TOUCH DYNAMIC

DT-07

User Guide for Integrators

Revision History

Version	Date	Description
1.0	21 May 2014	Draft release

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Regulatory Information

FCC Statement

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

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 or more of the following measures:

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

The FCC permits a maximum SAR value of 1.6 W/kg averaged over one gram of tissue. For body worn operation, this device has been tested and meets the FCC RF exposure guidelines when used with an accessory that contains no metal. The highest SAR value of this device (FCC ID: VRI-B195), tested for typical body worn operation, is 0.495 W/kg. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

Safety Information

Please read the following information carefully before using the device for the first time, and keep this User Guide in a safe place for future reference.

- Always treat the device with care and keep it in a clean and dust-free environment.
- Do not expose the device to extremely hot, cold or humid environment. The operation temperature is from –10° C to 50° C.
- Do not use the device in wet or rainy conditions.
- Do not charge the device in extremely hot (> 40° C) or cold conditions (< 0° C).
- Do not attempt to disassemble or modify the device including the charger.
- Do not operate the device when your hands are wet.
- Do not insert foreign objects into the openings of the device.
- Use only the adaptor and battery approved for the device.
- The adapter shall be installed near the device and shall be easily accessible.
- Do not use the adaptor if the power cord or plug is damaged.
- Install the cradle on a flat and stable surface.
- Do not disassemble, crush or puncture the battery.
- Do not expose the battery to high temperatures.
- Do not let battery terminals touch other metal objects that could lead to short-circuit of the battery.
- Do not dispose of the battery in fire or water.
- Dispose of used battery properly according to local laws and regulations.
- The device shall only be connected to a USB interface of version 2.0 or higher. The connection to so called power USB is prohibited.

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1. Product Specifications

Handheld Terminal

Item	Specification
Processor	Cortex A5 1.2GHz Quad Core processor
Flash	4GB NAND Flash
RAM	1GB DDR2 RAM
LCM	7” TFT 1024 x 600 256K Colour LCD
Touch panel	Capacitive multi-touch touch panel Hardness 7H
Memory expansion	MicroSD card slot Support up to 32GB
WLAN	802.11b/g/n
WPAN	Bluetooth 3.0
WWAN	3.75G (Optional) 1 x SIM card slot
GPS	Assisted GPS (Optional)
NFC	Frequency: 13.56MHz Support ISO14443A/B, MIFARE, NFC Forum tags, Felica
Sensors	Ambient light sensor
	G-sensor
	Proximity sensor
	Hall sensor
Camera	Rear camera 5MP with LED flash Front camera 2MP
LED Indicator	Power LED
Vibrator	Built-in vibrator
Audio	Mono speaker Microphone 3.5mm headset jack
Keys	1 x Power Key
	2 x Configurable Shortcut Key
Keys	Power key, Volume up/down key, Reset key
USB	USB2.0 Micro-USB connector
Main battery	Removable 4960mAh Lithium smart battery
Secondary battery	Lithium polymer battery for RAM backup
Battery life	● Communication Time: 6 hours (Screen on. Wi-Fi data communication every 6 seconds.) ● Standby Time: 100 hours (LCD off, Wi-Fi connected, Keep alive on)
Charging	Charging cradle with device slot and spare battery slot Intelligent charging system Battery charging time to 70%: 1.5 hrs
Module expansion	40-pin connector External Module: Add-on MSR module
Dimension	210mm x 132mm x 21.4mm
Weight	570g typ.
IP Rating	IP54
Drop Test	2 cycle drops of 6 sides/ 4 corners from 1.2m onto concrete.
ESD	Contact discharge ±6KV Air discharge ±12KV
Operating temp.	-10 to +40 deg C

Storage temp.	-20 to +65 deg C
Operating humidity	10% to 95%
Storage humidity	5% to 95%

Cradle

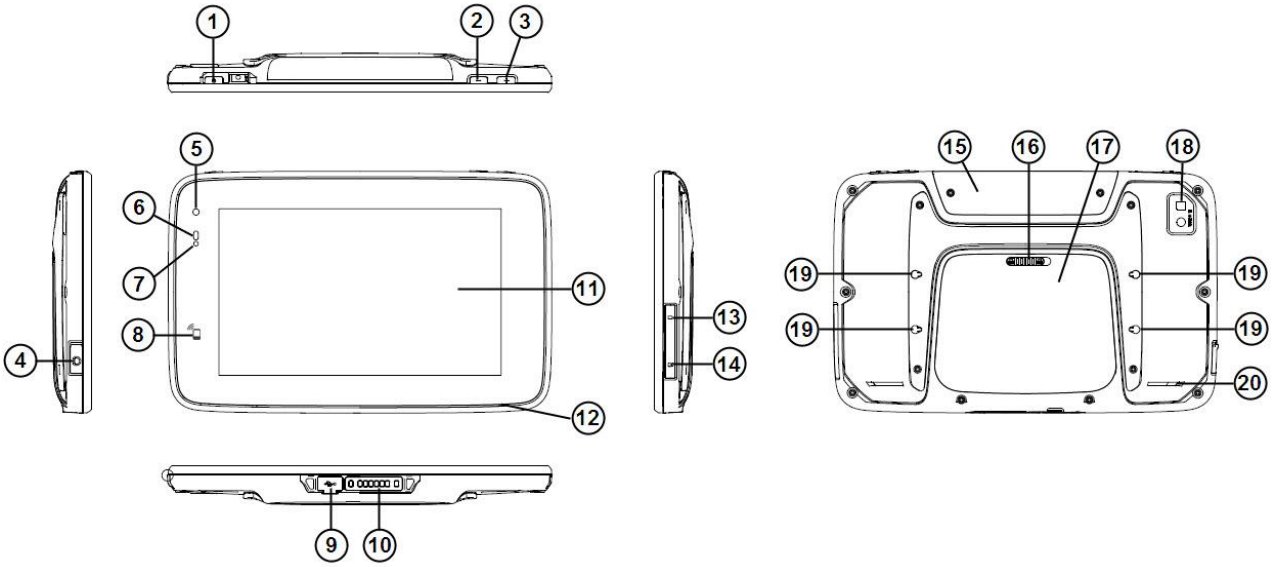
Item	Specification
Charging slot	1 x Tablet slot, 1 x spare battery slot
AC/DC adaptor	AC IN: 100-240V DC OUT: 5.9V 3A
Indicator	1 x Green LED (Cradle power status) 1 x Red/Green LED (spare battery charging status)
USB connector	USB type B connector
Dimension	106.2mm x 73.5mm x 97.2mm
Weight	450g typ.
Operating temp.	0 to +40 degree C
Storage temp	-20 to +65 degree C
Operating humidity	10% to 95%
Storage humidity	5% to 95%

Software Specification

Item	Specification
Operating system	Android OS 4.1.2
Kernel	Linux 3.4.0
File system	Ext4 flash file system for eMMC FAT32 support for SD card
Bluetooth	Profiles supported: GAP, SPP, GOEP, OPP, A2DP, AVRCP, HID
Wi-Fi	Support WEP, WPA-PSK, WPA2-PSK, 802.1x EAP security by WPA supplicant
Audio codecs	OGG decoders, AMR codec (for video recording)
Video codecs	MPEG4 codec only (for video recording)
Image formats	JPEG, PNG
Wi-Fi	Single SSID lock. No neighbour network appears in search list
	Option to keep WiFi connected even when system is in sleep mode
	WiFi keep alive mechanism in OS sleep mode to avoid access point terminating the session after timeout
	Auto/manual retry WiFi re-connection after out-of-coverage
	Fast & seamless roaming
	Configurable roaming trigger level
	Configurable WiFi status at boot up
	Configurable WiFi retry interval
Operating mode	Admin mode & User mode
	Admin mode for installing programs and configuring device
	User mode has limited rights for end user operations ● Not able to modify WiFi connection settings ● Option to disable Bluetooth pairing ● Not able to modify NFC settings ● Not able to install and uninstall applications ● Not able to access Developer options
Launcher Config	Select applications to show or hide in Admin and User mode Select applications for auto-launch upon booting up
Remote desktop	Bundle 3rd party remote desktop client – 2X RDP Client Support Remote Desktop Protocol with auto-logon.
Backup / Restore	Selectable backup and restore through SD card
	Backup/restore of system/application/data

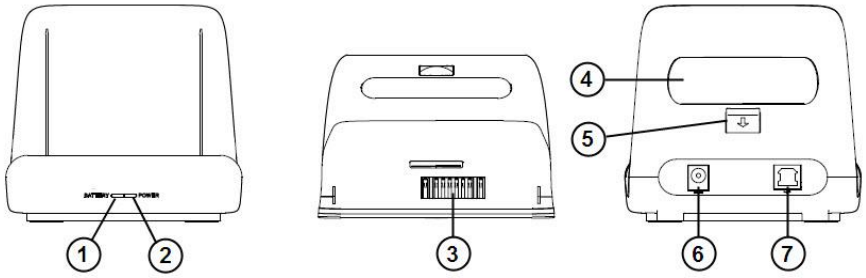
	Backup option to restore backup image to the same device, or any devices of the same model
	Backup all installed programs, settings passwords, SSID, IP settings
	Preserve static IP address, subnet mask, gateway and DNS settings
Remote Assistant	Remote access of device from PC over the Internet
	Tablet connects to the Remote assistant server by WiFi

2. Device Overview



No.	Item	Description
1	Power key	Press and hold to turn device on or off If the device is on, press to suspend
2	Volume down key	Press to decrease volume
3	Volume up key	Press to increase volume
4	Earphone jack	Open the cover to access the earphone jack
5	Front camera	2MP camera
6	Ambient light sensor	Auto screen brightness control
7	Power LED	Power status indicator
8	NFC reader	Scanning area for NFC tags
9	USB connector	Open the cover to access the micro-USB connector
10	Cradle contact plates	Contact plates for charging and USB connectivity through the cradle
11	Touch screen	LCD with capacitive touch screen
12	Microphone	Built-in microphone
13	SIM card slot	Open the cover to access the SIM card slot
14	MicroSD card slot	Open the cover to access the MicroSD card slot
15	Expansion slot cover	Remove the cover for the add-on module connection
16	Battery cover lock	Slide right to unlock the battery cover

17	Battery cover	Remove the battery cover to access the battery
18	Rear camera	5MP camera with LED flash
19	Handstrap mounting point	To attach the handstrap
20	Speaker	Mono speaker



No.	Item	Description
1	Spare battery LED	Spare battery charging status indicator
2	Power LED	Cradle power connection indicator
3	Contact plates	Contact plates for charging and USB connectivity
4	Battery slot	To charge spare battery
5	Battery release button	Press to release the spare battery
6	DC jack	Connect AC/DC Adaptor
7	USB connector	Connect USB cable

3. Getting Started

3.1 Installing and Removing the Battery

3.1.1 Installing the Battery

1. Slide the battery cover lock to the right until the battery cover ejects slightly.
2. Remove the battery cover.
3. Align the battery metal contacts with the contact pins inside the battery compartment.
4. Press the battery down until the battery lock clicks into place.
5. Ensure the battery cover lock is in unlock position. Align the battery cover with the battery compartment; and push the battery cover down.
6. Slide left the battery cover lock to lock the cover.

3.1.2 Removing the Battery

Note: Always power off the device before removing the battery.

1. Slide the battery cover lock to the right until the battery cover ejects slightly.
2. Remove the battery cover.
3. Slide the battery lock down and hold it at the unlocked position.
4. Lift the battery from the battery compartment.

3.2 Battery Charging

3.2.1 Charging the Device

1. Connect the AC/DC adaptor to the DC jack of the cradle.
2. Plug the AC/DC adaptor into a suitable power socket. The cradle power LED will turn green when power is supplied to the cradle.
3. Insert the device to the cradle slot. The device LED will indicate red while charging, and then it will turn green when fully charged.

3.2.2 Charging the Spare Battery

1. Align the battery metal contacts with the contact plates in the battery slot.
2. Slide the battery down the battery slot until the battery clicks into place. The cradle battery LED will turn red while charging, and then it will turn green when fully charged.
3. After charging, press the battery release button to eject the battery.

3.3 LED Status Description

Device LED

LED color	Description
Red	Charging
Green	Fully charged / Battery level above the user defined threshold
Flashing red	Battery low

Cradle Power LED

LED color	Description
Green	Cradle is powered on
Off	Cradle is powered off

Cradle Battery LED

LED color	Description
Red	Spare battery is charging
Green	Spare battery is fully charged
Off	Battery slot is empty

3.4 Powering the Device On and Off

Powering on the Device

Press and hold the Power key for 2 seconds to power on the device.

