



NEXCOM International Co., Ltd.

Interactive Signage Platform Business Unit

Digital Signage Platform

NDiS B115XXXXXXXXXX

PDSB115XXXXXXXXXX

User Manual

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PREFACE

Copyright

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Disclaimer

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Acknowledgements

NDiS B115 is a trademark of NEXCOM International Co., Ltd. All other product names mentioned herein are registered trademarks of their respective owners.

Regulatory Compliance Statements

This section provides the FCC compliance statement for Class A devices and describes how to keep the system CE compliant.

Declaration of Conformity

FCC

This equipment has been tested and verified to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. 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. Operation of this equipment in a residential area (domestic environment) is likely to cause harmful interference, in which case the user will be required to correct the interference (take adequate measures) at their own expense.

CE

The product(s) described in this manual complies with all applicable European Union (CE) directives if it has a CE marking. For computer systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cable and cabling techniques.

RoHS Compliance



NEXCOM RoHS Environmental Policy and Status Update

NEXCOM is a global citizen for building the digital infrastructure. We are committed to providing green products and services, which are compliant with European Union RoHS (Restriction on Use of Hazardous Substance in Electronic Equipment) directive 2011/65/EU, to be your trusted green partner and to protect our environment.

RoHS restricts the use of Lead (Pb) < 0.1% or 1,000ppm, Mercury (Hg) < 0.1% or 1,000ppm, Cadmium (Cd) < 0.01% or 100ppm, Hexavalent Chromium (Cr6+) < 0.1% or 1,000ppm, Polybrominated biphenyls (PBB) < 0.1% or 1,000ppm, and Polybrominated diphenyl Ethers (PBDE) < 0.1% or 1,000ppm.

In order to meet the RoHS compliant directives, NEXCOM has established an engineering and manufacturing task force to implement the introduction of green products. The task force will ensure that we follow the standard NEXCOM development procedure and that all the new RoHS components and new manufacturing processes maintain the highest industry quality levels for which NEXCOM are renowned.

The model selection criteria will be based on market demand. Vendors and suppliers will ensure that all designed components will be RoHS compliant.

How to recognize NEXCOM RoHS Products?

For existing products where there are non-RoHS and RoHS versions, the suffix "(LF)" will be added to the compliant product name.

All new product models launched after January 2013 will be RoHS compliant. They will use the usual NEXCOM naming convention.

Warranty and RMA

NEXCOM Warranty Period

NEXCOM manufactures products that are new or equivalent to new in accordance with industry standard. NEXCOM warrants that products will be free from defect in material and workmanship for 2 years, beginning on the date of invoice by NEXCOM. HCP series products (Blade Server) which are manufactured by NEXCOM are covered by a three year warranty period.

NEXCOM Return Merchandise Authorization (RMA)

- Customers shall enclose the “NEXCOM RMA Service Form” with the returned packages.
- Customers must collect all the information about the problems encountered and note anything abnormal or, print out any on-screen messages, and describe the problems on the “NEXCOM RMA Service Form” for the RMA number apply process.
- Customers can send back the faulty products with or without accessories (manuals, cable, etc.) and any components from the card, such as CPU and RAM. If the components were suspected as part of the problems, please note clearly which components are included. Otherwise, NEXCOM is not responsible for the devices/parts.
- Customers are responsible for the safe packaging of defective products, making sure it is durable enough to be resistant against further damage and deterioration during transportation. In case of damages occurred during transportation, the repair is treated as “Out of Warranty.”
- Any products returned by NEXCOM to other locations besides the customers’ site will bear an extra charge and will be billed to the customer.

Repair Service Charges for Out-of-Warranty Products

NEXCOM will charge for out-of-warranty products in two categories, one is basic diagnostic fee and another is component (product) fee.

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System Level

- Component fee: NEXCOM will only charge for main components such as SMD chip, BGA chip, etc. Passive components will be repaired for free, ex: resistor, capacitor.
- Items will be replaced with NEXCOM products if the original one cannot be repaired. Ex: motherboard, power supply, etc.
- Replace with 3rd party products if needed.
- If RMA goods can not be repaired, NEXCOM will return it to the customer without any charge.

