (left to right), connects the RS700 to Wi-Fi Antennas for wireless signal enhancement.
3.	RFID Antenna Ports.	ANT1, ANT2, ANT3 and ANT4 (left to right) connects the RS700 to RFID Antennas for reading data stored on RFID tags.

#### **Bottom Panel**



No.	Component	Description
4.	Backup Battery Switch.	Press this switch to engage the Backup Battery.
5.	GPIO Port.	Use the GPIO Cable to connect the RS700 to external controls such as LED indicator lamp, LCD or motion sensor.
6.	USB Port.	Use the USB Cable to connect the RS700 to a host computer and perform Microsoft ActiveSync.
7.	Ethernet Port.	Use the Ethernet Cable to connect the RS700 to a wired Ethernet network.
8.	DC Input Power Port RS232 Port.	Use the Power/RS232 Cable to connect the RS700 to an external power supply or to a computer to perform configuration updates.
9.	Reset Button.	Use a stylus to press the button and reset the RS700.

**CAUTION!** Pressing the Reset Button erases current configuration settings and reboots the RS700.

### **Connect Power**

An internal backup battery helps prevent data loss when the RS700 disconnects from an external power source. The backup battery stores all data and system settings for up to seven days. Connect power to the RS700 through the following:

- **NOTE:** To adequately charge the backup battery, connect the RS700 to an external power source and press the Backup Battery Switch. Charge the RS700 for at least 20 hours. The backup battery begins charging as soon as the RS700 connects to a power source.
- 1. Connect the Power/RS232 Cable to the PWR + RS232 Port, and rotate the cable cap clockwise to secure the connection.
- 2. Insert the AC Adapter into the power jack of the Power/RS232 Cable.
- 3. Insert the Power Cord into the AC Adapter.
- 4. Plug the other end of the Power Cord into an electrical outlet.



**NOTE:** The PWR LED on the RS700's front panel lights up green when the RS700 connects to a power source.

Once the RS700 connects to an external power source the device is ready for initial setup to make connections and read RFID tags.

## Chapter 2

## **Using the Hardware**

The RS700 contains two Antenna Ports for wireless signal enhancement and RFID reading points.

### **Installing Wi-Fi Antenna**

There are two Wi-Fi Antenna Ports on the RS700 (Wi-Fi ANT1 and Wi-Fi ANT2). Install a Wi-Fi Antenna through the following:

- 1. Locate the Wi-Fi Antenna Ports on the RS700's top panel.
- 2. Connect a Wi-Fi Antenna to a desired Wi-Fi Antenna Port, and rotate the antenna cap clockwise to secure the connection.



3. Bend the Wi-Fi Antenna(s) to a 90-degree angle.



### **Installing RFID Antenna (Optional)**

The RS700 has four RFID Antenna Ports (ANT1, ANT2, ANT3, and ANT4) and two removable protection caps on ANT2 and ANT3.

**NOTE:** Only remove the protective caps for installing RFID Antennas.

Install an RFID Antenna through the following:

- 1. Locate the RFID Antenna Ports on the RS700's top panel.
- 2. If necessary, remove the protection caps on ANT2 and ANT3.
- 3. Connect the Antenna Cable to the desired RFID Antenna Port, and rotate the cable cap clockwise to secure the connection.
- 4. Connect the other end of the Antenna Cable to the wall mounted RFID Antenna, and rotate the cable cap clockwise to secure the connection.



- **NOTE:** Refer to the RFID Antenna Installation guide for mounting the RFID Antenna(s).
- WARNING! To avoid radiation exposure, the RFID Antennas should be installed and operated with minimum distance 1000mm away from the human body.

### **Using the GPIO Interface**

Use the GPIO Cable to connect the RS700 to several external controls such as an LED indicator lamp, LCD or motion sensor.

#### **GPIO Pin Assignment**

Connect two relay output and digital input signals with the 10-pin GPIO cable. Connect external devices through the following:



Pin	Name	Description
10.	DI1-1.	DIX: Digital Input (X=1; 2).
9.	DI1-2.	DIX-1
8.	DI2-1.	
7.	DI2-2.	DIX-2
		DIX-1: Input Voltage (3.3V - 12V). DIX-2: Ground.
6.	RL1C.	RLX: Relay (X=1; 2).
5.	RL1NC.	RLXC
4.	RL1NO.	
3.	RL2C.	
2.	RL2NC.	C: Common.
1.	RL2NO.	RLXNO NO: Normal Open.

### Mounting the RS700

The RS700 comes standard with a wall mounting kit for easy installation.

Mount the RS700 to a wall through the following:

- Plastic conical anchor (4) 3x25mm.
- Self-tapping screw (4) 3.5x19mm.
- 1. Locate the four mounting holes on the RS700.



- 2. Place the RS700 on the wall. Mark the mounting hole locations with a pen.
- 3. Remove the RS700 and drill four 1/4-inch wide holes at least one inch deep.
- 4. Insert the four plastic conical anchors into the holes.
- 5. Secure the RS700 to the wall with the four self-tapping screws, and insert them into the plastic conical anchors.



### **Performing a Hardware Reset**

Perform a reset if the RS700 freezes (i.e., no longer responds).

Resetting the RS700 erases all installed records, entries and programs; returning the RS700 to default status. (Not even the date and time settings remain.) All settings return to default mode. However, data stored in the flash storage or in an SD Card Slot will remain intact. Use the remote control to access the SD folder on the RS700. See *Using Remote Control* on page 47.

**NOTE:** During the next Microsoft ActiveSync operation, lost data can be restored that was previously synchronized on the computer, or data can be restored from a storage card.

Reset the RS700 through one of the following:

- 1. Use a stylus to press the reset button on the RS700's bottom panel.
- 2. Reconnect the power supply, and reset the Backup Battery Switch to the **on** position.
- **CAUTION!** Pressing the Reset Button erases current configuration settings and reboots the RS700. The RS700 returns to default mode. All registry settings and all files (including hidden files) are returned to their original factory defaults.

## Chapter 3

## **Making RFID Applications**

The Unitech RS700 Smart RFID Fixed Reader can do more than just read, store or forward data. The built-in Unitech RFID middleware helps filter data, execute commands and perform rich functions at the front end.

The Smart-Reader Server is designed to control and collect data from RFID tags through a wired or Wi-Fi network. Enhancing the data precision is possible by creating accurate reports, reducing server load and even customizing RFID applications on the RS700.

### **Using Smart-Reader Server**

#### **Opening Smart-Reader Server**

The RS700 automatically starts once it connects to an external power source. Follow the instructions below to check which programs are currently active (If necessary, activate the Smart-Reader Server on the RS700).

- 1. Install the remote control program. See Using Remote Control on page 47.
- 2. On the remote control window, double click **My Device**  $\rightarrow$  **Windows**  $\rightarrow$  **SRS**  $\rightarrow$  **SmartReader Server**. The SRS window appears with an assigned IP address.



**NOTE:** The yellow RFID LED flashes on the RS700's front panel, indicating that the Smart-Reader Server is operating.

### **Controlling Smart-Reader Server Remotely**

It is necessary to install the Smart-Reader Server Remote Control (SRSRC) Program, to control the built-in RS700 Smart-Reader Server remotely. Please contact a Unitech representative to acquire the program.



RS700

#### **Installing Microsoft .NET Framework**

To execute the SRSRC, Microsoft .NET Framework 3.5 must be installed on the computer. Download the software from the Microsoft Download Center at:

http://www.microsoft.com/downloads/details.aspx?FamilyID=333325fd-ae52-4e35-b531-508d977d32a6&DisplayLang=en.

**NOTE:** Uninstall any previous versions of Microsoft .NET Framework before installing Microsoft .NET Framework 3.5.

#### Installing the SRSRC Program

Install the SRSRC program and acquire an IP address for the RS700 through the following:

- 1. Connect the computer to a DHCP enabled network.
- 2. Connect the Ethernet Cable to the Ethernet Port on the RS700's bottom panel, and rotate the cable cap clockwise to secure the connection.
- 3. Connect the RS700 to the same network via DHCP. The DHCP server will assign an IP address to the RS700.
- 4. Install SRSRC.msi on the computer.
- 5. Follow the onscreen instructions to complete the installation of the SRSRC program.
- 6. Click Start  $\rightarrow$  Programs  $\rightarrow$  Smart-Reader Server Remote Control  $\rightarrow$  Reader Discovery.

7. Click **Discovery** to lookup the DHCP client in the same subnet.

💐 Reade	rDiscovery ¥1.00 🛛
Adapter:	Realtek RTL8168/8111 PCI-E Gigabit Ethernet NIC - Packet Scheduler Miniport 💌
	IP: 192,168,110.80 Mask: 255,255,255.0
	Subnet: 192,168.110,1 ~ 192,168.110.254
Progress	Discovery
IP	MAC address
The disco	very process will take about 2 or 3 minutes. Please keep patient for waiting.
Double cl	ick to open config webpage.

8. Refer to the MAC address label attached on the RS700's bottom panel, and discover the RS700's IP address from the list box.

