

User Manual

Android[™] 12 v3.01 for DLT-V73A





IMPORTANT:

For safe and proper use, follow the instructions in this manual. Keep the manual for future reference.

Manual version

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Version	Date	Manual modifications
V1.00	February 12, 2024	Initial document Android™ 12 v3.01 release.
V1.10	March 11, 2024	MDevice v2024.2.4 release
V1.20	June 10, 2024	Power Settings: Charge battery (UPS) removed GOTA description added USB (Type-C) function – no plug-in of USB sticks or keyboards Power Settings: 3 seconds delay Defroster option removed No switch from AOSP version to GMS version possible SOTI description added MDevice v2024.5.3 release Fastboot information added on OTA DeviceON link updated
V1.30	July 8, 2024	Android Enterprise installation added
V1.31	August 1, 2024	SOTI-OTA description added
V1.40	October 15, 2024	MWedge description added MBlank description added ADB commands added
V1.50	November 26, 2024	Kiosk Mode / Advantech MFocus description added External Partner SOTI and StayLinked added

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Technical customer support

Contact your distributor, sales representative or an Advantech Service Center for technical support. Please have the following information ready:

- Product name
- Serial number
- Description of your peripheral attachments
- Description of your software (operating system, application software, etc.)
- The exact wording of any error messages
- A complete description of the problem

Find the contact data of our Global Advantech Service Centers on our website:

https://erma.advantech.com

Contents

1.	Introduction	7
1.1.	Area of applicability	. 8
1.2.	Target group for this manual / loss of warranty	. 8
1.3.	Current manual versions	. 8
1.4.	Abbreviations in this manual	. 9
1.5.	Design elements in this manual	10
	1.5.1. Safety notes and other notices	10
	1.5.2. Text formatting conventions	11

2. Functional description12

2.1.	Suppor	ted hardware and peripherals	13
2.2.	Android	d for DLT-V73A - Overview	13
	2.2.1.	Main applications integrated with Android	14
	2.2.2.	Optimized for enterprise use	15
	2.2.3.	Google® Mobile Services (GMS)	16
	2.2.4.	Optimized for on-vehicle use	17
	2.2.5.	Licensing	18

3. Getting Started.....19

3.1.	Native Mode and Kiosk Mode	20
3.2.	Recommendations for configuring the system	21
3.3.	System startup (Power button / Ignition)	21
3.4.	Kiosk Mode / Advantech MFocus	22
3.5.	Accessing the Android Home Screen	23
3.6.	Kiosk Mode / Advantech MFocus Configuration	26
	3.6.1. Set customized Wallpaper	28
	3.6.2. Switch default Home app (Advantech MFocus / Quickstep)	31

4. Settings Menu.....35

4.1.	Comm	on Settings	
4.2.	Sugge	stions	
	4.2.1.	Network & Internet	
	4.2.2.	Connected Devices	37
	4.2.3.	General Settings	
	4.2.4.	Security & location	44
	4.2.5.	System	

5.1.	Basic safety notes	50
5.2.	Start MDevice Utility	50
	5.2.1. User and Admin modes	51
5.3.	MDevice Functional overview	53
	5.3.1. System Information	54
5.4.	Power Settings	59
5.5.	Startup Settings	61

5.6.	Front Key Settings	63
	5.6.1. Assigning special function keys	64
5.7.	Display Settings	67
5.8.	Radio Settings	69
5.9.	MDevice Settings	.72
	5.9.1. Export Customer Settings	74
	5.9.2. Import Customer Settings	75

6. MBlank.....76

6.1.	MBlank	Settings	77
	6.1.1.	Logo configuration	78
	6.1.2.	Enable MBlank	83
	6.1.3.	Show Logo	84
	6.1.4.	Show Time	85
	6.1.5.	Sensitivity Configuration	86

7.1.	WLAN Roaming	89
7.2.	Ethernet Settings	92
7.3.	GPRS / GNSS Settings	
7.4.	USB-Stick (file transfer)	
7.5.	Files Explorer	102
	7.5.1. APK Installation	102
7.6.	Power off / Restart System	104
7.7.	Factory Reset	105
7.8.	Multiple Users	108
7.9.	ADB over USB (Type-C)	113
7.10.	ADB Commands	117
	7.10.1. Open / Close ADB connection	117
	7.10.2. Screen Capture using ADB	117
	7.10.3. Upload files using ADB	
7.11.	External Partners	119
7.12.	SOTI support	119
	7.12.1. AOSP Installation	119
	7.12.2. GMS Installation	
7.13.	DeviceOn/iService support	145
7.14.	Resistive Touch Controller (PenMount)	146
	7.14.1. Touchscreen Calibration	147

8. OTA Update.....149

8.1.	Functional description	50
8.2.	Image Versioning / Release policy	51
8.3.	Version update / downgrade information 15	52
8.4.	Different ways to perform OTA updates	53
	8.4.1. Way1: Apps Screen → OTA update	53
	8.4.2. Way2: ADB over USB (Type-C) Connection	56
	8.4.3. Way 3: SOTI® (Send Intent)	57