Board Level

- Component fee: NEXCOM will only charge for main components, such as SMD chip, BGA chip, etc. Passive components will be repaired for free, ex: resistors, capacitors.
- If RMA goods can not be repaired, NEXCOM will return it to the customer without any charge.

Warnings

Read and adhere to all warnings, cautions, and notices in this guide and the documentation supplied with the chassis, power supply, and accessory modules. If the instructions for the chassis and power supply are inconsistent with these instructions or the instructions for accessory modules, contact the supplier to find out how you can ensure that your computer meets safety and regulatory requirements.

Cautions

Electrostatic discharge (ESD) can damage system components. Do the described procedures only at an ESD workstation. If no such station is available, you can provide some ESD protection by wearing an antistatic wrist strap and attaching it to a metal part of the computer chassis.

Safety Information

Before installing and using the device, note the following precautions:

- Read all instructions carefully.
- Do not place the unit on an unstable surface, cart, or stand.
- Follow all warnings and cautions in this manual.
- When replacing parts, ensure that your service technician uses parts specified by the manufacturer.
- Avoid using the system near water, in direct sunlight, or near a heating device.
- The load of the system unit does not solely rely for support from the rackmounts located on the sides. Firm support from the bottom is highly necessary in order to provide balance stability.
- The computer is provided with a battery-powered real-time clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Installation Recommendations

Ensure you have a stable, clean working environment. Dust and dirt can get into components and cause a malfunction. Use containers to keep small components separated.

Adequate lighting and proper tools can prevent you from accidentally damaging the internal components. Most of the procedures that follow require only a few simple tools, including the following:

- A Philips screwdriver
- A flat-tipped screwdriver
- A grounding strap
- An anti-static pad

Using your fingers can disconnect most of the connections. It is recommended that you do not use needle-nose pliers to disconnect connections as these can damage the soft metal or plastic parts of the connectors.

Safety Precautions

1. Read these safety instructions carefully.
2. Keep this User Manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a stable surface during installation. Dropping it or letting it fall may cause damage.
7. The openings on the enclosure are for air convection to protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Place the power cord in a way so that people will not step on it. Do not place anything on top of the power cord. Use a power cord that has been approved for use with the product and that it matches the voltage and current marked on the product's electrical range label. The voltage and current rating of the cord must be greater than the voltage and current rating marked on the product.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
12. Never pour any liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If one of the following situations arises, get the equipment checked by service personnel:
 - a. The power cord or plug is damaged.
 - b. Liquid has penetrated into the equipment.
 - c. The equipment has been exposed to moisture.
 - d. The equipment does not work well, or you cannot get it to work according to the user's manual.
 - e. The equipment has been dropped and damaged.
 - f. The equipment has obvious signs of breakage.
15. Do not place heavy objects on the equipment.
16. The unit uses a three-wire ground cable which is equipped with a third pin to ground the unit and prevent electric shock. Do not defeat the purpose of this pin. If your outlet does not support this kind of plug, contact your electrician to replace your obsolete outlet.
17. **CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER. DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.**

Technical Support and Assistance

1. For the most updated information of NEXCOM products, visit NEXCOM's website at www.nexcom.com.
2. For technical issues that require contacting our technical support team or sales representative, please have the following information ready before calling:
 - Product name and serial number
 - Detailed information of the peripheral devices
 - Detailed information of the installed software (operating system, version, application software, etc.)
 - A complete description of the problem
 - The exact wordings of the error messages

Warning!

1. Handling the unit: carry the unit with both hands and handle it with care.
2. Maintenance: to keep the unit clean, use only approved cleaning products or clean with a dry cloth.

Conventions Used in this Manual



Warning:

Information about certain situations, which if not observed, can cause personal injury. This will prevent injury to yourself when performing a task.



Caution:

Information to avoid damaging components or losing data.



Note:

Provides additional information to complete a task easily.

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Package Contents

Before continuing, verify that the NDiS B115 package that you received is complete. Your package should have all the items listed in the following table.

Item	Name	Qty
1	Wi-Fi Antenna	1
2	Power Adapter	1



Wi-Fi Antenna



Power Adapter

Ordering Information

The following below provides ordering information for NDiS B115.