🕱 Reader	rDiscovery V	1.00	
Adapter:	Realtek RTL	8168/8111 PCI-E Gigabit Ethernet NIC - Packet S	cheduler Miniport 💌
	IP: 192,168.1	10.80 Mask: 255.255.255.0	C.
	Subnet: 192.1	68.110.1 ~ 192.168.110.254	
Progress			Discovery
1			
IP		MAC address	-
192.168 192.168	110.57	00:16:09:06:00:40 00:16:09:06:01:99	
192,168	110.248	00:16:09:04:03:95	
The disco	verv process wi	ll take about 2 or 3 minutes. Please keep patient h	or waiting.
Double cli	ick to open con	fig webpage.	-

#### **Using the Smart-Reader Server Remote Control**

Start using the SRSRC through the following:

- 1. Click Start  $\rightarrow$  Programs  $\rightarrow$  Smart-Reader Server Remote Control  $\rightarrow$  Smart-Reader Server Remote Control.
- 2. Enter the assigned IP address in the **Server Address** field. To login, enter the default user name and password as **unitech**. Click **OK**.

Server Name:	Warehouse-Left 💉 🔀
Server Address:	192.168.110.59 : 11126
🔽 Login:	
User Name:	unitech
Password:	unitech
	OK Cancel

**NOTE:** Do not change the default port number from **11126**, and ensure that the port is not occupied by any other service.

 The SRS Remote Control window appears. The SRSRC menu resides in the left pane, while the reader status is in the right pane. At the bottom right corner of the screen, the login info displays the user name and the login time duration. Click **Stop** to end the connection between the RS700 and the R1000 Reader.

📰 SRS Remote Control -	Warehouse-Left - Device Sta	tus	
*192.168.110.80:11127	arehouse-Left	**************************************	9.7
Device Status Event Management Report Management	Reader: R1000 Status: Status: Connected, Readin	ng	Start Start
Server Log	( a three send		( NBP
About	Antennas:	4	
	Antenna Switch Time (ms):	300	
	Inventory Times:	0	Apply
	Tags:		
	30361F5F445C3E98758279 E2003411E8020110942622 30361F5F4447A340000001 30361F5F4445C3E98758279 E2003411E8020110942622 30361F5F4447A340000001 30361F5F4445C3E98758279 30361F5F445C3E98758279 30361F5F445C3E98758279 20361F5F445C3E98758279 30361F5F445C3E98758279 30361F5F445C3E98758279 30361F5F445C3E98758279 1111222233344445555666 30361F5F4447A340000001 2003411E8020110942622 30361F5F4447A340000001 2003411E8020110942622 30361F5F4447C3E98758279 1111222233344445555666 11112222333344445555666 11112222333344445555666 1111222333344445555666 1111222333344445555666 1111222333344445555666 1111222333344445555666 1111222333344445555666	14, 456600 14, 456650 14, 456650 14, 456650 14, 456685 14, 456685 14, 456685 14, 456703 16, 456710 70, 456717 70, 457784 16, 457790 18, 457803 18, 457803 18, 457812 18, 457852 16, 457857 70, 457847 14, 457852 16, 457879 70, 457847 14, 457852 16, 457879 70, 457879 70, 457879 70, 457879 70, 457879 70, 457879 70, 457879 70, 457879 70, 457879 70, 457875 14, 458747 70, 458747 70, 458751 14, 458756 15, 458756 16, 458756 17, 458756 17, 458756 18, 45	
			Clear
New Close	Refresh		User: unitech Live Time: 00:05:40

**NOTE:** A dialog box appears informing **User account expired!** (when the screen is idle for three minutes). Login (again) and continue with the settings.

#### **Configuring Antenna Port**

To enable or disable antennas connected to antenna ports, click **Device Status** in the left screen panel. Configure the Antenna Port settings through the following:

- 1. In the **Antennas:** field, check the antenna port number to enable the antenna. Antenna port number (**1** is checked by default). If more than one antenna is enabled, the antennas switch in numerical order (i.e.,  $1 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 1$ ).
- 2. In the **Antenna Switch Time (ms):** field, input the Antenna Switch Time for each reading period (**300ms** by default).

- 3. In the **Inventory Times:** field, input the Inventory Times for reading times within the reading period (**0ms** by default). A setting of 0 or 8192ms is recommended, but it depends on the local environment.
- **NOTE:** The Antenna Switch Time and the Inventory Times cannot both be simultaneously set at **0**.
- 4. Click **Apply** to save the settings.

Antenna ports switch when the Antenna Switch Time or Inventory Times run out. If installed properly, the Tags screen will display any data collected from the antennas. Click **Clear** at the bottom of the screen to view the fresh data. See *Installing RFID Antenna (Optional)* on page 7.

**NOTE:** The red DATA LED flashes on the RS700's front panel, indicating data collection.

#### **Defining Smart Reader Behavior**

In the left pane, click **Event Management**. In the right panel, define the event cycle specifications, specify the report criteria and the setup filter rules.

📰 SRS Remote Control - W	arehouse-Left - Event Managemen	
*192.168.110.80:11127 Warel	nouse-Left	
La salaria	All Defined EC Specs:	
Device Status	*spec Test1, subscribed	
Report Management		
0 T	EC Spec: "specTest1"	
Server Log	Reader: R1000	
About	Boundary Spec:	<u> </u>
	Repeat Period 5000 E	uration: 4500 Stable Set Interval: (ms)
	Trieger, Start:	1
	Stop	
	The half the to Depart	
	Include spec in Reports	
	Report Specs: report1	
	Set: CURRENT	
	Output Includes:	x D Raw Hey Raw Der D Course
		e itom movi itom p.~ itom p.~
	Filter: Include Patterns:	+ - X
	Evolude Patterns:	
	Linciule I dilettis.	+   -   32
	Group Patterns:	= +   -   ×
		The Control of Control
		INEM #Dec Defea
	Subscription: file://srs/reports/	2
		Subscribe Unsubscribe
	C	
	New EC Spec	Delete Define Undefine >
New Clear	Petroph	User: unitech
Twee Crose	Trettezh	Live Time: 00:14:02

#### Creating a New EC Spec

In the **All Defined EC Specs** field, **\*specTest1** is defined and subscribed as the default. Create a new event cycle specification through the following:

1. Click New EC Spec. An InputBox screen appears.

InputBox	
EC-Spec Name::	
spec1	
Help:	
Specify a unique ec-spec name.	
	OK Cancel

2. Input a unique EC Spec name or accept the default at **spec1**. Click **OK**, and **spec1** appears in the **All Defined EC Specs** field.

🔜 SRS Remote Control -	Warehouse-Left - Event Manag	gement		
*192.168.110.80:11127	larehouse-Left			
Device Status Event Management Report Management	All Defined EC Specs: *specTest1, subscribed spec1			
Server Log	EC Spec: "spec1"			
About	Reader: \$(READER) Boundary Spec:	Duration:	Stable Set Interval: (m	< \$)
	Report Specs: report1 Set: CURRENT Output Includes: EPC Filter: Include Patterns:	V Tag 🗌 Raw F	Iex 🗌 Raw Dec 📋 Count	× <
	Exclude Patterns:			- FEX
	Group Patterns:			+•×
			New Spec Delete	•
	Subscription:			<
			Subæribe Unsubæ	nbe
	New EC Spec	Delete	Define Undefi	ne >
New Close	Refresh		User: unitech Live Time: 00:10	6:14

- 3. In the **All Defined EC Specs:** field, check **Repeat, Period:** for the automatic reading mode, and set the following values in milliseconds.
  - Repeat, Period: field Cycle time (5000ms by default).
  - Duration: field Duration for reading data within the cycle time (4500ms by default).

- Stable Set Interval: field Interval time between cycles (0ms by default).
- 4. Check **Trigger, Start:** to activate the trigger manually. Specify the **trigger start/ stop** name for the event cycle. Add *II* before the name string. For example, input the following in each field:
  - Start: //spec1\_start\_trigger.
  - Stop: //spec1\_stop\_trigger.
- 5. Check Include Spec In Reports to include the EC-Spec info in the report.

#### Specifying Report Criteria

In the **Report Specs** field, set **report1** as the default. Modify or create reports through the following:

1. Click **New Spec** and **Yes** to create a new report. The **report2** appears in the **Report Specs** field.

Click **Delete** to delete a selected report.

🛃 SRS Remote Control	- Warehouse-Left - Event Management	
*192.168.110.80:11127	Warehouse-Left	
Device Status Event Management Report Management	All Defined EC Specs: *specTest1, subscribed spec1	
Server Log	EC Spec: "spec1"	
About.	Reader: R1000         Boundary Spec:         O Repeat, Period:       5000       Duration:       4500       Stable         Trigger, Start:       //spec1_start_trigger         Stop:       //spec1_stop_trigger         Include Spec In Reports	Set Interval: (ms)
	Report Specs:       report1         Set:       CURRENT         Output Includes:       EPC         Filter:       Include Patterns:         Exclude Patterns:	Aaw Dec □ Count +•x +•x
	Subscription:	New Spec Delete
	New EC Spec Delete	Subsanhe Insubsanhe Define Undefine > User mitsch
New Close	Refresh	Live Time: 00:46:53

- 2. In the Set: drop down menu, select the occasion for the report:
  - CURRENT: Produces report when tag reading occurs.
  - ADDITIONS: Produces report when tag seen in this cycle, but not in the previous cycle.
  - DELETIONS: Produces report when tags not seen in this cycle, but seen in the previous cycle.