Note: The device can only power on when the battery cover is closed.

Powering off the Device

Press and hold the Power key for 2 seconds, and follow the screen instructions to power off the device.

3.5 Suspending the Device

If the device is on, press the Power key once to suspend the device (i.e. entering sleep mode), saving battery power.

To resume operation from sleep mode, press the Power key once.

3.6 Viewing Device Information

1. Select **Application drawer > Settings > About tablet.**
2. Scroll to view **Model number**, **Android version**, **Kernel version**, and **Build number**.
3. Click **Status** to view **Serial number**, **Battery status**, **Battery level**, **IP address**, **Wi-Fi MAC address**, **Bluetooth address**, and **Up time**.

4. Admin Mode and User Mode

The DT-07 can be operated in the Admin Mode or User Mode. In the Admin Mode, system integrators will have full administrative right to configure system settings and install / un-install applications. This operating mode is typically used in the initial setup stage and ongoing maintenance. In contrast, the User Mode has limited access right to the system with restrictions on certain operations. As system configurations are completely hidden in the User Mode, end users will only be able to run designated applications.

The following table summarizes the restrictions in the User Mode.

Items	Admin Mode	User Mode	Purpose
System setting change	Enabled	Disabled	● No changes of pre-configured environment. ● No support call due to accidental changes of settings.
Application shortcut change	Enabled	Disabled	● No changes of application environment.
Application installation / un-installation	Enabled	Disabled	● No installation of unauthorised applications, e.g. games, personal utilities. ● Unable to remove pre-configured applications.
Direct access to Files and Local Database	Enabled	Disabled	● No unauthorised access to files & database. ● No copying of device data.
USB connection	Enabled	Disabled	● Prevent unauthorized data transfer. ● Prevent direct access to files and local database.

4.1 Configuring User Mode Applications

To configure the applications for the User Mode:

1. Select **Application drawer > Launcher Config.**
2. Select **User App.**
3. Select the checkbox to enable the applications for the User Mode.

Note: The installed applications are selected automatically in both **Admin App** and **User App.**.

4.2 Configuring Auto-launch Application

To launch an application automatically at device startup in the User Mode:

1. Select **Application drawer > Launcher Config.**
2. Select **User Launch App.**
3. Select an application for auto-launch at the startup.

4.3 Changing the Operating Mode

4.3.1 Switching to the User Mode

By default, the device is configured to run in the Admin Mode. To switch the default to the User Mode:

1. Select **Application drawer > Settings > Security.**
2. Select **Login mode settings > Default mode.**
3. Select **User Mode**.
4. Reboot the device.

Note: Admin password is required to switch the operating mode from User Mode to Admin Mode. The default admin password is 1111.

4.3.2 Switching the Operating Mode Temporarily

For initial setup and ongoing maintenance, system integrators may require switching between operating modes temporarily to check and adjust the settings without changing the default mode.

To change the operating mode temporarily:

1. Select **Application drawer > Settings > Security.**
2. Select **Login mode settings > Current mode.**
3. Select **User Mode** or **Admin Mode**.

Note: The temporary change is valid until rebooting the device. It will not change the default mode.

4.4 Changing the Admin Password

1. Select **Application drawer > Settings > Security.**
2. Select **Login mode settings > Login password.**
3. Enter the new password in **New password**, and re-enter the same password in **Repeat password**.
4. Click **OK** to complete the change.

5. Using Wi-Fi

5.1 Turning Wi-Fi On or Off

To turn Wi-Fi on or off:

1. Select **Application drawer > Settings >Wi-Fi.**
2. Slide the Wi-Fi On/Off switch to the ON or OFF position.

Note: The Wi-Fi feature is turned on by default.

5.2 Setting Wi-Fi Boot Up State

To change the boot up setting:

1. Select **Application drawer > Settings > Wi-Fi.**
2. Click **Menu** to show the option menu.
3. Select **Turn on at Boot.**
4. Select the Wi-Fi boot up option.

On: Turning on Wi-Fi after boot up.
Off: Turning off Wi-Fi after boot up.
Keep last status: Follow the last Wi-Fi status after boot up.

5.3 Connecting to WLAN

To connect to a WLAN:

1. Select **Application drawer > Settings > Wi-Fi.**
2. Slide the Wi-Fi On/Off switch to the ON position.
3. Select the required AP on the right pane.
4. Input the password when prompted.
5. Select **Lock Single Network** checkbox to lock the device to the selected network.
6. Select **Show advanced options** to enter static IP settings/ Proxy settings if needed.
7. Click **Connect.**

5.4 Unlocking/ Disconnecting WLAN

To turn off the single network lock:

1. Select **Application drawer > Settings > Wi-Fi** .
2. Touch and hold the connected network on the right pane until a pop up menu appears.
3. Select **Modify network**.
4. Uncheck **Lock Single Network**, and then click **Save**.

To disconnect from the connected network:

1. Select **Application drawer > Settings > Wi-Fi** .

2. Touch and hold the connected network on the right pane until a pop up menu appears.
3. Select **Forget network**.

5.5 Configuring Roaming Trigger Level

For multiple AP site, it is important to perform wireless site survey to determine the best placement of access points that provides the best signal coverage with minimum interference.

By default, the **Roaming trigger level** is –76dBm. When the signal is less than –76dBm, the device will start searching for nearby APs while obeying single SSID rule. Once an AP with stronger signal is identified (i.e. 10dBm or better), the device will roam across the APs transparent to the application and user.

To adjust the roaming trigger level:

1. Select **Application drawer > Settings > Wi-Fi**
2. Click **Menu** to show the option menu.
3. Select **Advanced > Roaming trigger level**.
4. Drag the slide bar to adjust the trigger level, and then click **OK.**

Note:

- It is suggested to set the adjacent APs to non-overlapped channels (e.g. 1, 6, 11, etc.).
- It is essential to carry out site survey to ensure there are sufficient overlapped signal coverage areas for seamless roaming between two adjacent APs.
- Defining a trigger level as -60dBm may not achieve a good result as the device will need to find an AP with -50dBm or better.
- It is recommended to define the roaming trigger level as –90dBm for single AP site. This disables the system from searching for nearby AP, and thus saving battery power.

5.6 Configuring Periodic Keep-alive

The **Periodic keep alive** feature prevents the session from timing-out and terminated by the AP. By default, the keep alive period is set to 1 minute.

To change the periodic keep alive setting:

1. Select **Application drawer > Settings > Wi-Fi.**
2. Click **Menu** to show the option menu.
3. Select **Advanced > Periodic keep alive.**
4. Select the time interval required.

5.7 Configuring Auto Retry WLAN

When the device is out of signal range, the system will start searching for the designated network. To preserve battery power, the Wi-Fi feature of the device will be turned off automatically if it fails to find the network.

The **Auto Retry WLAN** defines the time interval the system attempts to search and connect to the designated network after the Wi-Fi auto off. By default, **Auto Retry WLAN** is set to 2 minutes.

To change the retry time interval:

1. Select **Application drawer > Settings > Wi-Fi.**
2. Click **Menu** to show the option menu.
3. Select **Advanced > Auto retry WLAN.**
4. Select the time interval required.

5.8 Viewing Network Information

To view WLAN information:

1. Select **Application drawer > Settings > Wi-Fi.**
2. Click **Menu** to show the option menu.
3. Select **Status** to view basic network information including SSID name, signal strength, AP MAC address, WLAN channel, and IP address.
4. Click **Details** to view further network details.

6. Using Bluetooth

6.1 Bluetooth Profiles

The DT-07 supports the following Bluetooth profiles:

- GAP: Generic Access Profile
- SPP: Serial Port Profile
- GOEP: Generic Object Exchange Profile
- OPP: Object Push Profile
- A2DP: Advanced Audio Distribution Profile
- AVRCP: Audio/ Video Remote Control Profile
- HID: Human Interface Device Profile

6.2 Connecting to a Bluetooth Device

To connect to a Bluetooth device:

1. Select **Application drawer > Settings > Bluetooth**.
2. Slide the Bluetooth On/Off switch to the ON position.
3. Ensure the device to be paired is set to discovery mode within range.
4. Click **SEARCH FOR DEVICES**.
5. Select the required device under **AVAILABLE DEVICES**.
6. Input PIN when prompted, and then click **OK**.
7. Input the same PIN on the selected device if needed.
8. Upon completing the pairing, the selected device is displayed under **PAIRED DEVICES**.

6.3 Setting Bluetooth Boot Up State

By default, Bluetooth is set to follow the last status after booting up. To change the boot up setting:

1. Select **Application drawer > Settings > Bluetooth.**
2. Click **Menu** to show the option menu.
3. Select **Turn on at Boot.**
4. Select a Bluetooth boot up option.

On: Turning on Bluetooth after boot up.
Off: Turning off Bluetooth after boot up.
Keep last status: Follow the last Bluetooth status after boot up.

6.4 Changing the Bluetooth Name

To change the Bluetooth device name:

1. Select **Application drawer > Settings > Bluetooth**, and turn on Bluetooth.
2. Click **Menu** to show the option menu.
3. Select **Rename tablet.**
4. Enter a device name, and the click **Rename.**

6.5 Making the Device Discoverable

To make DT-07 visible to all nearby Bluetooth devices:

1. Select **Application drawer > Settings > Bluetooth**, and turn on Bluetooth.
2. Click **DT-07** on the right pane to make the device discoverable.
3. Click **Menu > Visibility timeout**, and select the discoverable timeout period.

6.6 Modifying Bluetooth Settings in User Mode

In the User Mode, users will only be allowed to turn Bluetooth on or off. To enable users to pair with new devices or adjust the Bluetooth settings in the User Mode:

1. Select **Application drawer > Settings > Bluetooth**.
2. Click **Menu** to show the option menu.
3. Select **User mode**.
4. Select **Allow modify bluetooth settings in user mode** checkbox.

6.7 Unpairing a Bluetooth Device

To unpair a Bluetooth device:

1. Select **Application drawer > Settings > Bluetooth.**
2. Click next to the paired device.
3. Select **Unpair**.

7. Using NFC

7.1 Turning on NFC

To turn on the NFC feature:

1. Select **Application drawer > Settings > More**.
2. Select NFC checkbox to turn on NFC.

Note: Position the tag within 2cm of the NFC scanning area to ensure successful scans.

7.2 NFC Sample Application

The NFC implementation on DT-07 is based on standard Android NFC framework. The built-in sample application demonstrates the reading and writing of NFC tags with the use of standard Android APIs.

7.2.1 Scanning NFC tags

1. Select **Application drawer > NFC.**
2. Place the NFC tag within 2cm of the NFC scanning area.
3. NFC data is displayed after scanning.

7.2.2 Writing NFC tags

1. Select **Application drawer > NFC.**
2. Select **NFC write.**
3. Enter the data to write to the tag with the soft keyboard.
4. Place the tag within 2cm of the NFC scanning area, and then click **Write NDEF.**
5. Prompt will appear after writing data successfully.

7.2.3 Changing NFC Default Application

The built-in NFC sample application will be launched automatically when scanning tags. To disable the auto-run of the sample application:

1. Select **Application drawer > NFC.**
2. Uncheck the **Autostart** checkbox.

8. Configuring General Settings

8.1 Changing Sound Settings

1. Select **Application drawer > Settings > Sound.**
2. Change the required sound settings including volume, notification tone, touch sounds, screen lock sound, vibrating option, etc.

8.2 Changing Display Settings

8.2.1 Adjusting Brightness

1. Select **Application drawer > Settings > Display > Brightness**.
2. Drag the slide bar to adjust the backlight, or select **Automatic brightness** checkbox to enable auto brightness adjustment.

8.2.2 Changing Wallpaper

1. Select **Application drawer > Settings > Display > Wallpaper**.
2. Select **Gallery.**
3. Browse to a picture, and then click **OK**.

8.2.3 Enabling Auto-rotate screen

1. Select **Application drawer > Settings > Display.**
2. Select the **Auto-rotate screen** checkbox.

8.2.4 Adjusting Screen timeout

Screen timeout is the idle period before the screen turns off and enters sleep mode. To change the screen timeout period:

1. Select **Application drawer > Settings > Display.**
2. Select **Sleep.**
3. Select the required screen timeout period.