- **Barebone**

NDiS B115 (P/N: 10W00B11500X0)

Rockchip RK3288 ARM Cortex-A17 quad core

CHAPTER 1: PRODUCT INTRODUCTION

NDiS B115

Overview



Powered by ARM® Cortex®-A17 quad core, NDiS B115 can play rich multimedia contents with low power consumption. NDiS B115 is enclosed in a compact chassis and can be easily integrated to display devices, such as LCD TV or PDP at site installation with HDMI display output (up to HDMI 2.0 support 4K2K 60Hz), Gigabit LAN. NDiS B115 is suitable as an entry level digital signage player for advertising, messaging, and brand promotion.

Key Features

- Onboard Cortex®-A17 quad core SoC
- Compliant to HDMI 2.0, support 4K2K video content
- Onboard IEEE 802.11 b/g/n and Bluetooth 4.0
- Fanless and slim design
- Support Android

Hardware Specifications

CPU Support

- Rockchip RK3288 28nm Cortex®-A17 quad core up to 1.8GHz

Graphics

- Rockchip RK3288 integrated graphics engine

Main Memory

- Support DDR3 2GB memory on board

I/O Interface-Front

- 1x Power LED indicator

I/O Interface-Left

- 1x SD card slot, supports up to 64GB flash card
- Reset button
- 1x USB 2.0

I/O Interface-Rear

- 1x HDMI 2.0 output
- 1x RJ45 Gigabit LAN port
- 1x USB OTG
- 1x ANT
- DC 5V power input jack
- 1x Audio line-out

Storage

- Internal Flash: default 16G Bytes eMMC flash

Dimensions

- 118mm (W) x 101mm (D) x 23.6mm (H)

Power Supply

- 1x External 18W AC/DC adapter
- Input: 100~240VAC
- Output: +5V

Environment

- Operating temperature: ambient with air flow from -10°C to 50°C
- Storage temperature: -20°C to 80°C
- Humidity: 10 to 95% (non-condensing)

Certifications

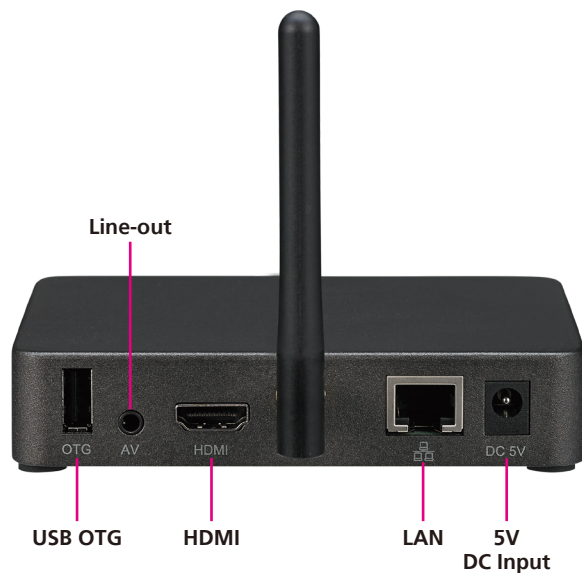
- CE approval
- FCC Class A

Operating System

- Android 4.4

Knowing Your NDiS B115

Front Panel



USB OTG Port

Used to connect and provide USB host support for USB devices.

Line-out

Used to connect a headphone or a speaker.

HDMI Port

Used to connect an HDMI interface monitor.

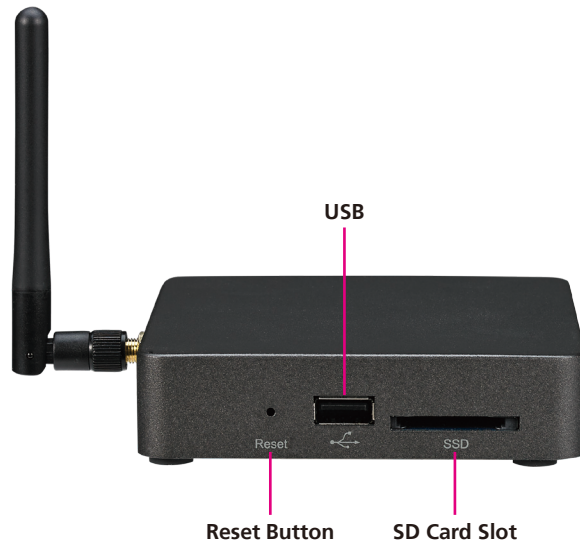
LAN Port

Used to connect the system to a local area network.