- 3. Definitions of the options in the **Output Includes** field:
  - **EPC:** Displays EPC encoding method.
  - Tag: Displays tag ID.
  - Raw Hex: Displays hexadecimal data.
  - Raw Dec: Displays decimal data.
  - Count: Displays tag count.

#### Setting up Filter Rules

Use a filter to sort data in the **Report Specs** field. Setup the filter rules through the following:

- 1. To add a filter, select a desired report from the **Report Specs** drop down menu. For example, **report1**.
- 2. To add a new inclusive pattern, click + next to the **Include Patterns** field. An InputBox screen appears with some predefined patterns for reference.

InputBox	
Filter, include pattern: um epc.pat.SCHEME * * * *	
Help:	
Predefined patterns for scheme: GID-96: um:epc:pat:gid-96:*** SGTIN-64: um:epc:pat:sgtin-64:****	×
ОК	Cancel

To create a GID-96 encoding, input any of the following:

- urn:epc:pat:gid-96:20.100.5000 to match the EPC for Unitech serial number 5000.
- urn:epc:pat:gid-96:20.100.\* to match any ABC's EPC (regardless of serial number).
- urn:epc:pat:gid-96:20.\*.[5000-9999] to match any XYZ Corporation product whose serial number is between 5000 and 9999 (inclusive).
- urn:epc:pat:gid-96:\*.\*.\* to match any GID-96 tag.
- Click OK to confirm. To modify an inclusive pattern, select the pattern and click -. To delete an inclusive pattern, select the pattern and click x.
- 4. Follow similar steps to exclude or group patterns.

#### **Defining the EC Spec**

After defining the event cycle and its report specifications, save this EC Spec through the following:

- 1. Select a desired EC Spec, for example, **spec1**.
- 2. Click Define. The #spec1, defined appears in the All Defined EC Specs field.

#### Subscribing the EC Spec

In order to implement the event cycle, make a subscription to the EC Spec through the following:

- 1. Select a defined EC Spec in the **All Defined EC Specs:** field. For example, **#spec1**.
- 2. Click **Subscribe**. An InputBox screen appears with some predefined formats for reference.

📰 SRS Remote Control	- Warehouse-Left - Event Management	
*192.168.110.80:11127	Warehouse-Left	
During Oktober	All Defined EC Specs:	
Event Management Report Management	#spec1, defined *spec Test1, subscribed	
Server Log	EC Spec: "spec1"	
About	Reader: R1000 Boundary Spec: Repeat, Period 5000 Duration: 4500 Stable Set Int Tragger, Start. file://spec1_start_trigger/ Stop: file://spec1_stop_trigger/	erval: (ms)
	Report Specs: report1 Set: CURRENT Output Includes: EPC Tag Row Hex Row De	e [] Count
	Filter: Include Patterns: Exclude Patterns:	+ - x
	Group Patterns:	+ -  x
	New S1	pec Delete
	Subscription:	ibe Unsubsente
	New EC Spec Delate Defin	B Undefine >
INGM Close	Keiresh	Live Time: 01:18:26

3. In the **Subscribe Notification:** field, input any of the following:

InputBox	
Subscribe Notification:	
Help:	
Format of subscribe notification: file://' 'top://' use top host in this SRS	
	OK Cancel

 - file:// to store data in the folder located in the path My Device/srs/reports on the RS700.

- tcp:// to send the report to the computer hosting SRS, i.e.,
   192.168.110.80:11127, the tab shown on the upper left corner of the screen.
- tcp://192.168.110.114:11126 to send the report to another computer in the same subnet with IP address 192.168.110.114 and default port 11127.
- 4. Click **OK**, and **\*spec1**, **subscribed** appears in the **All Defined EC Specs** field. Click the **!** button next to the trigger start/stop fields that appear, and this allows to control the reading behaviors.

#### **Redefining the Subscription**

Redefine a subscribed EC Spec through the following:

- 1. In the **All Defined EC Specs:** field, select a subscribed EC Spec. For example, **\*spec1**.
- 2. In the **Subscription:** field, select the subscribe notification path.
- 3. Click Unsubscribe to cancel the subscription.

Device Status Event Management Report Management Server Log About Reader: R1000 Boundary Spec: Reader: R1000 Boundary Spec: Repeat, Randoi 5000 Duration: 4500 Stable Set Interval: (me) Progen, Statu Stop: file://opec1_start_trigger/ Stop: file://opec1_start_trigger/ Report Spec: report! Set: TRRENT Output Includes: EPC Tase Rew Hay: Rew Dec Count Filter: Include Patterns: Exclude Patterns: Exclude Patterns: Subscription: file://opectA Subscription: file://		All Defined EC Space	
Server Log About BC Spec: "spec1" Reader: R1000 Boundary Spec: Capacity Forced: 5000 Duration: 4500 Stable Set Interval: (ms) Trager, Start: File://spec1_start_trigger/ Stop: File://spec1_start_trigger/ Stop: File://spec1_start_trigger/ Couput Include: File: Include Patterns: File: File: File	Device Status Event Management Report Management	*spec1, subscribed *specTest1, subscribed	
About.       Reader: R1000         Boundary Spec:       Repet: Facod 5000       Duration: 4500       Stable Set Interval: (ms)         Trager, Start.       file://spec1_start_trigger/       I         Stop:       file://spec1_start_trigger/       I         Datable Species       report!       I         Set:       URRENT       I         Output Includes:       EPC       Tas       Rew Enc         Filter:       Include Patterns:       I       I         Boundary Patterns:       I       I       I         Wew EC Spec       Delate       Delate       Instrumenter	а. т.	EC Spec: "spec1"	
Report Specs:       report1         Set:       URREAT         Output Includes:       EPC         Filter:       Include Patterns:         Exclude Patterns:       # # #         Group Patterns:       # # #         Bask Spec       Delete         Subscription:       EPE Mars/sequents/         New EC Spec       Delete         Delete       Unsubscribe	Server Log About	Reader: R1000 Boundary Spec: Repeat, Pariod 500 Tragger, Starti file Stop: file Include Sper. In Hoports	00     Duration:     4500     Stable Set Interval:     (ms)       ://spec1_start_trigger/     !
Exclude Patterns: Group Patterns: New Spec: Delete Subscription: file://srs/ueports/ Subscribe Unsubscribe New EC Spec Delete Define Undefine		Report Specs: report1 Set: CURRENT Output Includes: EPC	Tag Rew Hay Raw Dec Count
New EC Spec Delete Define Undefine			
New EC Spec Delate Define Undefine		Exclude Patterns: Group Patterns:	
		Exclude Patterns: Group Patterns: Subscription:	Hew Spec Delete Orts' < Subscribe Unsubscribe

4. Click **Undefine** or **Delete** at the bottom of the screen. Now, it is possible to redefine or delete this EC Spec.

#### **Viewing Data Collection Report**

Click **Report Management** in the left screen panel. All reports set to store on the RS700 will display in the right pane. Manage reports through the following:

🖷 SRS Remote Control	- Warehouse-Left - Report Management		
*192.168.110.80:11127	Warehouse-Left		
	All Reports: (Total 70)		
Device Status	And Reports (1001/10)		
Event Management	\srs\reports\000101-000237-000.xml		
Report Management	\srs\weports\000101-000242-000.cml		
	\srs\reports\000101-000247-000.xml		
Server Log	srsueports/000101-000252-000.xml /srs/ueports/000101-000257-000.xml		
4	\srs\reports\000101-000302-000.xml	**	
About	Report: "\srs\reports\000101-000813-000.xon1"		
	<pre><?ml version="1.0" encoding="utf-8" ?> <ale:ecreports xml<br=""><reports <report reportname="report1"> <groups <grouplist> <member> <tgsum.epc:di.sgtin.8902609.073357.27< pre=""> <tagsum.epc:di.sgtin.8902609.073357.27< pre=""> <tagsum.epc:di.gstin.8902609.073357.27< pre=""> <tagsum.epc:di.gstin.8902609.073357.27< pre=""> <tagsum.epc:di.gstin.8902609.073357.27< pre=""> <tagsum.epc:di.gstin.8902609.073357.27< pre=""> <tagsum.epc:tag:mu.epc.aw.96.x30361f5f4447a.340000000 </tagsum.epc:tag:mu.epc.aw.96.x30361f5f4447a.340000000 </tagsum.epc:di.gstin.8902609.073357.27<></tagsum.epc:di.gstin.8902609.073357.27<></tagsum.epc:di.gstin.8902609.073357.27<></tagsum.epc:di.gstin.8902609.073357.27<></tagsum.epc:di.sgtin.8902609.073357.27<></tgsum.epc:di.sgtin.8902609.073357.27<></member></grouplist></groups </report></reports </ale:ecreports></pre> <tagsum.epc:tag:mu.epc.aw.96.x11112222333344445555666  <tagsum.epc:tag:mu.epc.aw.96.x11112222333344445555666  <tagsum.epc:tag:gstin.8902609.094458.105050700052 <tagsum.epc:di.sgtin.8902609.094458.105050700052 <tagsum.epc:di.sgtin.8902609.094458.105050700052 <tagsum.epc:di.sgtin.8902609.094458.105050700052 <tagsum.epc:di.sgtin.8902609.094458.105050700052 <tagsum.epc:di.sgtin.8902609.094458.105050700052 <tagsum.epc:di.sgtin.8902609.094458.105050700052 <tagsum.epc:di.sgtin.8902609.094458.105050700052 <tagsum.epc:di.sgtin.8902609.094458.105050700052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.094458.10505070052 <tagsum.epc:di.sgtin.8902609.09458.10505070052 <tagsum.epc:di.sgtin.8902609.09458.10505070054 <tagsum.epc:di.sgtin.8902609.09458.10505070054 <tagsum.epc:di.s< td=""><td>s:epcglobal="unrepcglobal:xsd:1" xmln 1B 56  10552 14 70</td></tagsum.epc:di.s<></tagsum.epc:di.sgtin.8902609.09458.10505070054 </tagsum.epc:di.sgtin.8902609.09458.10505070054 </tagsum.epc:di.sgtin.8902609.09458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.10505070052 </tagsum.epc:di.sgtin.8902609.094458.105050700052 </tagsum.epc:di.sgtin.8902609.094458.105050700052 </tagsum.epc:di.sgtin.8902609.094458.105050700052 </tagsum.epc:di.sgtin.8902609.094458.105050700052 </tagsum.epc:di.sgtin.8902609.094458.105050700052 </tagsum.epc:di.sgtin.8902609.094458.105050700052 </tagsum.epc:di.sgtin.8902609.094458.105050700052 </tagsum.epc:di.sgtin.8902609.094458.105050700052 </tagsum.epc:tag:gstin.8902609.094458.105050700052 </tagsum.epc:tag:mu.epc.aw.96.x11112222333344445555666 </tagsum.epc:tag:mu.epc.aw.96.x11112222333344445555666 	s:epcglobal="unrepcglobal:xsd:1" xmln 1B 56  10552 14 70	
	Auto Upload All Reports		
	Delete in Server Alter Opload		
	Upload Interval: 300 seconds		
	Report Folder:		
New Close	Refresh	User: unitech	
		19196 TIME, 00,19.92	

- 1. Click **Refresh** to load the latest reports into the **All Reports:** field.
- 2. Double click the desired report in the **All Reports:** field so that it opens in the middle of the screen. Click **Clear** to clear the screen and view the report with fresh data.
- 3. Check Auto Upload All Reports to upload reports to the computer.
- 4. Check **Delete In Server After Upload** to delete the report after uploading.
- 5. In the **Upload Interval:** field, set the **Upload Interval** in units of seconds (by default, the value is set at **300** seconds).
- 6. Choose the preferred folder to store reports in XML format on the computer.

Click on the IP address tab to view reports that set to send out to computers in the network. Click **Refresh** and select a desired IP address. Click **Clear** to clear the screen and view the report with fresh data, or click **Delete** to remove the report page.

#### Viewing Server Log

Click **Server Log**, and log events on the Smart-Reader Server display in the right pane. Click **Clear** to clear the screen and view fresh logs.



### **Using the Application Programming Interface**

Besides using the built-in RS700 Smart-Reader Server and SRSRC, develop or customize RFID applications based on specified requirements. To learn more about the API, please refer to the Unitech Software Development Kit and Programming Manual.

## **Connecting to BizTalk Server**

RS700 supports Microsoft BizTalk Server for data collection. Connect to the BizTalk Server through the following:

- Copy the UnitechAdapter.dll, which is on the Unitech Software Development Kit CD-ROM, to the BizTalk RFID Manager folder (C:\Program Files\Microsoft Biz-Talk RFID\bin).
- 2. Run RFID Manager.

3. Right-click **Device Providers** in the left screen panel, and select **New Provider** to add a provider. The Add Provider screen appears.



4. Type a name for the provider, and click **Browse** to locate the file, Unitech-Adapter.dll which is saved in Step 1. Click **Register** to add the provider.

<u>V</u> ame:	unitechProvider	à -		
jile name(s):	C:\Program File	s\Microsoft BizTalk Rf	FID\bin\Ur	Browse
ovider Properties:				<u>R</u> egister
Tinberit lag level frankservi	ie.	Log level	-	1
No. No. L. L. T.				

5. Click **OK** to confirm.

name for the provider, provide t ince a provider is registered, you To complete the registration, clic	ne list of files as u can edit its pro k OK,	sociated with the perties in the
initechProvider		
:\Program Files\Microsoft BizTal	k RFID\bin\Ur	Browse
		<u>R</u> egister
Log level	Info	<u></u>
1.0		
losing this dialog box		
	_	
	a name for the provider, provide t Once a provider is registered, you . To complete the registration, did unitechProvider [C:\Program Files\Microsoft BizTal 	a name for the provider, provide the list or files as Once a provider is registration, click OK.

6. Right-click **Devices** in the left screen panel, and select **New Device** to add a device. The Add Device Wizard screen appears.

RFID Service	ces Administration	Devices				
E RFID-D	EV1 (local) icesses	Name	Status	Address	Provider	D
D	New Device Import Export Connection Param	neters		THE E A		3 YIGYV,
	⊻iew	•				
	Refresh Export List					
	Help					
	Help					

7. Check Add single device. Click Next.

Add Device Wizard		
Introductio	n	
Introduction Provider	Introduction	
Connection Add Device to a Group Authentication	This wizard helps you add a device. To add a device, you need to know: - Its connection parameters - The provider that the device will use - Credentials required (if any) to successfully connect to the device	
roperties Completion	If you are unable to connect to a device, you can add it in offline mode for future use, when the device comes online.	
	Select an appropriate option for adding the device:	
	<ul> <li>Add <u>multiple devices</u></li> <li>Add <u>multiple devices</u></li> </ul>	
	< Brevious Next > Einish Cancel	

8. Select the newly created provider in Step 4. Click Next.

roduction	Provider
nnection	Select a provider from the list, and then click Next. If the provider does not appear in the list, click Add Provider.
d Device to a Group thentication	A <u>v</u> ailable providers:
operties	unitechProvider Add Provider

9. Input the RS700's IP address and port number. Click Next.

Add Device Wizard		
Connection	L.	
Introduction Provider	Connection	
Connection	Select a connection type and provi required for the RFID server to co	ide the required information for this connection. This is nnect to the device.
Add Device to a Group		
Authentication	Connect using:	ТСР
Properties		
ompiedon	Name or IP address:	192.168.110.102
	Po <u>r</u> t:	11126
		< Previous Next > Finish Cancel

10. Click Next.

introduction Provider	Add Device to a Group To add the device to a group, select the group, and then click f	Vext. To add a new device group,
Add Device to a Group		
Authentication Properties	Existing groups:	Ne <u>w</u> Group

11. Enter the default user name and password as **unitech**. Click **Next**.

Add Device Wizard		
Authentica	ition	
Introduction Provider Connection Add Device to a Group	Authentication If the device requires a use to connect to the d	uthentication, type the credentials that Microsoft BizTalk RFID should levice, and then click Next.
Authentication		unitech
roperties	User name:	
Iompletion	Password:	****

12. Type a name for the device. Click **Next**.

rovider ponection dd Device to a Group	Properties We were successful in co device. Any changes ma	onnecting to the device. The following p de here will override the device proper	properties are available on the ties.
uthentication	N <u>a</u> me:	R5700	
ompletion	Description:     Firmware version:     Vendor:     Location:     Use device property	template	
	<u>Fi</u> le name:		Browse

13. Click Finish.

🛃 Add Device Wizard		×
Completion	1	
Introduction Provider Connection Add Device to a Group Authentication Properties Completion	Completion You have successfully completed the Add Device Wizard.	
	Add another device	
	< <u>Previous</u> <u>N</u> ext > <u>Einish</u>	Cancel

14. Right-click the device, and select View Tags. The View Tags screen appears.



15. Data collected from the RS700 displays in the **Tags:** field. Setup the interval from the **Refresh interval:** drop down menu to update the screen automatically. Or, click **Clear** or **Refresh** to update the screen manually.