8.2.5 Adjusting Font Size

1. Select **Application drawer > Settings > Display.**
2. Select **Font size.**
3. Select the required font size.

8.2.6 Hiding System Bar

To hide the system bar for full screen operation:

1. Select **Application drawer > Settings > Display.**
2. Select the **Hide system bar** checkbox.

Note: In full screen operation, the volume keys are re-mapped as follows if default key mapping is used:

Key	Function
Volume up	Home
Volume down	Back

If the volume keys are re-mapped, the key functions will follow the assigned key definitions in both normal screen and full screen operations.

8.3 Changing Key Definition

To change the key definition of volume keys:

1. Select **Application drawer > Settings > Key.**
3. Select **Function select** to change the key definition.

8.4 Viewing Storage Information

To view memory available, select **Application drawer > Settings > Storage.**

Note: Selecting **Erase device storage** will delete all data on the internal SD card permanently.

8.5 Changing Battery Charging Policy

By default, smart charging mechanism is enabled to charge the battery only when the battery level is lower than 80%.

To adjust the charging trigger level:

1. Select **Application drawer > Settings > Battery**.
2. Select **Smart charging >mart charging settings**.
3. Drag the slide bar to adjust the charging trigger level, and then click **OK**.

To disable smart charging mechanism, uncheck **Enable charging when battery level is lower than ##%,** and then click **OK.**

8.6 Managing Applications

To manage installed applications:

1. Select **Application drawer > Settings > Apps.**

2. Select **Manage apps.**
3. Select an app to manage or remove.

To change the installation location for new applications:

1. Select **Application drawer > Settings > Apps.**
2. Select **Preferred install location.**
3. Select an install location.

8.7 Changing Security Settings

8.7.1 Changing Screen Lock Settings

The screen lock is enabled by default. To change the unlock mechanism:

1. Select **Application drawer > Settings > Security.**
2. Select **Screen lock.**
3. Select an unlock mechanism, and follow the screen instructions to complete the set up.

Note: To disable screen lock, select **None**.

8.7.2 Installing Certificates

To install a certificate:

1. Copy a certificate to the root directory of a MicroSD card.
2. Select **Application drawer > Settings > Security.**
3. Select **Install from SD card.**
4. Click the certificate to install.
5. Enter the certificate password when prompted, and then click **OK.**
6. Enter the certificate name, and then click **OK.**

8.8 Changing Language and Input

8.8.1 Changing Language

1. Select **Application drawer > Settings > Language & input**
2. Select **Language.**
3. Select a language.

8.8.2 Changing Keyboard Settings

To add extra keyboards for text input:

1. Select **Application drawer > Settings > Language & input.**
2. Select the keyboard checkbox.

To change the default keyboard:

1. Select **Application drawer > Settings > Language & input**.
2. Select **Default**.
3. Select a keyboard as default.

8.9 Adjusting Date & Time

To set the date and time manually:

1. Select **Application drawer > Settings > Date & time.**
2. Adjust **Set date, Select time zone, Set time, Use 24-hour format, Choose date format** accordingly.

   Set date: Set the current date.
   Select time zone: Select an appropriate time zone.
   Set time: Set the current time.
   Use 24-hour format: Select to use 24-hour format or 12-hour format.
   Choose date format: Select the date display format.

9. Resetting the Device

9.1 Soft Reset

Soft reset shuts down and reboots the device. It preserves installed applications, settings, and saved data. To perform a soft reset:

1. Remove the battery cover.
2. Press the reset button once.
3. Close the battery cover and power on the device.

9.2 Clean Reset

Clean reset restores the system to factory default by erasing all installed applications, settings and data.

To perform a clean reset:

1. Select **Application drawer > Settings > Backup & reset.**
2. Select **Factory data reset.**
3. Select **Reset tablet**.

Note: Clean reset does not erase data on the internal SD card. To erase internal SD card data, select **Application drawer > Settings > Storage > Erase device Storage.**

10. Enabling Developer Options

To enable developer options for development use:

1. Select **Application drawer > Settings > Developer options.**
2. Slide the On/Off switch to the ON position.
3. Select the required developer option checkbox.

11. Performing System Backup & Restore

The DT-07 features a powerful backup and restore tool that minimizes the efforts on mass deployment and ongoing customer support. It allows system integrators to clone the master image onto a MicroSD card and replicate it on other devices.

The benefits include:

- **Standardised setup:** Prepare one master image and restore to many devices in deployment.
- **Minimised on-site setup effort:** The master image with applications, settings and data is prepared in advance. Only restoring image with SD card is required for on-site installation.
- **Fast deployment time:** Devices can be set up simultaneously with multiple SD cards.
- **Easy software upgrade:** Software upgrade can be performed with restore process.
- **Minimised on-site support:** The simple restore process enables end users to upgrade or recover master image with ease; minimising interruptions to operations and the need for on-site technical support.

11.1 Performing System Backup

To perform system backup:

1. Select **Application drawer > System Backup.**
2. Select the **Backup** button.
3. Edit the **Backup path** if needed. This is the folder name of the backup image.
4. Select **Internal storage** or **SD card** from the **Backup Location** drop down menu.
5. Select the backup data option from **Backup selection** drop down menu.

   OS: Backup OS only.
   DATA: Backup installed applications, settings, and data.
   OS+DATA: Backup OS, installed applications, settings, and data.

6. To restore the back up image on current device only, select **Need to match serial no.** checkbox.
7. Select **Start.**

Note:

- Close all active programs before performing backup or restore.
- The backup image will be located in the folder named **backup**.
- The backup image folder can be re-named.
- The number of files in the backup image folder will vary depending on the selected backup option.
- The backup feature is disabled in the User Mode.

11.2 Performing System Restore

To restore a backup image:

1. Select **Application drawer > System Backup.**
2. Select the **Restore** button.
3. Select the backup image location from the **Backup location** drop down list.
4. Select the backup image file from **Restore content** menu.
5. Select **Start.**

Note:

- Restore will overwrite all existing data in the system except the IP address assignment.
- The backup image folder must be placed in the **backup** folder.
- Restore can be performed in both Admin Mode and User Mode.
- When only data is backed up, it should be restored with the same firmware version on the device. Restoring on different firmware version might create instability or corruption.

12. Transferring Files through USB

To transfer files between the device and a PC through USB:

1. Connect the device to the USB port of a PC with the USB cable.
2. Select **My Computer > DT-07 > Device storage**.
3. Transfer files between the device and the PC as required.

13. Performing Firmware Upgrade

DT-07 firmware can be updated with a MicroSD card in both Admin and User mode. To update the firmware:

1. Unzip the software update package.
2. Copy the file **update.zip** to the root directory of a MicroSD card.
3. Insert the MicroSD card into the card slot of DT-07.
4. Select **Application drawer > Settings > About tablet > Software update.**
5. Click **OK** to proceed software update when prompted.
6. System will reboot to home screen automatically upon completing the software update.

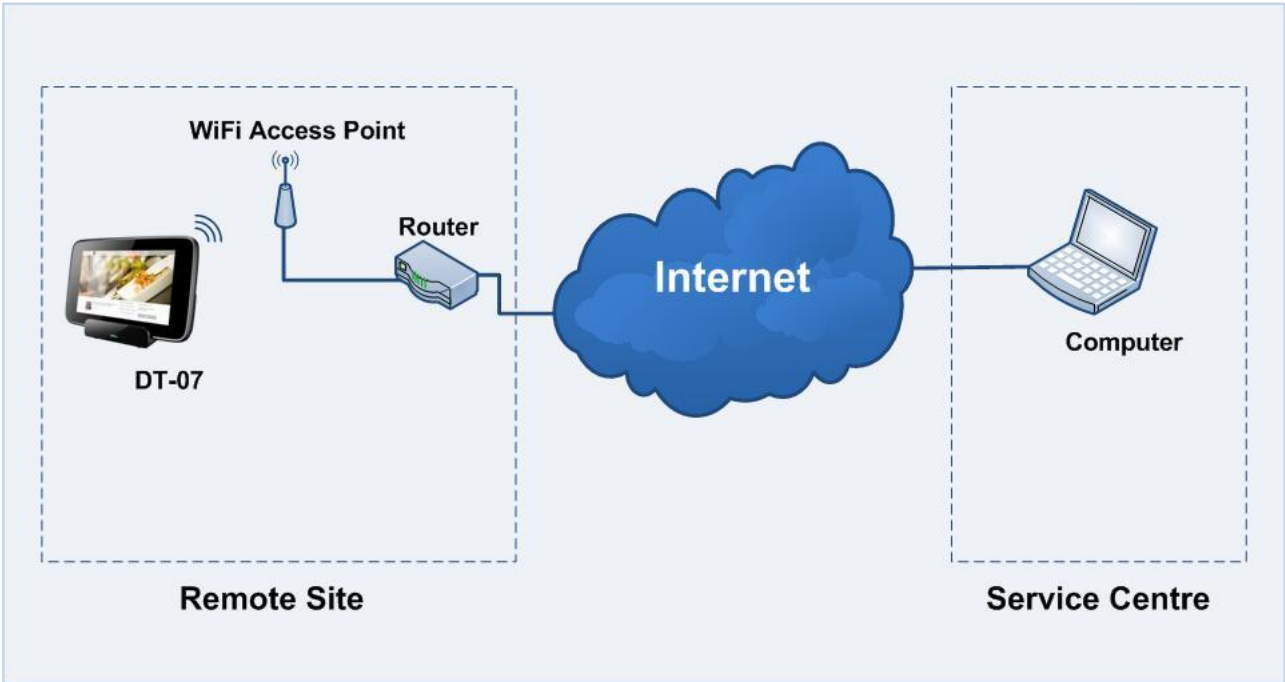
14. Using Remote Assistant

14.1 Introduction

The Remote Assistant is a remote management tool that enables support technicians to access and manage the DT-07 tablets over the Internet. Technicians will be able to perform the followings without site visits; saving significant time and resource for ongoing customer support.

- Control the tablet remotely from a computer.
- Adjust tablet settings.
- Transfer files.
- Install applications onto the tablet.
- Upgrade OS image.
- View the tablet screen on multiple computers simultaneously.

System Requirements



To conduct a remote session, the minimum requirements of the computer at the service centre are:

Operating System: Windows XP or above
CPU: 800MHz or faster processor
RAM: 512MB of system RAM memory
Hard disk: 100MB available hard disk space
Internet: Broadband Internet connection

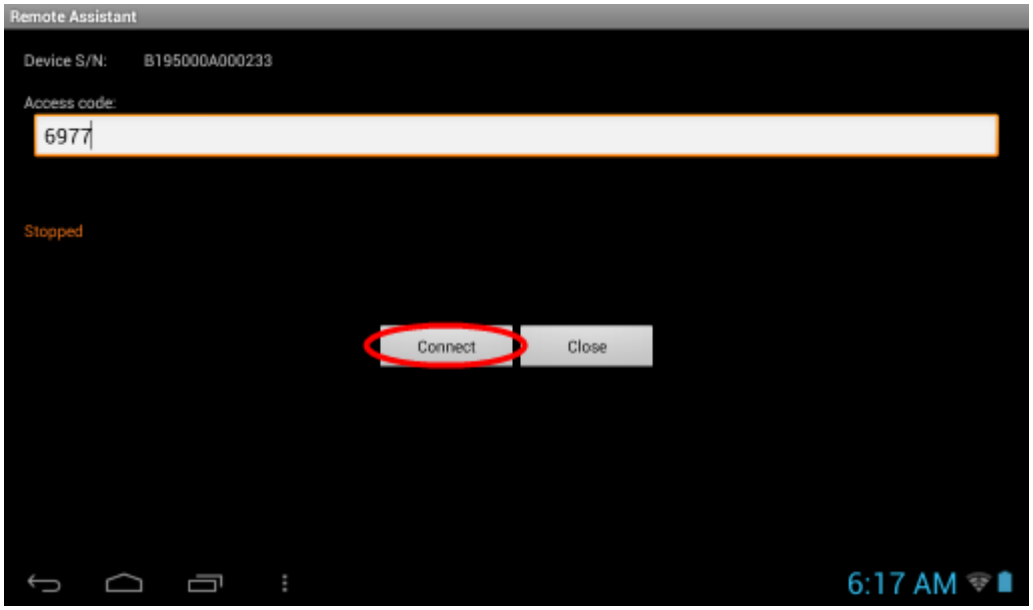
At the remote site, the tablet requires Internet access through a WiFi network.