5V DC Input

Used to plug a DC power cord.

Left Panel



SD Card Slot

External SD card slot that supports up to 64GB flash cards.

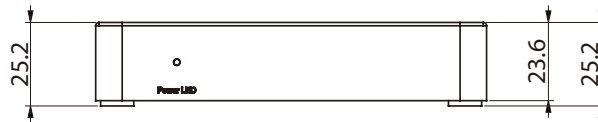
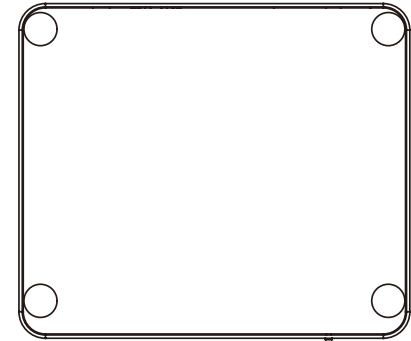
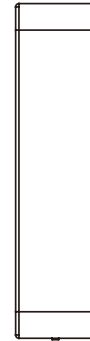
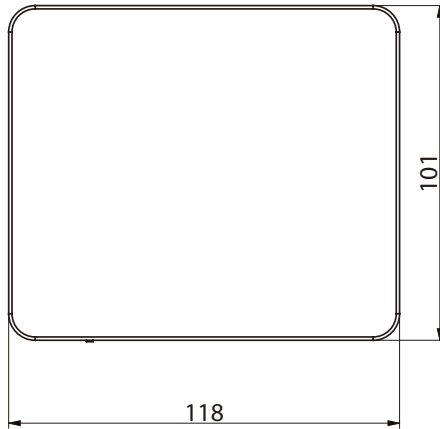
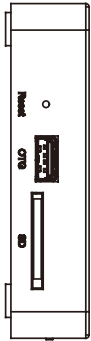
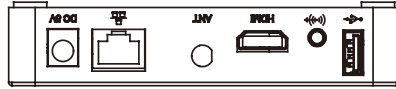
Reset Button

Press to re-start the system.

USB

Used to connect USB 2.0/1.1 devices.

Mechanical Dimensions



CHAPTER 2: JUMPERS AND CONNECTORS

This chapter describes how to set the jumpers and connectors for NDiS B115.

Before You Begin

- Ensure you have a stable, clean working environment. Dust and dirt can get into components and cause a malfunction. Use containers to keep small components separated.
- Adequate lighting and proper tools can prevent you from accidentally damaging the internal components. Most of the procedures that follow require only a few simple tools, including the following:
 - A Philips screwdriver
 - A flat-tipped screwdriver
 - A set of jewelers screwdrivers
 - A grounding strap
 - An anti-static pad
- Using your fingers can disconnect most of the connections. It is recommended that you do not use needle-nosed pliers to disconnect connections as these can damage the soft metal or plastic parts of the connectors.
- Before working on internal components, make sure that the power is off. Ground yourself before touching any internal components, by touching a metal object. Static electricity can damage many of the electronic components. Humid environments tend to have less static electricity than dry environments. A grounding strap is warranted whenever danger of static electricity exists.

Precautions

Computer components and electronic circuit boards can be damaged by discharges of static electricity. Working on computers that are still connected to a power supply can be extremely dangerous.

Follow the guidelines below to avoid damage to your computer or yourself:

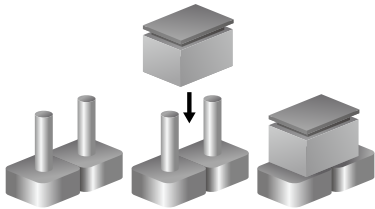
- Always disconnect the unit from the power outlet whenever you are working inside the case.
- If possible, wear a grounded wrist strap when you are working inside the computer case. Alternatively, discharge any static electricity by touching the bare metal chassis of the unit case, or the bare metal body of any other grounded appliance.
- Hold electronic circuit boards by the edges only. Do not touch the components on the board unless it is necessary to do so. Don't flex or stress the circuit board.
- Leave all components inside the static-proof packaging that they shipped with until they are ready for installation.
- Use correct screws and do not over tighten screws.