S700         TestSource         E2003411880201105         2009/2/19 下午 05:00           15700         TestSource         E2003411880201105         2009/2/19 下午 05:00	evice Name	Source	Tag ID F2003411880201105	Tag Time 2009/2/19 TF	£ 05:00
S700         TestSource         E2003411B80201105         2009/2/19 下午 05:00           S700         TestSource         E2003411B80201105         2009/2/19 下午 05:00           S700         TestSource         11112222333344445         2009/2/19 下午 05:00           S700         TestSource         E2003411B80201105         2009/2/19 下午 05:00           Tags re         Trags re         Tags re           resh interval:         Manual         Clear         Refre	5700	TestSource	E2003411B80201105	2009/2/19下	F 05:00
5700 TestSource 1111222333344445 2009/2/19 下午 05:00 5700 TestSource 1111222333344445 2009/2/19 下午 05:00 5700 TestSource E2003411880201105 2009/2/19 下午 05:00	5700	TestSource	E2003411B80201105	2009/2/19下	F 05:00
5700         TestSource         E2003411880201105         2009/2/19 下午 05:00           Tags re         Tags re         Tags re           fresh interval:         Manual         Clear         Refre	5700	TestSource	11112222333344445	2009/2/19 1-	± 05:00
5700 TestSource E2003411880201105 2009/2/19 下午 05:00 5700 TestSource E2003411880201105 2009/2/19 下午 05:00 5700 TestSource E2003411880201105 2009/2/19 下午 05:00 Tags re fresh interval: Manual Clear Refre	5700	TestSource	E2003411B80201105	2009/2/19下	F 05:00
19700 TestSource E2003411880201105 2009/2/19 下午 05:00 19700 TestSource E2003411880201105 2009/2/19 下午 05:00 Tags re fresh interval: Manual Clear Refre	5700	TestSource	E2003411B80201105	2009/2/19 T	Ŧ 05:00
S700         TestSource         E2003411880201105         2009/2/19         F+         05:00           Tags re         Tags re         Tags re         Tags re         Tags re	5700	TestSource	E2003411B80201105	2009/2/19下	Ŧ 05:00
fresh interval: Manual 🗾 Clear Refre					Tags read:
ors encountered in obtaining tags:	fresh interval:	Man	ual 🗾	Cle <u>a</u> r	Refresh
vevice Name Error Time	fresh interval: ors encountered	Man I in obtaining tags	ual 🗾	Clear	Refresh

### **Connecting to Oracle Sensor Edge Server**

The RS700 supports the Oracle Sensor Edge Server (SES) for data collection. Connect to SES through the following:

- 1. Stop SES.
- Copy the three files, SmartReaderAdapter.jar, SmartReaderDevice.jar and SmartReaderDispatcher.jar, which are on the Unitech Software Development Kit CD-ROM, to the path C:\Oracle\product\10.1.3.1\AS\j2ee\home\applications\edge\edge\extensions.
- 3. Restart SES.
- 4. Open the web browser and type **http://127.0.0.1:7777/edge** to login to the server on the local host.
- 5. Click MyEdgeServer.
- 6. Click Change dispatcher.

http://127.0.0.1/edge/j_security_che	ck - Microsoft Internet Explorer				
<u>File Edit View Favorites Iools Help</u>					
🌏 Back 🔹 🕑 🔸 💌 😰 🏠 🍃	🔵 Search 👷 Favorites  [	3• 🕹 🖂	8		
ddress 🕘 http://127.0.0.1/edge/j_security_	_check			💌 🛃 Go 🛛 Links 🎽	
Sensor Edge Ser	ver			other servers logout help	
			Configura	ntion Monitor Events View Log Event Reports	
MyEdgeServer			-		
	Edge Server Configura	ation: MyEdg	eServer		
Available Extensions	- Drill down on Available Extens	sions to see informa	tion on the edge extensions ava	ailable to use.	
Child Groups	- Drill down on Groups to conti To access other Sensor Edge Serv	gure Sensor Device ers using the same	s. Sensor Data Repository, click 'o	ther servers' on the upper right hand corner.	
- Delaun					
	General Settings			Usage Statistics	
	Server Name: [MyE	dgeServer		Evente Reserved: 0 (0 00(coo))	
	Site Name: MySi	te		Events Generated: 1 (0.01/sec)	
	Internal Queue: persi	st	<b>•</b>	Events Sent: 0 (0.00/sec)	
	Log Level: error	Log Level: error		Queued Events: 1 (0.01/sec)	
	Use Archive: No		*	<u>Clear Queue</u>	
	Shutdown Timeout: 10000 (in milleeconde)		conds)		
		(ut mane s			
	Current Dispatcher: N	lullDispatche	r [Status: NA]		
	Parameter	Type	Value		
	ExtensionName Name of this extension	STRING	NullDispatcher		
	Version	STRING	1.0		
	LastMessage	STRING			
	Last error or display message			Observed descriptions	
				Change dispatcher	
				Change dispatcher Save Changes Cancel	
		Conurial	st (a) 1000, 2000, Overale, (	All visite received	
		Copyrign	ii (c) 1996, 2006, Ofacle. A	An nynts reserveu.	
http://127.0.0.1/edge/j_security_check#				🔮 Internet	

#### 7. Select Smart Reader Dispatcher. Click Select.

ice you change v time	select an appropriate disp e dispatchers, choose a die	atcher, be sure to configure it correctly. patcher from the list below. Only one dispatcher may be configured at	Cance! Select
Searc	h		
Search		( 60 )	
Resul	its		
Select	Dispatcher	Description	
C	Streams DispatcherV2	Streams DispatcherV2	
C	ALE Dispatcher	ALE Dispatcher	
۲	SmartReader Dispatcher	SmartReader Dispatcher	
0	NullDispatcher	Dispatcher that does nothing	
С	Http Dispatcher	Http Dispatcher	
C	PML Dispatcher	PML Dispatcher	
			Cancel Select
			lester.
			Select

### 8. Set the Log Level to All. Click Save Changes.

			4.5		
iress 🧃 http://127.0.0.1/edge/EdgeServ	/er_main.uix				🗾 🔁 Go 🛛 Link
Sensor Edge Se	rver				other servers logout help
			Configuration	Monitor Events	View Log Event Reports
<ul> <li>■ MyEdgeServer</li> <li>■ Available Extensions</li> <li>■ Groups</li> <li>■ Default</li> </ul>	The EdgeServer instance will in Edge Server Configur This top level administrative page e - Drill down on Available Exter - Drill down on Available Exter To access other Sensor Edge Serv General Settings	need to be restarted ation: MyEdg exposes high level pa isions to see informa igure Sensor Device vers using the same	for recent changes to take effect. You eServer arameters for this Sensor Edge Server tion on the edge extensions available to sensor Data Repository, click 'other se	u can restart by using th o use. ervers' on the upper righ	e <u>Enterprise Manager</u> page. thand corner.
	Server Name: MyE	daeSener		🞯 Usage Sta	tistics
	Site Name: MyS Internal Queue: pers	Site Sist	<b>•</b>	Events Ree Events Gene Events	ceived: 0 (0.00/sec) erated: 1 (0.00/sec) s Sent: 0 (0.00/sec)
	Log Level: <b>all</b> Use Archive: No			Queued E	Events: 1 (0.00/sec) Clear Queue
	Shutdown Timeout:	10000 (in millise	conds) Dispatcher (Status: NA1		
	Parameter	Туре	Value		
	ExtensionName Name of this extension	STRING	SmartReader Dispatcher		
	Version Version of this extension	STRING	2.0		
	LastMessage Last error or display message	STRING		_	
	the second se			and the second se	

9. Click MyEdgeServer  $\rightarrow$  Groups  $\rightarrow$  Default.

10. Click Add new device.

http://127.0.0.1/edge/navigate.do?ta	get=group&group_index=edg	e:name=Default,type=DeviceGroup -	Microsoft Internet Explorer	
jie Edit View Favorites Tools Help				
🕽 Back 🔹 🥥 🔸 본 🙆 🏑	Search 🎇 Favorites 🥙	12 · 2 2 2		
ddress 🗃 http://127.0.0.1/edge/navigate.d	o?target=group&group_index=edge	%3Aname=Default%2Ctype=DeviceGroup	0	💌 🎅 Go 🛛 Links
Sensor Edge Ser	ver			other servers logout help
			Configuration Monitor Events	View Log Event Reports
MyEdgeServer > Groups > Default				
Original MyEdgeServer           Original MyEdgeServer           Original MyEdgeServer           Original MyEdgeServer	The EdgeServer instance w Configure Group: Do This name lists all of the devices	vill need to be restarted for recent changes t efault and filters configured in this group. To con-	to take effect. You can restart by using the	ne <u>Enterprise Manager</u> page.
Orault	devices.	ana more configured in the group. To sort		co control to having a contract
	TIP To delete a devi	ce from this group, or access the co	nfiguration for a device, use the tre	e control to the left.
	Configured Filters	Start all d	Add new device	
	Order Delete Nam	e	Move	
			Add new filter	
	Update Group			
	Group Name: D	efault	(Rename Group)	
	Event Collect Time:	500 (in milliseconds)	Update	
				(Delete Group)
		Copyright (c) 1996, 2006,	, Oracle. All rights reserved.	
http://127.0.0.1/edge/navigate.do?target=	aroup&aroup index=edge%3Aname	=Default%2Ctype=DeviceGroup#		M Internet

- 11. Select Smart Reader Device.
- 12. Type a name for the device. For example, RS700. Click Select.