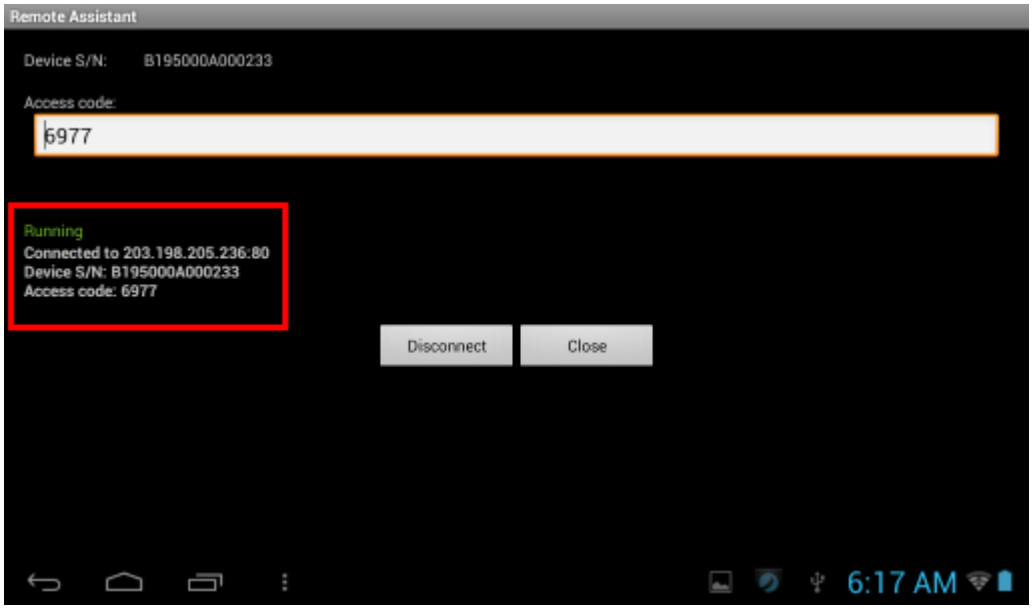
14.2 Establishing a remote session from the tablet

14.2.1 Connecting to the Remote Assistant Server

To establish a Remote Assistant session from the tablet:

1. Connect the tablet to a WiFi access point with Internet access.
2. Select **Application drawer > Remote Assistant**.
3. Select **Connect.**
4. Once connected to the Remote Assistant server, notify the support technician the **Device S/N** and **Access code**.



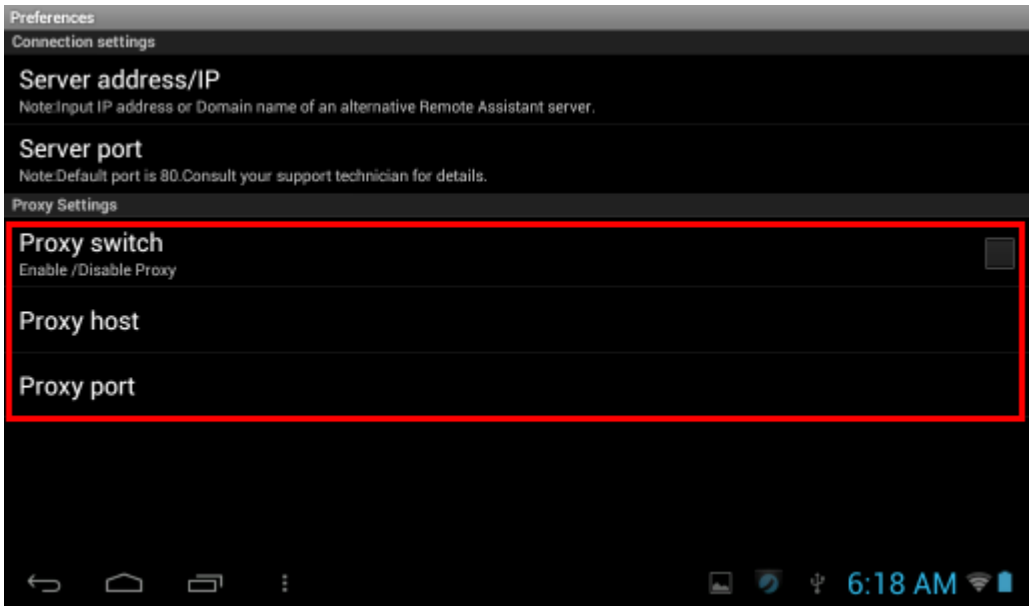


Note: Access code is generated automatically for each session. Users may change the code manually if needed.

14.2.2 Advanced Remote Assistant Settings

If the remote site uses a proxy server to connect to the Internet, configure the proxy settings on the tablet as follows:

1. Select **Application drawer > Remote Assistant**.
2. Click **Menu** to bring up the option menu, and select **Settings.**
3. Input **Proxy host** and **Proxy port**, and check the **Proxy switch** checkbox.



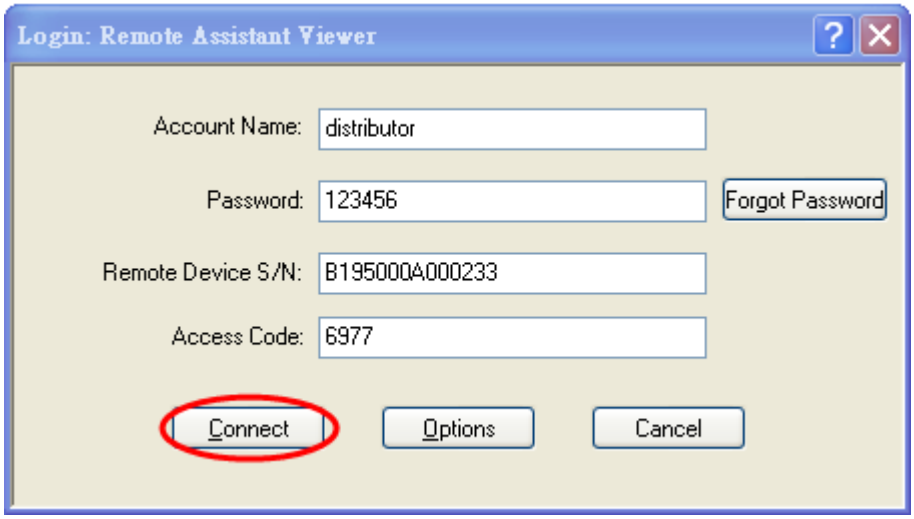
14.3 Establishing a Remote Session from a Computer

Support technicians will need the Remote Assistant Viewer utility to establish a remote session with a tablet.

1. Run **RemoteAssistant.exe** on the computer.

2. Input the **Account Name, Password, Remote Device S/N**, and **Access Code** accordingly.

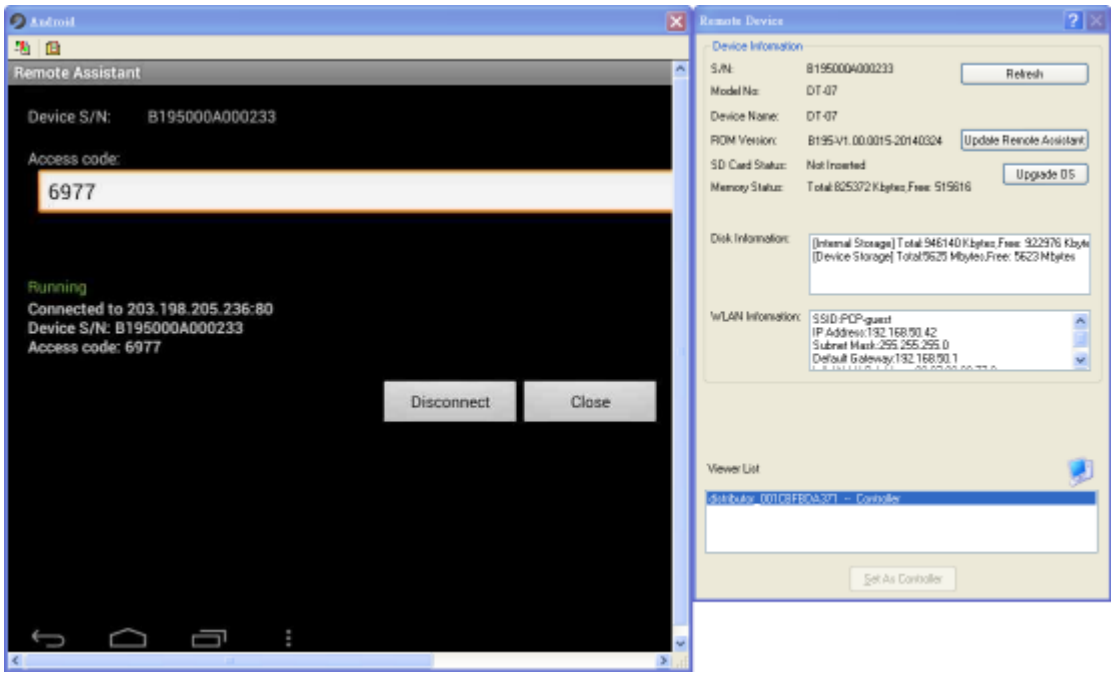
Note: Remote Device S/N, and **Access Code** must match the remote device to be connected.



3. Click **Connect** to connect to the remote device.

Note: Click **Options** to input proxy server information if needed.

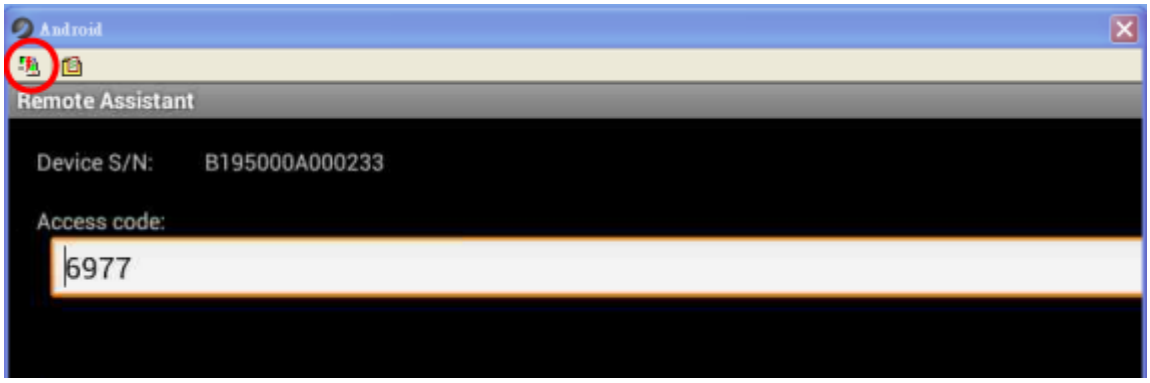
4. Upon successful connection, the remote device can be viewed and controlled from the computer.



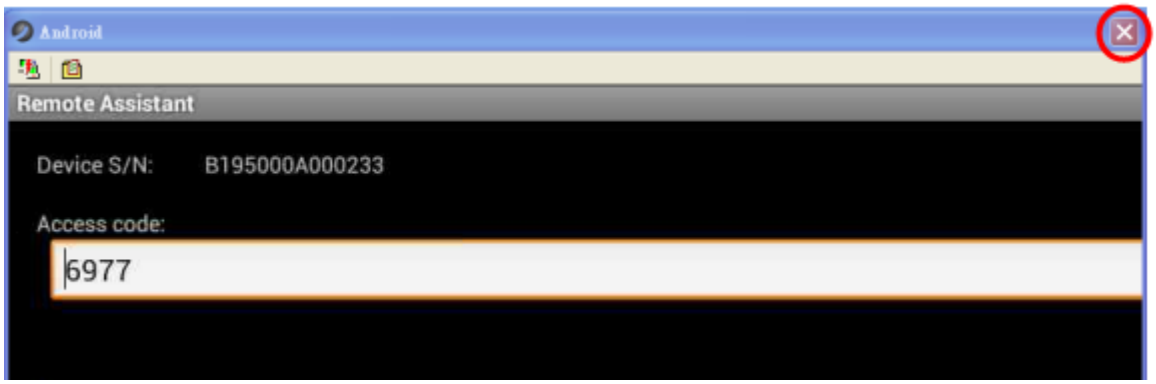
14.4 Disconnecting a Remote Session

When exiting a remote session, technicians can disconnect both the computer and tablet connections from the server, or disconnect the computer connection only.