Jumper Settings

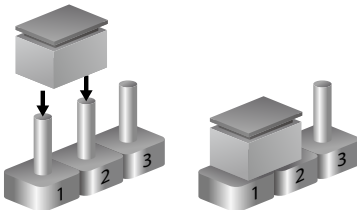
A jumper is the simplest kind of electric switch. It consists of two metal pins and a cap. When setting the jumpers, ensure that the jumper caps are placed on the correct pins. When the jumper cap is placed on both pins, the jumper is short. If you remove the jumper cap, or place the jumper cap on just one pin, the jumper is open.

Refer to the illustrations below for examples of what the 2-pin and 3-pin jumpers look like when they are short (on) and open (off).

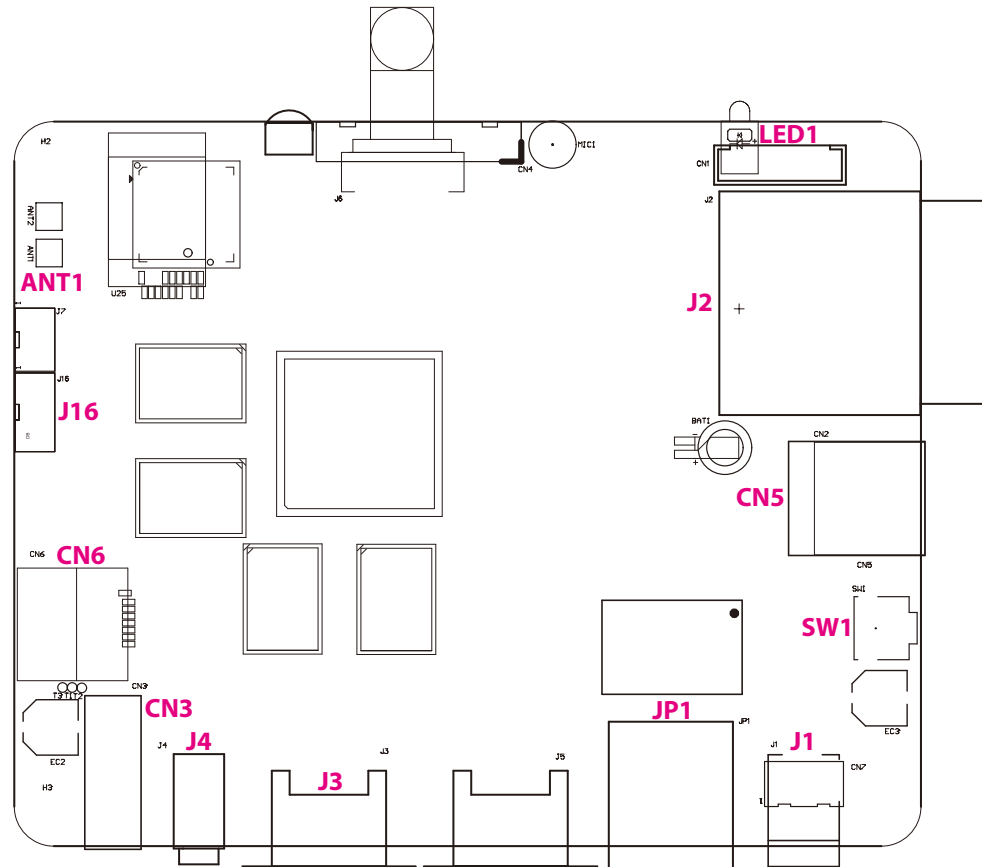
Two-Pin Jumpers: Open (Left) and Short (Right)