Gearch	1	Go	
Resul	ts		
elect	Driver	Description	
C	Samsys Driver	Samsys Driver	
Ċ.	BarcodeDriver	BarcodeDriver	
0	Symbol Driver	Symbol Driver	
0	Alien RI Driver	Alien RI Driver	
C	File Load Driver	File Load Driver	
C	Console Driver	Console Driver	
C	Intermec Reader Driver	Intermec Reader Driver	
0	Simple Audio Driver	Simple Audio Driver	
C	Tyco Reader Driver	Tyco Reader Driver	
Ċ.	AeroScoutDriver	Device Driver for Aeroscout RTLS system	
C	PatliteDriver	PatliteDriver	
C	Impinj Reader	Impinj Reader	
C	HtmlDriver	HtmlDriver	
C	RemoteDriver	RemoteDriver	
C	Edge Simulator Driver	Edge Simulator Driver	
0	AWID MPR-3014 Reader Driver	AWID MPR-3014 Reader Driver	
Ċ	Alien Reader Driver	Alien Reader Driver	
0	Intermec BRI Driver	Intermec BRI Driver	
0	Edge Echo Driver	Edge Echo Driver	
0	Prolite Driver	Prolite Driver	
•	SmartReader Device	SmartReader Device	
C	LpmIDriver	LpmIDriver	
C	AnimationDriver	AnimationDriver	
ew d	evice name: <mark>RS700</mark>		
			(Cancel) (Selec

	13.	Click MyEdgeServe	$r  ightarrow {f Groups}  ightarrow$	$\cdot$ Default $\rightarrow$ RS700.
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🗿 http://127.0.0.1/edge/Group.uix - Mi	rosoft Internet Explorer	
File Edit View Favorites Tools Hel		an a
🌀 Back 🔹 🕗 - 💌 😰 🏠 🍃	🔍 Search 🤺 Favorites 🧭 🎯 🍰 🤤 🦓	
Address 🗃 http://127.0.0.1/edge/Group.uix		💌 🋃 Go 🛛 Links ≫
MyEdgeServer > Groups > Default	Configu The EdgeServer instance will need to be restarted for recent changes to take e Configure Group: Default This page lists all of the devices and filters configured in this group. To configure filt devices.	ther servers with the server servers with the server servers with the server server servers with the server servers se
O Devices <u>RS700</u> – Group Filters	Of TIP To delete a device from this group, or access the configurat         Device Name       Status         RS700       A DOWN         Statt all devices	on for a device, use the tree control to the left. Add new device (Stop all devices)
	Configured Filters	
	Order Delete Name	Move Add new filter
	Update Group	
	Group Name: Default ( Event Collect Time: 500 (in milliseconds) (	Rename Group ) Update
a bttp://127.0.0.1/edge/Group.uv.#	Copyright (c) 1996, 2006, Oracle	Delete Group

14. Input the RS700's IP address and port number, and the default user name and password as **unitech**. Click **Save Changes**.

File Edit View Eavorites Tools Helr	?action=stop_device&group_ind	ex=&driver_	index=edge:Devicet - Microsoft Internet Explorer	_ 8 >
🗿 Back + 🔿 - 😰 🔹 🐔 🖉	Search Cavorites 🚱	a. B. r	3 28	
address bttp://127.0.0.1/edge/driverActio	n do?action=stop_device&group_index	=8driver_inde		in Links <sup>1</sup>
AT Rubille Longer And August House	ando, decion - scop_do nedogroup_indos			
O Default	Device Info			
Devices	Name: RS700		Rename	
Group Filters	Version: 1.0 Status: DOWN			
			(Start device) (Stop device )	
	Configured Filters			
	Order Delete Name:	1	Move	
			Add pow files	
			Authewniter	
	Parameters			
	Parameter	Туре	Value	
	FilterList The list of filter instances deploye	STRING		
	ExtensionName Name of this extension	STRING	SmartReader Device	
	Version Version of this extension	STRING	1.0	
	Address SmartReader IP Address	STRING	192.168.110.73	
	Port Smart Reader TCP Port	STRING	11126	
	Account Account for SmartReader Login	STRING	unitech	
	Password Password for Smart Reader Login	STRING	unitech	
	LastMessage Last error or display message	STRING		
			(Save Changes)	

- 15. Restart SES.
- 16. Click **MyEdgeServer**  $\rightarrow$  **Groups**  $\rightarrow$  **Default**  $\rightarrow$  **RS700**.

#### 17. Click Start all devices.

The server will log the event in the Monitor Events tab, when the RS700 collects RFID tags.

View Favorites Tools Help					
• 🕢 • 💌 😰 🏠 🔎 Sea	arch 📌 Favorites 🚱 😪	• 👌 🗔 🚜			
http://127.0.0.1/edge/Monitor.uix		3			▼ 🛃 G0
RACLE					A ()
ensor Edge Server	r				
			Configuration	Monitor Events	View Log Event Rep
eServer > Monitor Events					
monitors events that have recently moved	through the Edge Server queue.				
und Quede	102				
ile Tuno Description	10.0	Device Name		Data	Tima
ils Type Description	ID	Device Name		Data	Time
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## **Chapter 4**

## **Advanced Settings**

The RS700 provides a standard interface to setup the terminal, and It is possible through this to make connections and perform remote control functions.

## **Connecting to a LAN Network**

#### **Obtaining an IP Address**

Connect to a network through the following:

- 1. Connect the computer to a DHCP enabled network.
- 2. Connect the Ethernet cable to the Ethernet Port on the RS700's bottom panel, and rotate the cable cap clockwise to secure the connection.
- 3. Connect the RS700 to the same network via DHCP. The DHCP server will assign an IP address to the RS700.
- 4. On the computer, click Start → Programs → Smart-Reader Server Remote Control → Reader Discovery.
- 5. Click **Discovery** to lookup the DHCP client in the same subnet.



6. Refer to the MAC address label attached the RS700's rear panel, and discover the RS700's IP address in the list box. Double-click the IP address to open the configuration webpage in the default browser.

🗮 Reade	rDiscovery VI	.00	
Adapter:	Realtek RTL	3168/8111 PCI-E Gigabit Ethernet NIC - Packet Sch	eduler Miniport 💌
	IP: 192,168,11	0.80 Mask: 255,255,255.0	
	Subnet: 192.1	68.110.1 ~ 192.168.110.254	
Progress			Discovery
	_		
LIP		MAC address	
192.168 192.168 192.168	110,57 110,66 110,248	00:16:09:06:00:40 00:16:09:06:01:99 00:16:09:04:03:95	
The disco Double cl	ivery process wil	I take about 2 or 3 minutes. Please keep patient for ( ig webpage.	waiting.

7. The RS700 WebConfig Server window appears with basic information about the RS700, such as program version numbers and system memory.

Basic Information       System management     OS Version     V2.0.11       About     OS Version     V2.0.11       SystemTime     Boot Loader     V3.7       Enternet     Storage memory total     66.3 MB       Wireless     Storage memory total     66.2 MB
Basic Setup V2.0.38 Basic Setup AP Version V1.00 Status Drofile Setup

The built-in RS700 WebConfig Server is a web-based interface, which can configure the RS700 on a remote computer.

#### Setting the System Time

Synchronize the system time with the remote computer via the RS700 WebConfig Server. Set the system time through the following:

1. Click **SystemTime** in the left screen panel. The System Time Setup page appears in the right screen panel with the current settings.

unite	ch	Syste	em '	Time	e Setup	
System management	[Logout]	Time Zone	(GMT+	11:00) Magad	an, Solomon Is., New Caledonia	*
About		Year	2008			
SystemTime		Month	11	i i		
Enternet Wireless		Day	5	]		
Basic Setup		Hour	12	1		
Status Profile Setup		Min	00	Ĩ		
Global Setup		Sec	00			
				Apply	Reset	

- 2. Click **Reset** to clear all the fields.
- 3. Select the desired time zone, and input the preferred date and time.
- 4. Click **Apply** to save the settings. A dialog box appears with the message **Set System Time OK!**.

#### **Setting up Ethernet connection**

It is possible to configure the Ethernet settings on this page.

1. Click **Ethernet** in the left screen panel. The Ethernet Setup page appears in the right screen panel with the current settings.

<ul> <li>Obtain an IP address via</li> <li>Specify an IP address</li> <li>IP Address</li> <li>Subnet Mask</li> <li>Default Gateway</li> <li>Name Servers</li> <li>Primary DNS</li> <li>Secondary DNS</li> <li>Primary WINS</li> </ul>	DHCP  192.168.112.233  255.255.2  192.168.112.244
	<ul> <li>Obtain an IP address via</li> <li>Specify an IP address</li> <li>IP Address</li> <li>Subnet Mask</li> <li>Default Gateway</li> <li>Name Servers</li> <li>Primary DNS</li> <li>Secondary DNS</li> <li>Secondary WINS</li> <li>Secondary WINS</li> </ul>

- 2. Select the DHCP server to automatically assign an IP address, or manually specify an IP address.
- 3. Select **Specify an IP address**, input the IP address, subnet mask, default gateway and etc.
- 4. Click **Apply** to save the settings. A box appears with the message **Set Ethernet OK!**. While the message **Input Error, please check!** indicates incomplete input.