- Click to disconnect both the computer and tablet from the server.



- Click to disconnect the computer while keeping the tablet connected to the server.



14.5 Using Shortcut Keys

The following table describes the shortcut keys for controlling the tablet remotely.

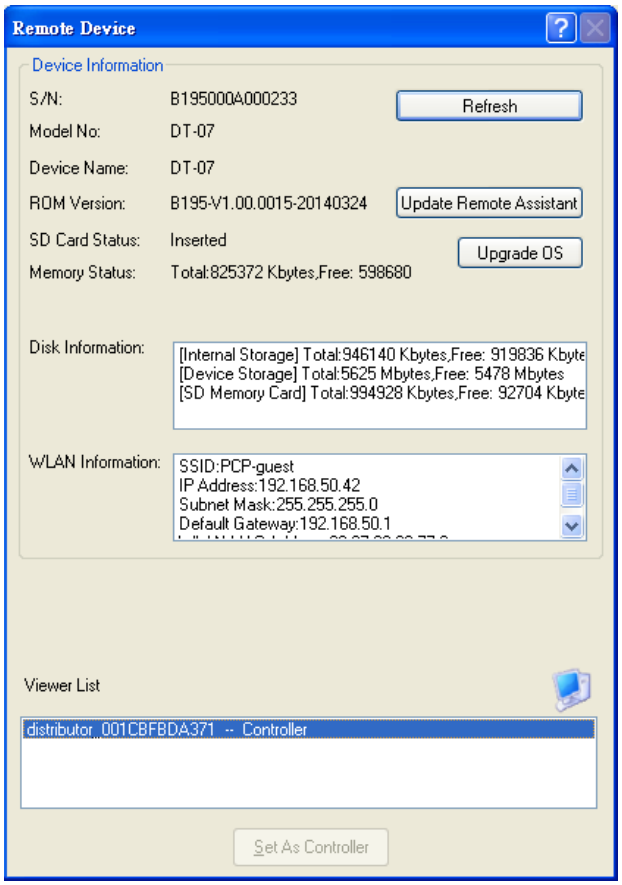
Keyboard Shortcuts	Tablet Operation
Esc key	Back
Home key	Go to Home screen
Pg Up key	Page up
Pg Dn key	Page down
End key	Menu / Turn on screen
Up	Move up
Down	Move down
Left	Move left
Right	Move right
Enter	Screen Tap

Mouse Shortcuts	Tablet Operation
Left key	Screen Tap
Right key	Back
Centre key	Scroll up/ down

14.6 Introducing the Remote Assistant Features

14.6.1 Viewing Device Information

The control screen displays the basic device information of the tablet.



Item	Descriptions
S/N	Tablet serial number
Model No.	Tablet model number
Device Name	Tablet name
ROM Version	OS version on the tablet
SD Card Status	Indicate whether MicroSD card is inserted into the tablet
Memory Status	RAM usage
Disk Information	Internal flash and MicroSD card memory usage
WLAN Information	Indicate the WLAN status of the tablet
Viewer List	Indicate the viewer(s) connected to the session.

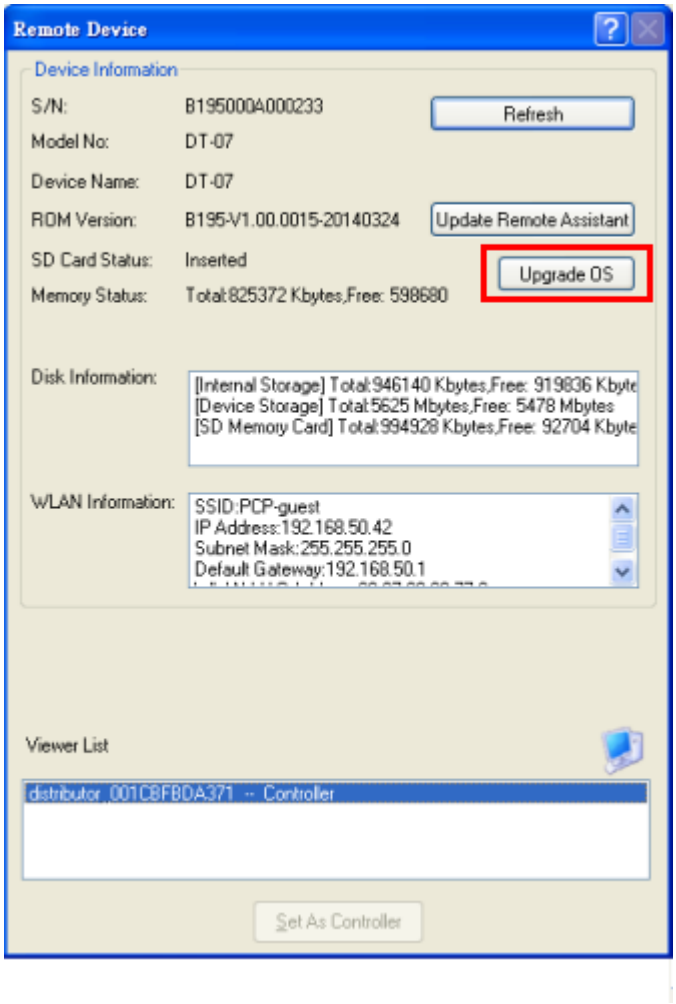
14.6.2 Refreshing the Control Screen

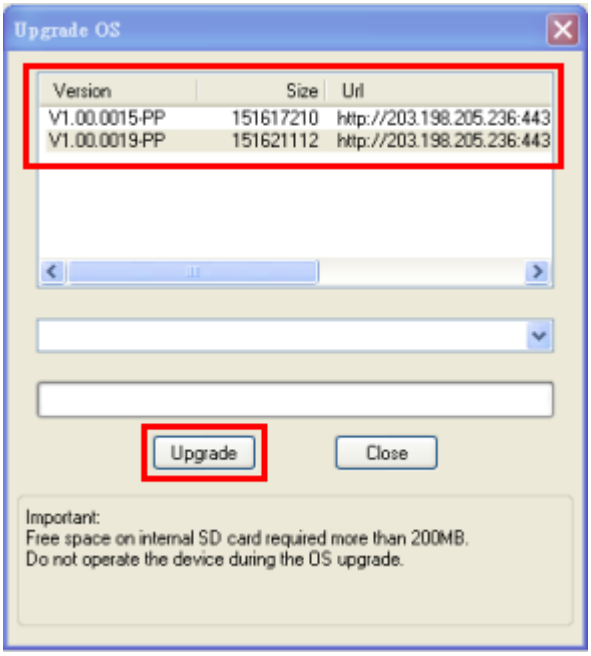
Click **Refresh** to refresh the device information displaying on the control screen.

14.6.3 Upgrading OS Software

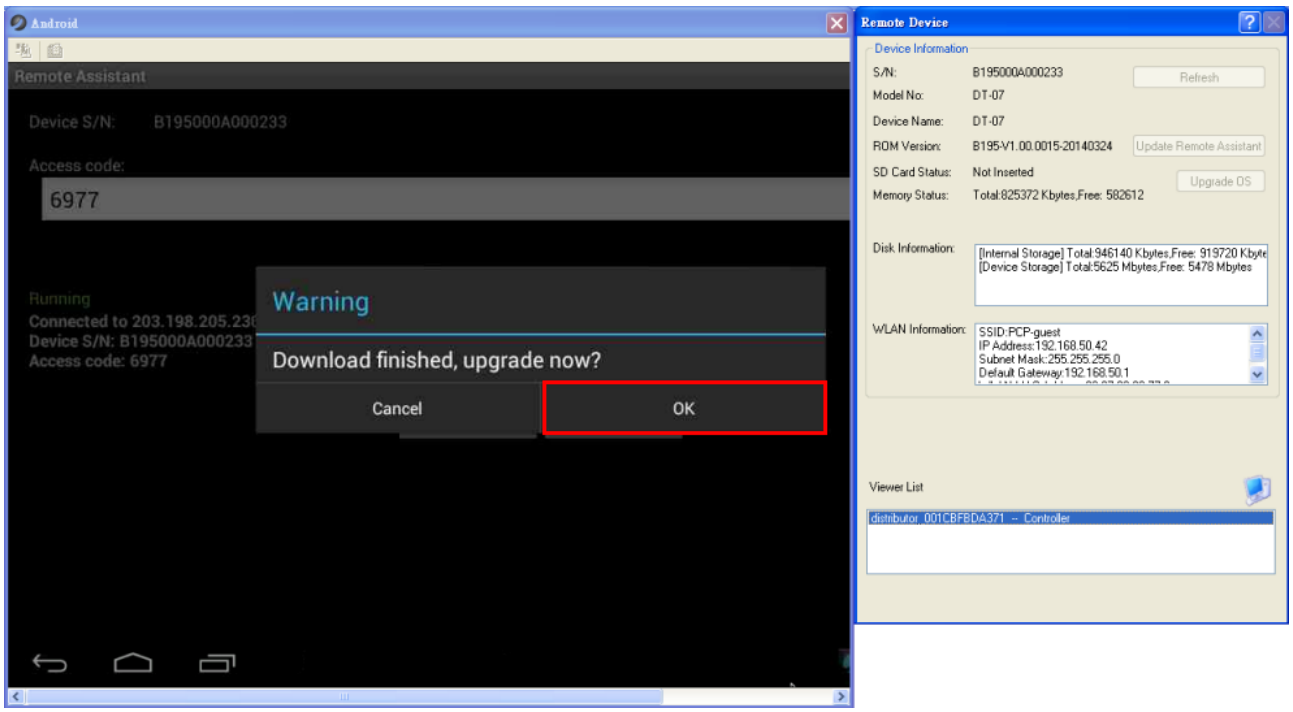
Note: Minimum 200MB is required for the internal SD card of the tablet.

1. Click **Upgrade OS,** and then click **Yes** to confirm OS upgrade on the screen prompt.
2. Select the required OS version, and click **Upgrade.**

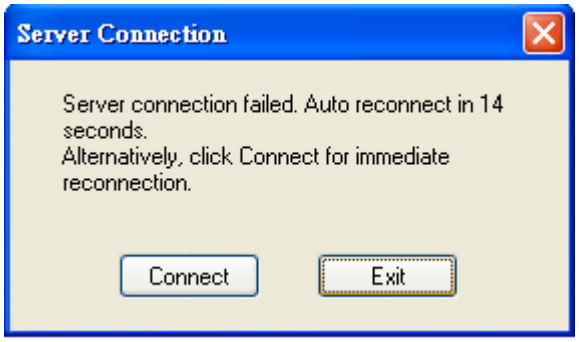




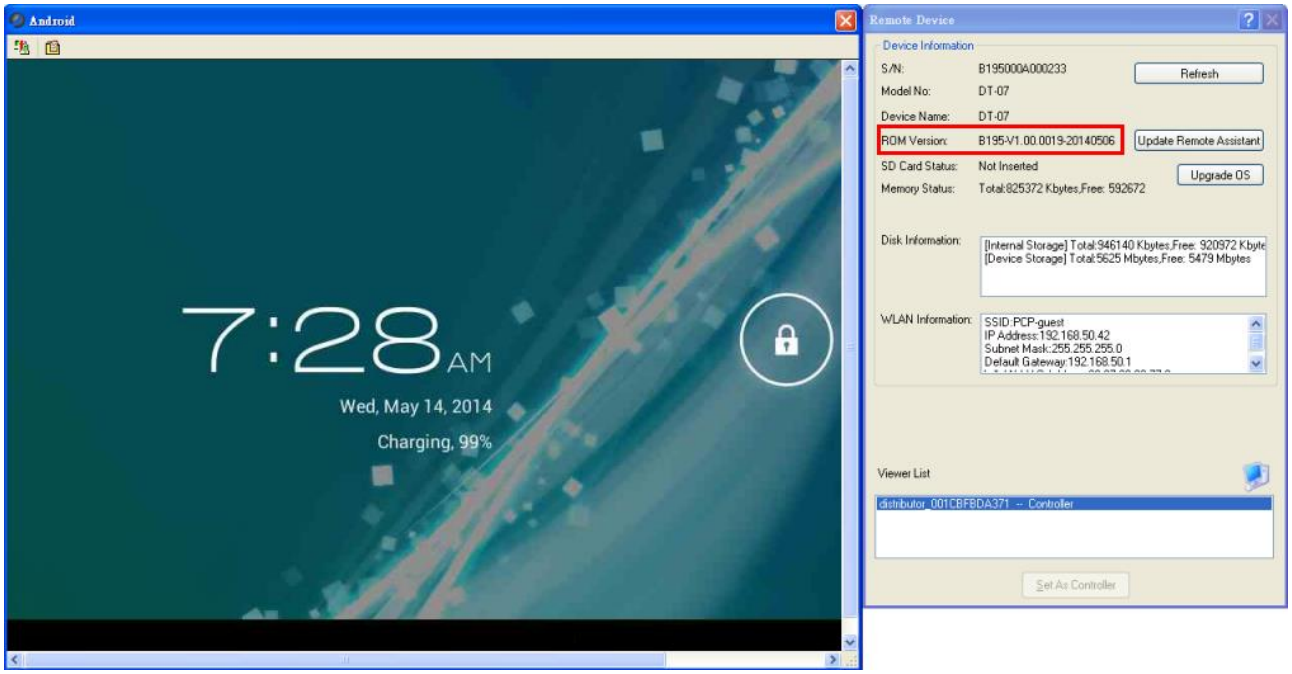
3. The tablet downloads the selected software to the internal SD card. Click **OK** on the device screen to start the upgrade when prompted.