Three-Pin Jumpers: Pins 1 and 2 are Short



Location of the Jumpers and Connectors



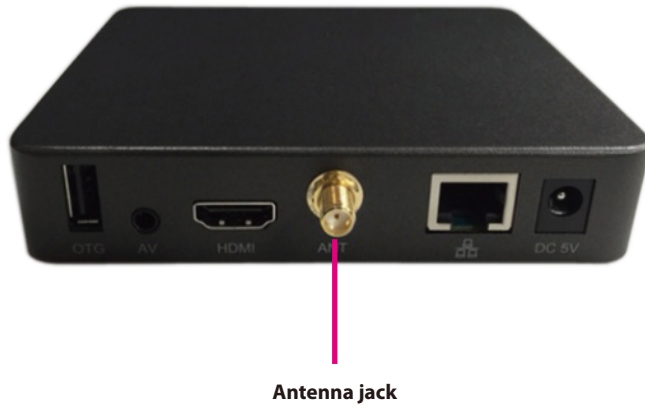
Connector/Button Table

Connector	Name
LED1	Power LED
J2	SD Card Slot
CN5	USB 2.0 Connector
SW1	RESET Button
J1	DC 5V Power-in Connector
JP1	RJ45 Gigabit LAN Connector
J3	HDMI out Connector
J4	Audio Line-out Connector
CN3	USB 2.0 Connector
CN6	USB 2.0 Connector (internal)
J16	COM Port Wafer
J9	Half-Size Mini-PCIe Connector
ANT1	Wi-Fi RF Cable Connector

CHAPTER 3: SYSTEM SETUP

Installing a Wi-Fi Antenna

1. Rotate the Wi-Fi antenna until it is secured to the antenna jack.



Installing the Hardware

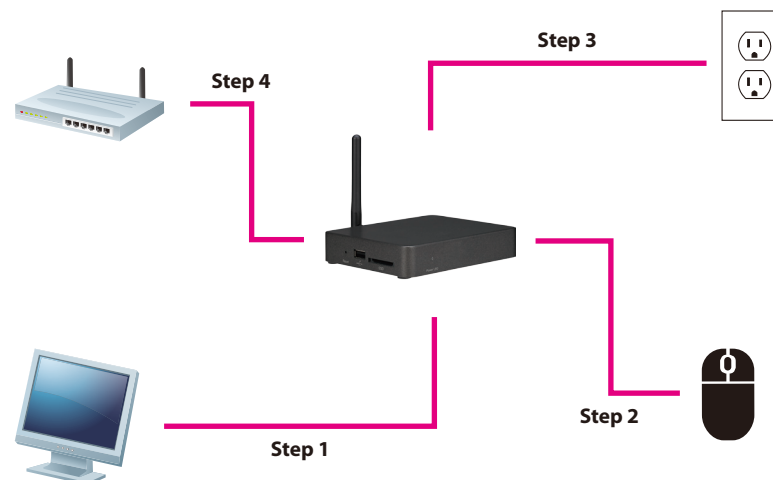
1. To start using NDiS B115, you need the following:

- A high-definition TV (HDTV) or LCD with HDMI port.
- Ethernet network or 802.11b/g/n Wi-Fi wireless AP.



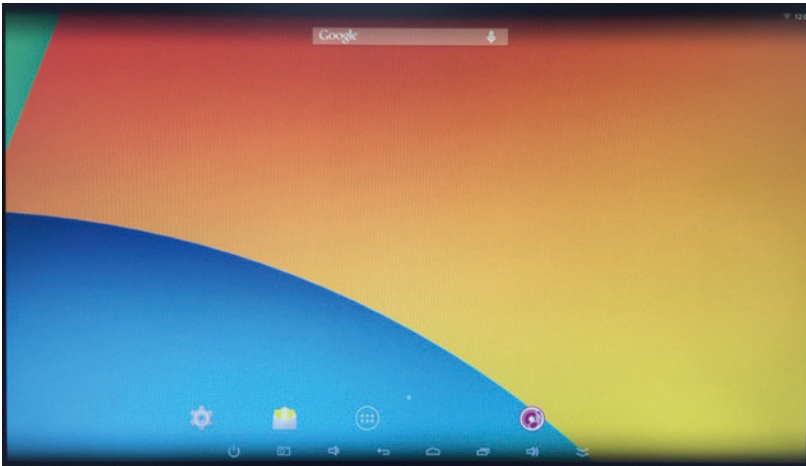
2. Hardware Installation:

- Connect an HDMI TV to the HDMI port with an HDMI extension cable.
- Connect a USB mouse to the USB port.
- Connect the Ethernet port to the ADSL modem or router with a RJ45 cable. (If you use Wi-Fi, please ignore this step.)
- Plug in the power adapter to the DC IN, then connect the adapter to a wall socket. After the Device boots up, you will see the main page of NDiS B115. (If you use an HDMI TV, please use the TV remote controller to select the HDMI interface.)



CHAPTER 4: ANDROID OS MENU INTRODUCTION

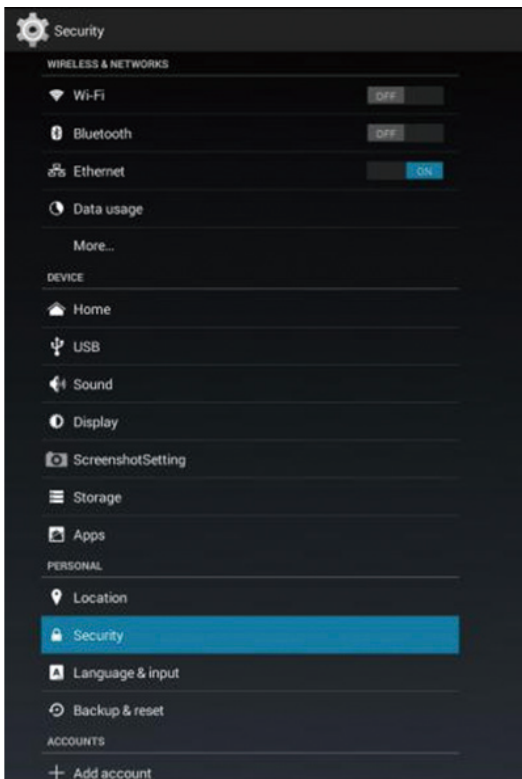
HOME Screen



The HOME Screen of NDiS B115 provides a Quick Access Panel (QAP) to access applications. From left to right, the available options are “Setup”, “Mail Setting”, “Apps” and “Music”. You can add more icons from Apps.

Connect a USB mouse to NDiS B115. You can move the icon to the desired location and delete icons from your desktop. (To remove a icon, select and hold the left mouse button and drag the icon to the ‘X Remove’ bar on the top of the screen.)

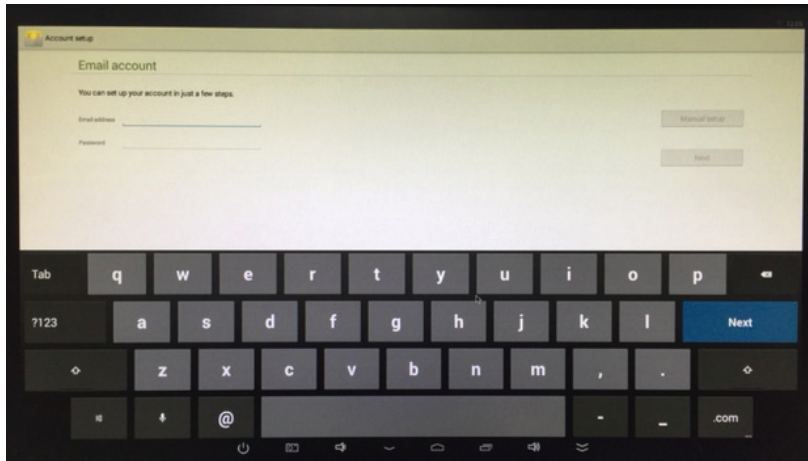
Setup



Item	Description
Wireless & Networks	Configures the network settings for Wi-Fi and local area network (LAN) connection.
Sound	Configures the sound settings such as volume adjustments and click sounds.
Display	Configures the settings for font size.
Screen	Configures the screen settings such as display scale, video output and HDMI mode.
Storage	Displays the storage usage of the internal storage and external SD card.
Apps	Provides options to manage current running applications as well as applications downloaded onto the system and stored on the SD card.
Security	Provides options to manage device administrators and credential storage.
Language & Input	Configures the display language and keyboard input method.
Backup & Reset	Provides options to backup and restore data, or restore the system to factory default settings.
Add Account	Adds an email or Google account for accessing NDiS B115.
Date & Time	Configures the date and time of the system.
Accessibility	Configures accessibility functions such as text size and touch and hold delay.
Developer Options	Provides advanced developer options for debugging and testing.
About Device	Displays system information.