### **Connecting to a WLAN Network**

It is possible to send and receive signals to a Wi-Fi network, and synchronize files with the RS700's embedded WLAN interface.

**NOTE:** Wi-Fi access requires a separate service contract through a wireless service provider. Contact a wireless service provider for more information.

A wireless network can be added when the network is detected or by manually entering information settings. Determine if authentication information is needed before proceeding through the following steps.

Setup a wireless LAN via RS700 WebConfig Server through the following:

1. Click **Profile Setup** in the left screen panel. The Wireless Profile page appears in the right screen panel. Click **New** to add a new profile.

unitech	Wireless Profile	
[Logout] System management About System Time Enternet Wireless Basic Setup Status Profile Setup Global Setup	Edit Profile New Rename Radio Client Name Power Save Tx Power Bit Rate Radio Mode Auth Type	Default
	Encryption:	EAP Type:
	None	V None V
	WEF keys/PSKs	Credentials
	Save Changes:	Commit

2. Enter the profile name in the dialog box. Click Ok.



3. Enter the SSID for the wireless network. Scroll down the **Encryption** drop down menu to select the wireless encryption type. Click **WEP keys/PSKs**.

unitech	Wireless Profile	
[Logout] System management About SystemTime Enternet Wireless Basic Setup Status Profile Setup Global Setup	Edit Profile New Rename Radio Client Name Power Save Th Power Bit Rate Radio Mode Auth Type	My WLAN Delere Scan UTE
	Encryption:	EAP Type:
	Manual WEP 🔷	None 💌
	WEP keys/PSKs	Credentials
	Save Changes:	Commit

4. Enter the WEP keys in the dialog box. Click **Ok**.

Enter 10 or 26 Hex digits(A-F,0-9) OR enter 5 or 13 ASCII characters Tx Key		
⊙ 1	1234567890	
O 2		
03		
04		
0	OK Cancel	

- 5. In the Wireless Profile page, click **Commit** to save the profile.
- 6. Click **Basic Setup** in the left screen panel. The Wireless Basic page appears in the right screen panel. Click **Reset** to clear all fields.

unitech	Wireless Ba	asic
[Logout] System management About SystemTime Enternet Wireless Basic Setup Status Profile Setup Global Setup	<ul> <li>Enable Radio</li> <li>Active Profile</li> <li>Obtain an IP address via D</li> <li>Specify an IP address</li> <li>IP Address</li> <li>Subnet Mask</li> <li>Default Gateway</li> <li>Name Servers</li> <li>Primary DNS</li> </ul>	O Disable Radio Default
	Secondary DNS Primary WINS Secondary WINS Apply	Reset

7. Select **Enable Radio**. Scroll down the Active Profile list to select the created profile.

unitech	Wireless Bas	sic
[Logout] System management About SystemTime Enternet Wireless Basic Setup Status Profile Setup Global Setup	<ul> <li>Enable Radio</li> <li>Active Profile</li> <li>Obtain an IP address via DHCP</li> <li>Specify an IP address</li> <li>IP Address</li> <li>Subnet Mask</li> <li>Default Gateway</li> <li>Name Servers</li> <li>Primary DNS</li> <li>Secondary DNS</li> <li>Secondary WINS</li> <li>Secondary WINS</li> </ul>	O Disable Radio Default ThirdPartyConfig Default My WLAN

- 8. Have the DHCP server automatically assign an IP address, or specify an IP address manually.
- 9. Select **Specify an IP address**, input the IP address, subnet mask, default gateway and etc.
- **NOTE:** To enhance radio performance install the Wi-Fi Antennas on the RS700's top panel. See *Installing Wi-Fi Antenna* on page 6.
- 10. Click **Apply** to save the settings. Check the settings if the message **Input Error, please check!** appears.
- 11. Click **Status** in the left screen panel. The Wireless Status page appears in the right screen panel with information containing the active profile, radio status, client attributes, AP attributes, connection channel number, data rate, transmitted power, signal strength and etc. Click **Refresh** to refresh the page.

12. Click **Basic Setup** in the left screen panel and select **Disable Radio** in the Wireless Basic page to disable the access point.

unitech	Wireless Basic	
[Logout System management About SystemTime Enternet Wireless Basic Setup Status Profile Setup Global Setup	Image: Subset Mask Default Gateway Drison       Image: Subset Mask Drison	
	Secondary DNS Primary WINS Secondary WINS Apply Reset	

#### **Managing your Wireless Profiles**

Click **Profile Setup** in the left screen panel to manage wireless profiles in the Wireless Profile page.

unitech	Wireless Profile	
[Logout] System management About SystemTime Enternet Wireless Basic Setup Status Profile Setup Global Setup	Edit Profile New Rename Radio Client Name Power Save Th Power Bit Rate Radio Mode Auth Type	Default
	Encryption:	EAP Type:
	None 💊	None 😽
	WEF keys/PSKs	Credentials
	Save Changes:	Commit

- Edit Profile: Views a selected profile from the drop down menu on the right.
  - New: Creates a new profile.
  - Rename: Changes the name of a selected profile. The name should be unique, not being assigned to another profile. Input another name for this profile if the message Profile name already exit! appears.
  - Delete: Deletes a selected profile, which is not the active profile. Otherwise, the message Active profile can not be deleted! appears.

- Scan: A window appears with available APs. Click Refresh to receive the updated list. Referring to the received signal strength indication (RSSI) and whether data encryption is required or not, i.e., true or false (Secure), select a desired SSID from the list and click Connect to create a new profile with this SSID.
- **Radio**: Configures radio settings on the right fields.
  - SSID: Enters the service set identifier (SSID) for an access point.
  - Client Name: Assigns a client name for the terminal.
  - Power Save: Selects a power saving mode when idling. Value CAM stands for constant awake mode, Maximum for maximum power saving mode and default Fast for fast power saving mode.
  - Tx Power: Selects a transmit power for power saving. While the default is set to Maximum, lower the transmit power to 50, 30, 20, 10, 5 or 1mW. The lower power will result in a lower signal strength.
  - Bit Rate: Selects a suitable transmission rate to AP. While the default is set to Auto, set the bit rate to 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 or 54 Mbps. The higher rate will allow a shorter distance between access points.
  - Radio Mode: Selects a radio mode to AP. The terminal supports 802.11b/g.
     While the default is set to BG optimized, change to B rates only (802.11b data rates at 1, 2, 5.5 and 11 Mbps), G rates only (802.11g data rates at 6, 9, 12, 18, 24, 36, 48 and 54 Mbps) or BG rates full (All 802.11b/g rates).
  - Auth Type: Selects an 802.11 authentication type. While the default is set to no authentication needed to Open, change to Shared using WEP shared key or LEAP using LEAP protocol.
- Encryption: Selects the type of encryption to protect transmitted data. Available types are Manual WEP, Auto WEP, WPA PSK, WPA TKIP, WPA2 PSK, WPA2 AES, CCKM TKIP, CKIP Manual and CKIP Auto. While WEP Keys/ PSKs appears; WEP keys or pre-shared keys are required.
- **EAP Type**: Selects an extensible authentication protocol. Available types are LEAP, EAP-FAST, PEAP-MSCHAP, PEAP-GTC and EAP-TLS. While **Credentials** appears, authentication credentials are required.

Click **Global Setup** in the left screen panel to adjust the wireless global settings in the Wireless Global page. The attributes in the **Property** field can apply to all profiles.

unitech	Wireless	Global
[Logout] System management	Property Roam Trianer	Value
About SystemTime Enternet Wireless Basic Setup Status Profile Setup Global Setup	Roam Delta Roam Delta Roam Period BG Channel Set Aggressive Scan OCX features WMM TX Diversity RX Diversity Frag Thresh RTS Thresh LED Tray Icon Hide Password Admin Password Admin Password Admin Password Admin Password Auth Timeout Certs Path Ping Payload Ping Timeout ms Ping Delay ms	-70 dbm -50 dbm -55 dbm -60 dbm -65 dbm -70 dbm -75 dbm -80 dbm -85 dbm -90 dbm

Click Logout to exit the RS700 WebConfig Server.

### **Establishing Terminal-PC Connection**

#### Installing Microsoft ActiveSync

In order to exchange data between the computer and the RS700, Microsoft Active-Sync must be installed on the computer. Use the USB Cable that comes with the RS700 to connect the terminal to the computer.