4. The device and control screen will be turned off temporarily during the upgrade. The Remote Assistant Viewer will re-connect to the server automatically.



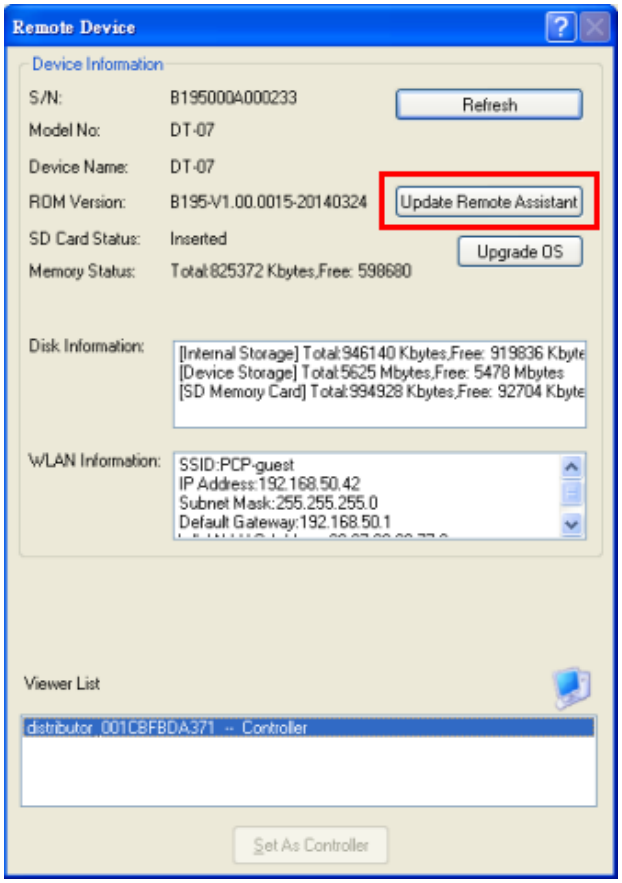
5. The display will resume upon completing the upgrade.



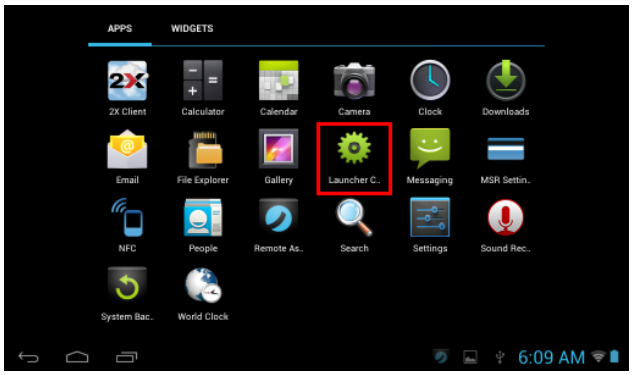
14.6.4 Updating Remote Assistant

Updating Remote Assistant upgrades the Remote Assistant application independently on the tablet. This is only required when the Remote Assistant version on the device is incompatible with newer OS release.

1. Click **Update Remote Assistant.**

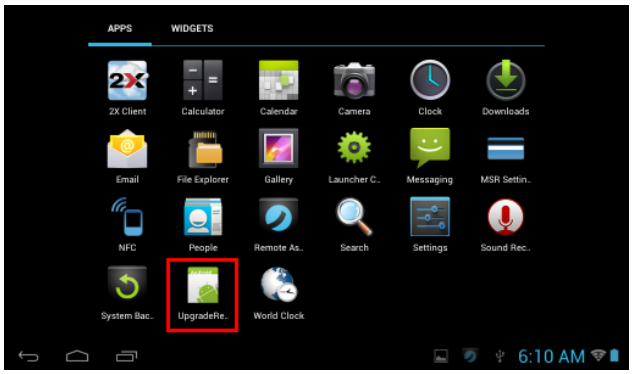


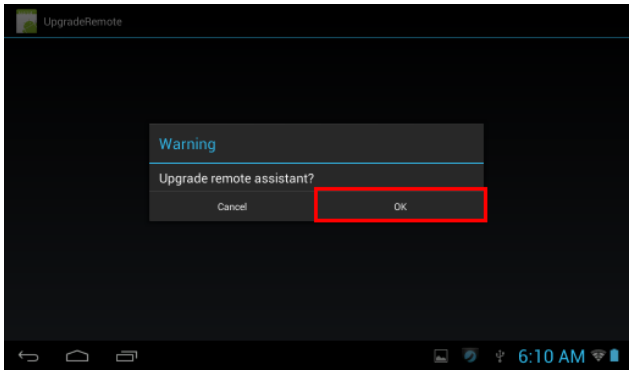
2. On the left device screen, select **Launcher Config**.



3. Check the **UpgradeRemote** checkbox.

4. Click **Back** to return to the main menu. Select **UpgradeRemote**, and then click **OK**.



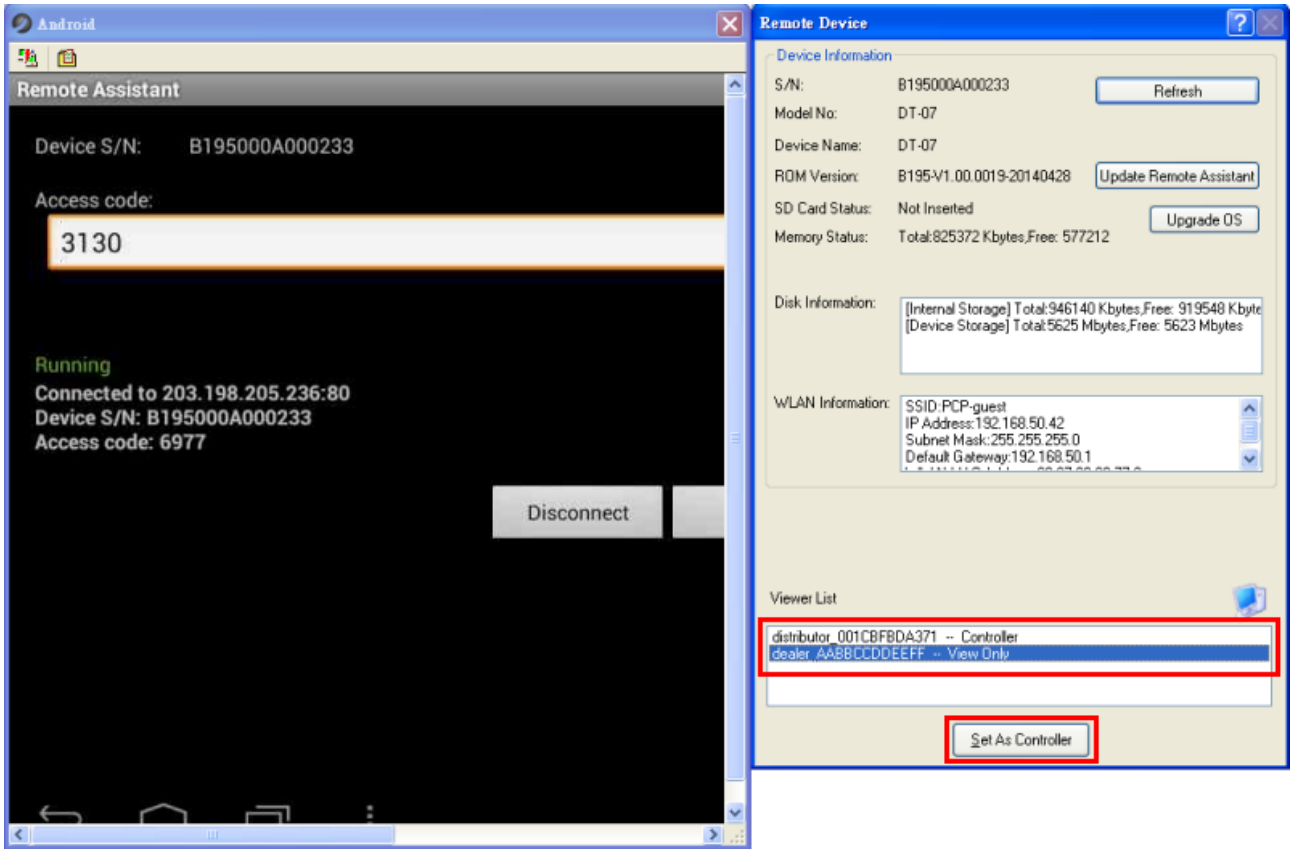


14.6.5 Changing the Controller

In a remote session, only the controller will have the right to control the tablet. Other participants connected to the session can view the shared screen only.

To pass the controller right to another viewer:

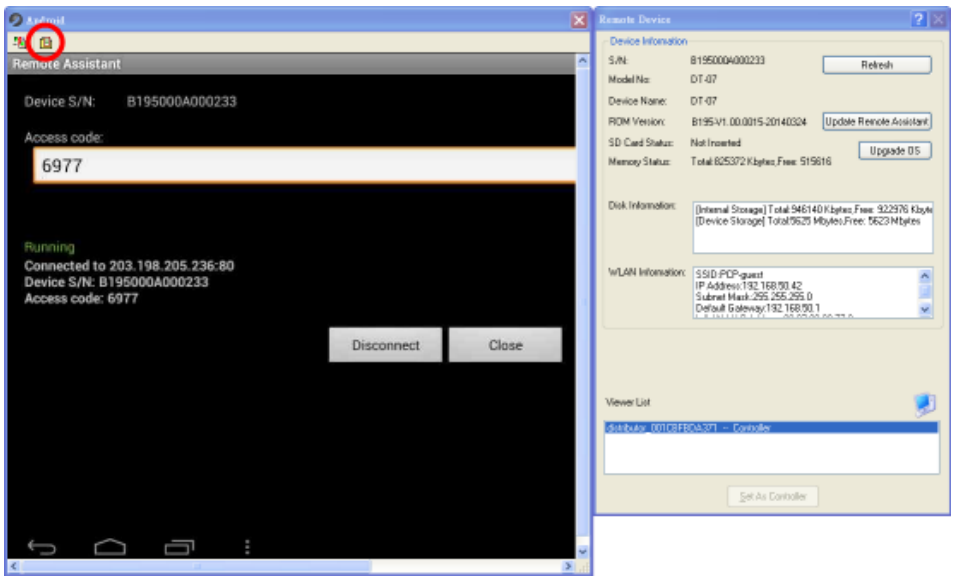
1. Select a viewer in the **Viewer List.**
2. Click **Set As Controller.**