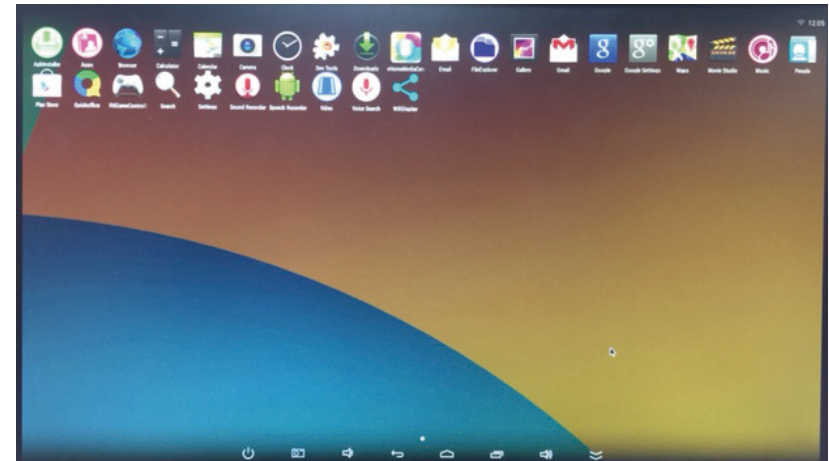
Mail Setting

Configures an email account used for sending and receiving emails.



Apps

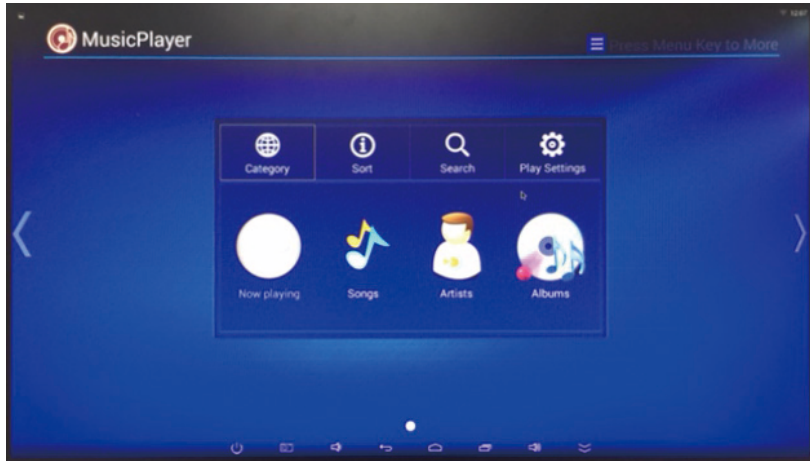
Displays all the downloaded and pre-installed apps on the system.



Item	Description
Browser	Web browser app for surfing the internet.
Calculator	Calculator app for mathematical calculations.
Calendar	Calendar app for managing schedule. The calendar can be synchronized with a Google account.
Clock	Clock app for setting alarm clocks.
Email	Email app for sending and receiving emails.

Music Player

Opens the music player app to play audio files.



APPENDIX A: REGULATORY STATEMENTS

Federal Communication Commission Interference Statement

- Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
- Class A digital device. A digital device that is marketed for use in a commercial, industrial or business environment, exclusive of a device which is marketed for use by the general public or is intended to be used in the home.

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 transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FOR MOBILE DEVICE USAGE (>20cm/low power) Radiation Exposure Statement:

- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

FOR COUNTRY CODE SELECTION USAGE (WLAN DEVICES)

Note:

- The country code selection is for non-US models only and is not available to all US models. Per FCC regulation, all Wi-Fi products marketed in US must fixed to US operation channels only.