**NOTE:** Uninstall previous versions of Microsoft ActiveSync before installing the latest version.

#### **Additional Capabilities**

- Backup and restore RS700 data.
- Copy (rather than synchronize) files between the RS700 and a desktop computer.
- Control the synchronization occurrence by selecting a synchronization mode. For example, synchronize continuously while connecting to a desktop computer or only when a synchronization command is selected.
- Select which information types are synchronized and control how much data is synchronized. For example, synchronize past appointments during the last six weeks.

Install Microsoft ActiveSync on the computer through the following:

- Close any open programs, including those that run during startup and disable any antivirus software.
- Download the ActiveSync software from the Microsoft ActiveSync Download page at:

http://www.microsoft.com/windowsmobile/en-us/help/synchronize/activesync45.mspx.

- Browse to the location of the downloaded file, and double-click it. The installation wizard begins.
- Follow the instructions onscreen to install Microsoft ActiveSync.

#### Connecting the terminal to Your Computer

After Microsoft ActiveSync is installed, make a connection through the following:

- 1. Connect the USB Cable to the USB port on the RS700's bottom panel, and rotate the cable cap clockwise to secure the connection.
- 2. Insert the other end of the USB Cable into a USB Port on the computer.
- Microsoft ActiveSync starts automatically and configures the USB Port to work with the RS700. The New Partnership setup wizard will ask to setup a partnership.



**NOTE:** If Microsoft ActiveSync doesn't start automatically, click Start  $\rightarrow$  Programs  $\rightarrow$  Microsoft ActiveSync.

If a message appears indicating that it is unable to detect a connection, click **Cancel** and manually configure the communication settings by clicking **MAS**  $\rightarrow$  **File**  $\rightarrow$  **Connection Settings**  $\rightarrow$  **Connect**.

4. Follow the onscreen instructions. The Microsoft ActiveSync window appears when the configuration is complete.

🔞 Microsoft ActiveSync	
<u>File Yiew Tools H</u> elp	
💿 Sync 🕒 Schedule 😥 Explore	
Guest	
Connected	G
	Hide Details 🗙
Information Type Status	

5. Synchronization will initiate, and it will synchronize periodically or upon connection.

#### Using Microsoft ActiveSync to Exchange Files

Synchronization options can modify, including when to synchronize and what gets synchronized. In the Mobile Device window on the computer, click **Tools**  $\rightarrow$  **Sync Options**.

For each type of information, the synchronization process can be hastened by limiting the amount of synchronized data. To do this, select a service and click **Settings**. After enabling a service, close and reopen Microsoft ActiveSync.

Synchronization occurs according to the options chosen while setting up Microsoft ActiveSync on the computer. If the default (On Connect) synchronization option in the Microsoft ActiveSync Setup Wizard is selected, simply connect the RS700 to the desktop computer and synchronization will take place.

If the disabled On Connect feature in Microsoft ActiveSync is selected, start Active-Sync through one of the following:

- On the computer, click **My Computer**  $\rightarrow$  **Mobile Device folder**.
- Connect the USB cable between the computer and terminal.

Use Microsoft ActiveSync to exchange information from the terminal to the computer and vice versa. Changes made to the information on one location will not affect the information on the other. To automatically update information on both the RS700 and the computer, synchronize the information instead.

**NOTE:** Files created on the computer may need to be converted by ActiveSync so that they can be viewed and edited on the terminal, and vice versa.

Copy two types of information to the device: files and Pocket Access Windows CE Store information.

The following procedure only applies to copying files. Refer to the Microsoft Active-Sync Help on the computer for instructions on how to copy Pocket Access Windows CE Store information.

- 1. In the Microsoft ActiveSync window on the computer, click **Explore**. Windows Explorer opens the Mobile Device window for the terminal.
- 2. Locate a file to copy on the terminal or computer.
- 3. Do one of the following:
  - To copy the file to the terminal, right-click the file and click Copy. Place the cursor in the desired folder for the terminal, right-click and click Paste.
  - To copy the file to the computer, right-click the file and click Copy. Place the cursor in the desired folder on the computer, right-click and then click Paste.

### **Using Remote Control**

Besides configurations through the web-based interface, there are also ways to control the RS700 remotely with the computer via Microsoft Power Toys. It is possible to setup the system time, establish network connections or do any other settings on the RS700 Windows platform.

Use the remote control through the following:

- 1. On the computer, install WindowsMobilePowerToys.msi, which is on the Unitech CD-ROM.
- **NOTE:** Download the latest PowerToys software from the Microsoft Download Center.
- 2. Connect the USB Cable to USB Port on the RS700's bottom panel, and rotate the cable cap clockwise to secure the connection.
- 3. Insert the other end of the USB Cable into a USB Port on the computer.
- 4. Microsoft ActiveSync starts automatically and configures the USB Port to work with the RS700.
- 5. Click Start  $\rightarrow$  Programs  $\rightarrow$  ActiveSync Remote Display.
- **NOTE:** Alternatively, execute ASRDisp.exe in the Microsoft ActiveSync Remote Display folder.
- 6. A dialog box appears with message **The OS or CPU of this device is unknown to this application**. Click **OK**. The WindowsCE window opens with applications, such as SRS and WebConfig running on the RS700.



Click **Zoom** to adjust the zoom level at 1x, 2x or 3x. Click **File**  $\rightarrow$  **Exit** to exit the remote control window.

## Chapter 5

## Troubleshooting

Unitech has a professional support team to answer any questions or technical related issues. If equipment problems occur please refer to the table below or contact a regional Unitech representative.

	Problem	Solution	
1.	Cannot Backup Data.	<ul> <li>Check if the Backup Battery Switch is on.</li> <li>Send back to Unitech for RMA.</li> </ul>	
2.	Cannot Read a Tag.	<ul> <li>Check whether the RFID Antenna is properly connected to the TNC Connector via Antenna Cable.</li> <li>Check whether the Antenna Port is correct.</li> <li>Check whether the tag is damaged.</li> <li>Check the software settings, e.g., reader status, antenna port and etc.</li> <li>Reset the RS700.</li> <li>Send back to Unitech for RMA.</li> </ul>	
3.	Cannot Charge the Backup Battery.	<ul> <li>Check if the Backup Battery Switch is on.</li> <li>Send back to Unitech for RMA.</li> </ul>	
4.	The USB Communication Fails.	<ul> <li>Reconnect the USB Cable.</li> <li>Reset the RS700.</li> <li>Send back to Unitech for RMA.</li> </ul>	
5.	Cannot Reset the RS700.	<ul> <li>Make sure the Reset Button is pressed in.</li> <li>Make sure the backup battery switch is turned off when removing external power.</li> <li>Send back to Unitech for RMA.</li> </ul>	

## Appendix A

## **System Specification**

Processor/Memory	CPU	520Mhz Intel PXA270	
	Memory	SDRAM: 64MB	
		Flash ROM: 64MB	
OS	Microsoft Windows CE 5.0		
Indicator	Data LED, RFID LED and Power	LED	
Communication	USB 1.1 Client		
	Serial RS232		
	Ethernet 10/100Base-T		
	IEEE 802.11b/g Wireless LAN, C	CX Compatible	
	Optical Inputs (2)		
PEID Boodor	Poodor	B1000	
KFID Keduei	Drotocol	EDCalabel Classed Can?	
	Plotocol		
	Frequency	UHF 860MHz - 960MHz	
	Output Power	Up to 1W and 4ERP with Antenna	
	Antenna Number	4-port switch	
	Channel	8-channel TX/RX	
	Reading Distance	1 - 10 Meters Depending on Reading	
		Points and Tags	
	Тад Туре	EPCglobal C1G2, ISO 18000-6C	
SD Card Slot	Built-in 2GB Storage		
Power Source	Main Power	Input: 100-240Vac, 50/60MHz, 0.75A	
		Output: 12V DC, 3A, 36W Max.	
	Backup Power	3800mAh Rechargeable Lithium-Ion	
		Battery	
Enclosure	Weight	1750g (3.8 lbs.)	
	Dimension	252mmL X 57.7mmH X 185.3mmW	
		(9.9"L X 2.2"H X 7.2"W)	
Environmental	Operating Temperature	-20°C - 50°C (-4°F - 122°F)	
	Storage Temperature	-30°C - 70°C (-22°F - 158°F)	
	Relative Humidity	0% - 95% (Non-condensed)	
	Environmental Sealing	IP65 (Indoor and Outdoor Applications)	
Certification	FCC, CE, NCC, BSMI, CCC, RoHS Compliance and TELEC		
Accessories	GPX-026XTPR8-763 RFID Antenna		
	CFD200-NL Antenna cable, 24'		
Software	RS700 SDK		
	RFID Middleware SDK		
	Microsoft BizTalk RFID		
	Oracle Sensor Edge Sever		
1	I IBM WebSphere		

## Appendix B

## Support

Region	Web site
Global Operation Center	www.unitech-adc.com
unitech Taiwan	adc-utt.unitech.com.tw
unitech Asia Pacific & Middle	www.unitech-utp.com.tw
unitech China	www.ute.com.cn
unitech Japan	www.unitech-japan.co.jp
unitech America	www.ute.com
unitech Latin America	latin.ute.com
unitech Europe	www.unitech-europe.nl