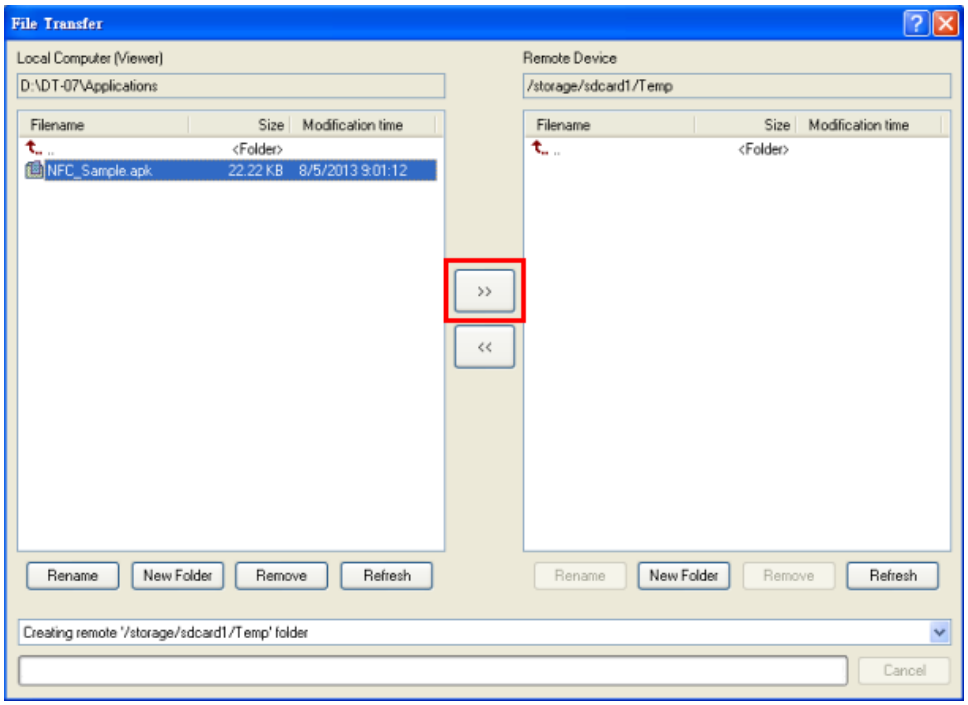
14.6.6 File Transfer

To transfer a file to the tablet:

1. Click .



2. Select the file and the destination folder with the file-browsing windows. Click to start the transfer.



15. MSR Expansion Module

15.1 Using the MSR

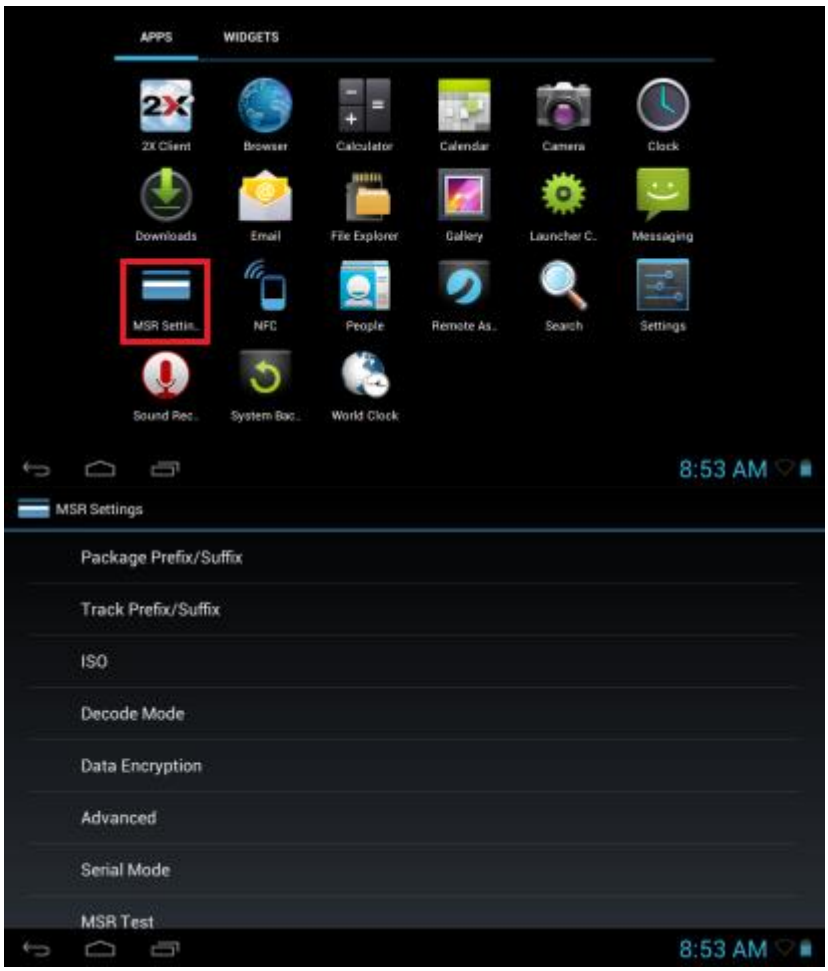
1. Insert the magstripe card from the side of the card slot with the magnetic stripe facing down.
2. Swipe the card through the card slot. A beep sound indicates a successful reading.

Note: The magstripe card can be swiped in either direction by default.

15.2 Configuring MSR Settings

The MSR can be configured directly on the device. To adjust the settings:

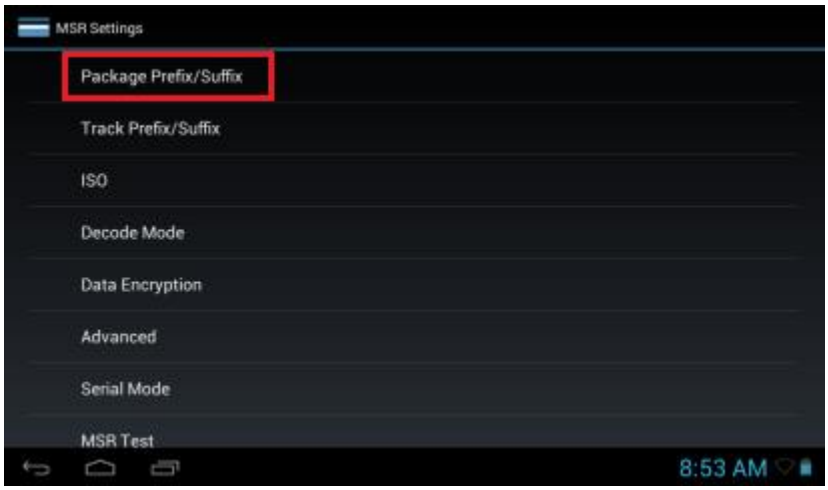
1. Select **Application Drawer > MSR Settings.**
2. Select the option to configure the MSR settings as required.

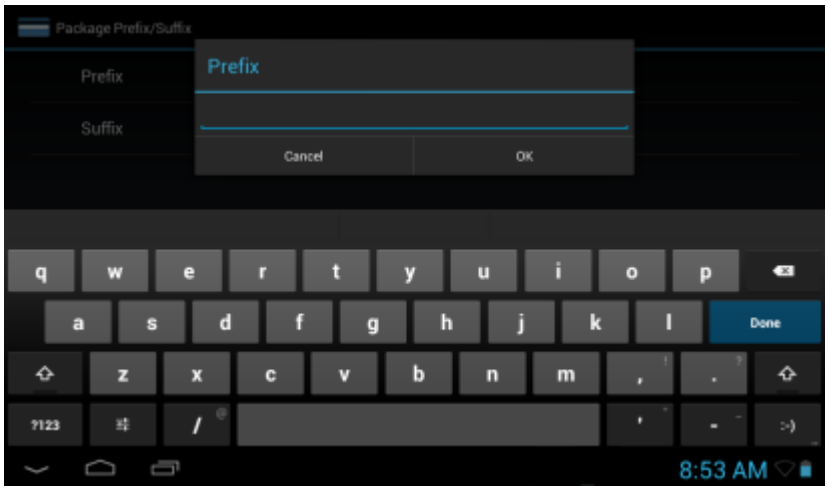


The following describes the available MSR settings.

Package Prefix/Suffix

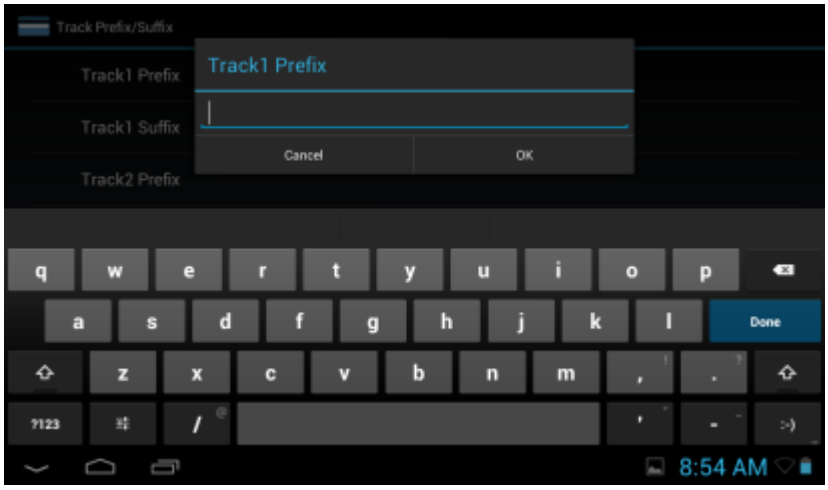
Add characters to the beginning and the end of a data package. Up to fifteen ASCII characters can be defined.





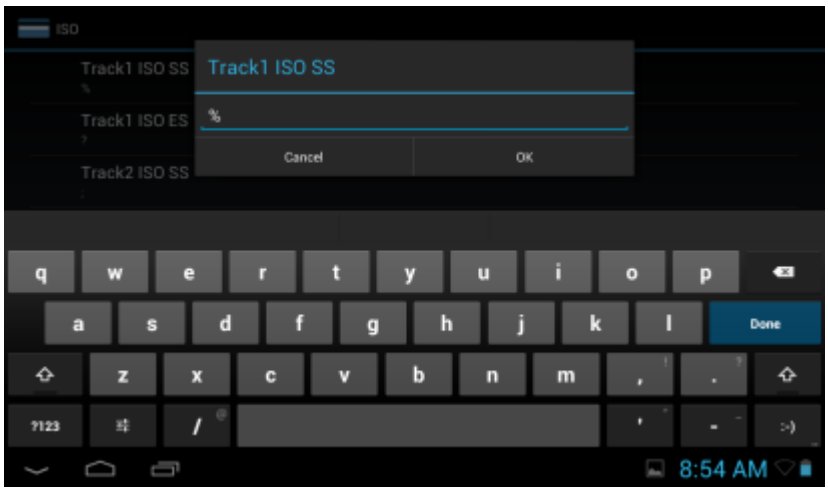
Track Prefix/Suffix

Add characters to the beginning and the end of a track data. Up to six ASCII characters can be defined.



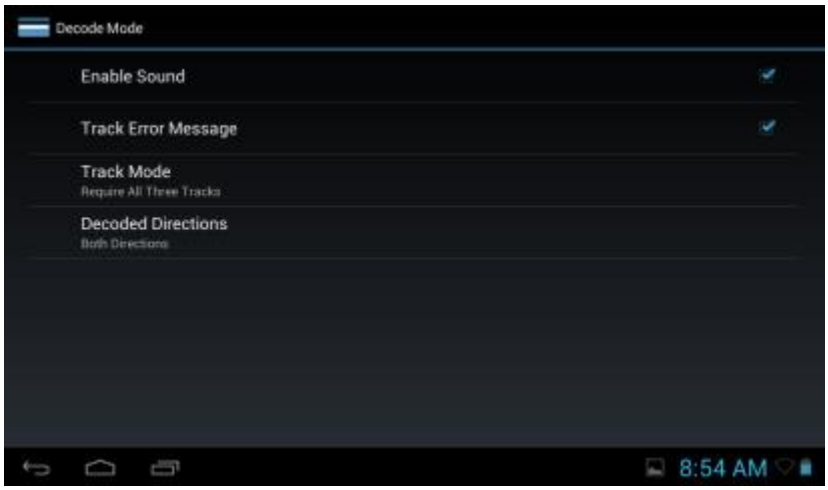
ISO

Defines the Start Sentinel and End Sentinel for the track data.



Decode Mode

Enable Sound: Select to play sound after swiping card.
Track Error Message: Select to display track error message for reading error.
Track Mode: Select the tracks that will be read.
Decoded Directions: Select the card reading direction.



Data Encryption

Card data can be encrypted to protect from unauthorized access. Data encryption can be done by MSR reader module hardware (hardware encryption), or at operating system level (software encryption).

Hardware encryption

Select MSR Encryption Enable checkbox to enable hardware MSR data encryption setting. Before encryption can be enabled, Key Serial Number (KSN) and Base Derivation Key (BDK) must be loaded. Once encryption mode is turned on, hardware encryption is enabled. For payment cards, encrypted data and masked clear text data are sent out.

Key management type: '0': Fixed Key, '1': DUKPT Key
MSR encryption mode: TDES or AES encryption
MSR KSN code: Key Serial Number (KSN)
MSR Encryption code: Encryption key, or Base Derivation Key (BDK)

There are 5 security levels:

Level 0: This is a special case where all DUKPT keys have been used and is set automatically when it runs out of DUKPT keys. The lifetime of DUKPT keys is 1 million.

Level 1: By default, the MSR module is configured to have this security level. There is no encryption process, no key serial number transmitted with decoded data. It functions as a non-encrypting reader.

Level 2: Key Serial Number and Base Derivation Key have been injected but the encryption process is not yet activated. The reader will send out decoded track data in default format. Setting the encryption type to TDES and AES will change the reader to security level 3.

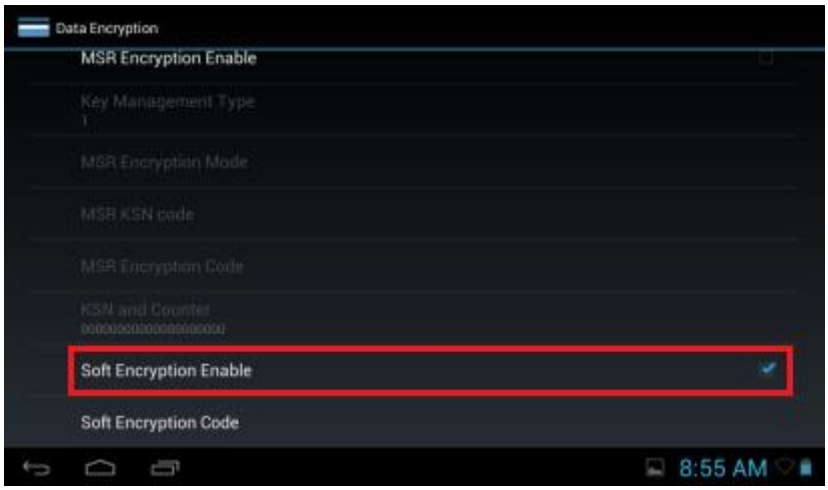
Level 3: Both Key Serial Number and Base Derivation Keys are injected and encryption mode is turned on. For payment cards, both encrypted data and masked clear text data are sent out. When the encryption is turned on, level 3 is the default security level.

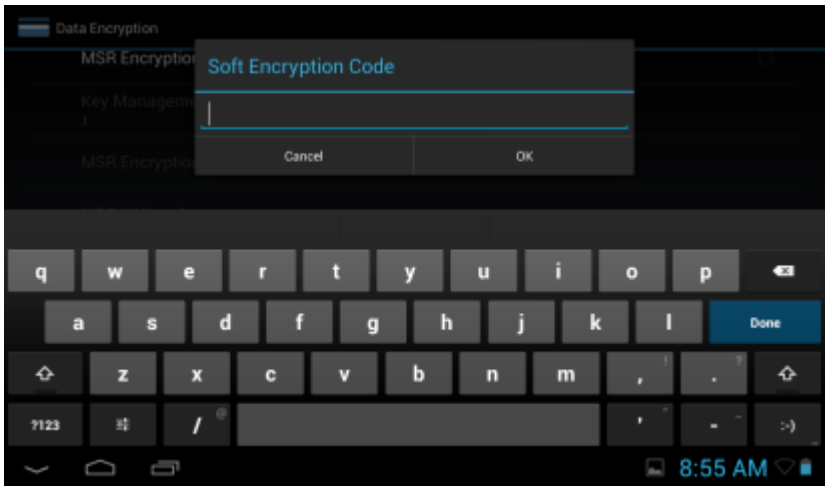
Level 4: When the reader is at Security Level 4, a correctly executed Authentication Sequence is required before the reader sends out data for each card swipe.

Note:
Once the security level is changed to level 3 or 4, it cannot go back to a lower level.

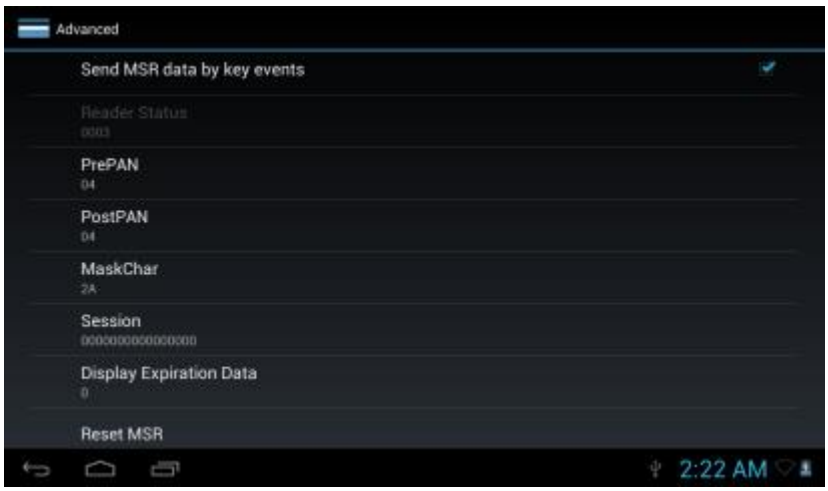
Software encryption
Select Soft Encryption Enable checkbox to enable software data encryption, and enter the data encryption key in Software Encryption Code.

Note: Advance Encryption Standard (AES) is adopted as the encryption method for each track.

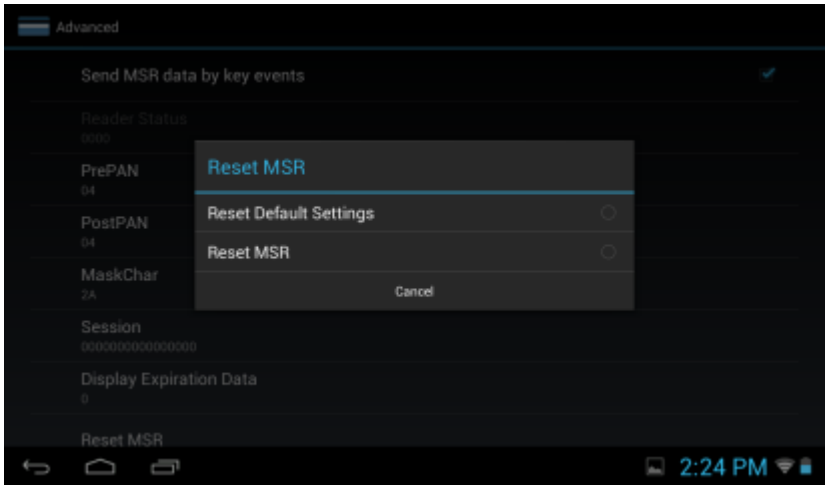




Advanced



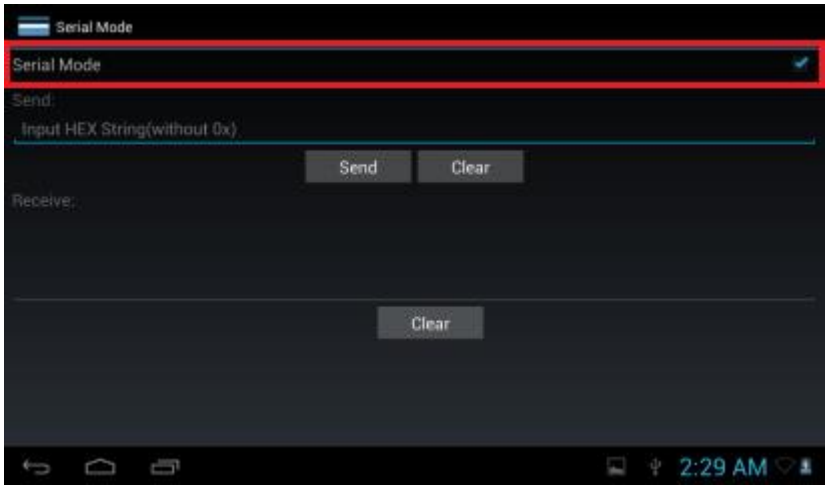
Send MSR data by key events: Select to enable MSR data to be sent as key events.
Reader status: It shows the current authentication state of the reader
PrePAN: number of leading Personal Account Number(PAN) digits to display
PostPAN number of trailing Personal Account Number(PAN) digits to display***:***
MaskChar: character used to mask the PAN
Session: *Show current session ID*
Display Expiration Data: Display expiration data as mask data(0) or clear data(1)



Reset Default Settings: Reset MSR module settings to default
Reset MSR: Re-initialize MSR module.

Serial Mode

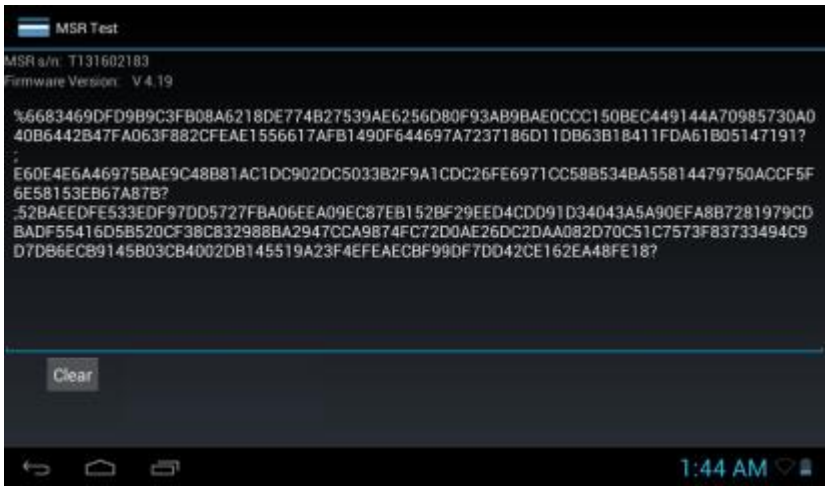
Select to control the MSR module through API programming or access MSR module directly by its command set.



MSR Test

MSR Test is a demo application for reading magstripe cards.

Swipe a card through the card slot to read the card data. Select **Clear** to empty the data output field.



Software encrypted data output

16. Bundled 3rd Party Applications

DT-07 is bundled with the following 3rd party applications. Visit the developer home page for product information and user manual.

Category	Application	Version	Developer URL
Remote Desktop	2X Client for Android	11.0.1823	http://www.2x.com

17. Application Development

17.1 Android SDK

The DT-07 is implemented with standard Android OS 4.1.2. To develop applications for the device, install Android 4.1.2 (API 16) for the Android SDK.

For MSR application development, refer to section 17.4 for more details.

17.2 Installing USB Driver

It is necessary to install the DT-07 USB driver for testing applications on an actual device connected to a Windows computer.

To install the DT-07 USB driver on Windows 7 computer:

1. Unzip the DT-07 USB driver software zip file, and copy the unzipped folder to the computer.
2. On the device, select **Application drawer > Settings > Developer options.** Turn on the **Developer options** with the on/off switch, and check the **USB debugging option.**
3. Connect the DT-07 device to the computer with a USB cable.
4. Select **Control Panel > System and Security > System > Device Manager.**
5. Right click the device **Android** on the left pane, and select **Update driver software**.
6. Select **Browse my computer for driver software**.
7. Click **Browse** and locate the DT-07 USB driver folder. Follow the on-screen instructions to complete the installation. Upon completion, the screen will prompt successful installation of driver software for **Android Composite ADB Interface**.

17.3 Installing Applications

Applications can be installed onto the DT-07 using MicroSD card or USB connection.

To install applications by MicroSD card:

1. Copy the apk file to a MicroSD card, and insert the card into the device.
2. Select **Application drawer > File Manager.**
3. Browse to the **/storage/sdcard1** folder.
4. Select the apk file in the SD card folder.
5. Select **Install** to install the installation.

To install applications by USB connection, use the **adb install** command in command prompt window to complete the apk installation.

17.4 Extra API Support & Sample Code

The DT-07 supports extra APIs for the development of MSR applications. Refer to the links below to access the document and sample in the DT-07 MSR SDK package.

MSR API Document

DT-07 MSR SDK\MSR Manager Doc\MSR-API.html

MSR API library

DT-07 MSR SDK\MSR Settings\libs\MsrManager.jar

MSR Sample Program

DT-07 MSR SDK\MSR Settings

- End of Document -