8.5.	OTA p	roblem solving	162
	8.5.1.	OTA update not compatible	162
	8.5.2.	OTA update failed	163

9. GOTA Update164

9.1.	Functio	nal description	165
9.2.	GOTA	update is available	166
	9.2.1.	Apply GOTA Update via update icon	166
	9.2.2.	Apply GOTA Update via Settings	168
9.3.	Perform	n GOTA update	169
9.4.	GOTA	problem solving	174
	9.4.1.	Network connection not available (before GOTA update)	174
	9.4.2.	Network connection lost (during GOTA update)	175
	9.4.3.	GOTA update failed	176

10. MTouch......177

10.1.	MTouch	178
	10.1.1. MTouch application	179
	10.1.2. MTouch (PCAP)	179
	10.1.3. MTouch (PENMOUNT)	180

11. MWedge......181

11.1.	MWedge	182
	11.1.1. MWedge configuration	183
	11.1.2. MWedge (Serial)	184
	11.1.3. MWedge (Change Input)	187
	11.1.4. MWedge (Test)	189

1. Introduction

1.1. Area of applicability

Information and settings described in this manual apply to product Android[™] 12 v3.01 for Advantech DLT-V73A Industrial Computer using AOSP / GMS certified image.

1.2. Target group for this manual / loss of warranty

Android installation and configuration should only be performed by qualified, skilled personnel, such as IT administrators.

Incorrect installation and configuration can compromise the function of your DLT-V73A Industrial Computer.

Incorrect installation and/or configuration of Android by the user, releases Advantech Co., Ltd. from all liability for warranty claims.

1.3. Current manual versions



The latest versions of our manuals are available at our websites: www.advantech.com

1.4. Abbreviations in this manual

Complete term	Abbreviation
Advantech DLT-V73A (Industrial Computer)	DLT-V73A
Android™ Debug Bridge	ADB
Android [™] 12 v3.01 for Advantech DLT-V73A	Android
Android™ Open-Source Project	AOSP
Android [™] MDevice for Advantech DLT-V73A	MDevice
Android [™] MTouch for Advantech DLT-V73A	MTouch
Uninterruptible power supply	Battery (UPS)
Ambient light sensor	ALS
General Packet Radio Service	GPRS
Global Navigation Satellite System	GNSS
Google® Mobile Services	GMS

1.5. Design elements in this manual

1.5.1. Safety notes and other notices

<Signal word> D

Damage to persons:

Signal word **DANGER** means that death or severe bodily injury will occur if this information is not observed.

Signal word **WARNING** means that death or severe bodily injury can occur if this information is not observed.

Signal word **CAUTION** means that slight bodily injury can occur if this information is not observed.

NOTICE Prevent system malfunction and property damage. Information about possible property damage to avoid damaging hardware or losing data.



Notes provide optional additional information.



1.5.2. Text formatting conventions

Subject	Formatting	Example
Lists	Bullet points	Part 1Part 2
Instructions	Numbers	 Copy file … Rename file …
Product names	Normal, not highlighted	Software MDevice is a setup tool for
Buttons in software dialogues	Bold	With button Next …
Texts, parameters in software dialogues	Bold	Parameter setting ID-Test should …
Placeholder for a variable	<x> value in angle brackets</x>	Value <x> depends on …</x>
Syntax, Strings	Courier New Size 11	The AT prefix must be set.
Keyboard keys	In capital letters, sequence with +	CTRL + ALT + DEL
Cross reference to other manual chapters	Text in <u>italics,</u> <u>underlined</u>	Please refer to manual section <u>1.1</u> <u>Examples</u>
Program files	In quotation marks	File "quectel.exe" …
File names		In directory "C:/Program Files"
Directories		
Links	Underlined, blue	Website https://www.advantech.com

2. Functional description

2.1. Supported hardware and peripherals

Android is running on DLT-V73A model variants. Android is supporting following peripherals:

- USB keyboards / mass storage (USB-Sticks)
- Mini Bluetooth adapter
- Internal / external GNSS receiver
- USB / Serial handheld scanners
- Battery (UPS)

2.2. Android for DLT-V73A - Overview

Android is based on android-x86.org Android open-source and built for enterprise environment.

- Kernel Version: 4.19.157
- Android security patch level: March 1, 2024
- Android Version: 12
- CPU Type: Quectel® SC66 SOC (Qualcomm® SDM 660)
- Processor Configuration and ABI (Application Binary Interface): ARMv8



Android is delivered as a User Build Image signed with Advantech certificates.

Figure 2-1: Android for DLT-V73A – Advantech home screen (GMS)

2.2.1. Main applications integrated with Android

The following table provides an overview of the main applications integrated with Android:

Application	Source	Description
Advantech MFocus	Advantech	Allows Kiosk Mode operation of the device
Android Agent	Advantech	DeviceOn IService Android Agent
Calculator	Google®	Standard Android Calculator application
Calendar	Google®	Standard Android calendar application
Clock	Google®	Standard Android clock application
Files	Google®	Standard Android file manager application
Gallery	Google®	Standard Android gallery application
MDevice	Advantech	Configuration utility
Music	Google®	Music Player
MBlank	Advantech	Prevent display content view and terminal access by the user while the vehicle is in motion
MFocus Configuration	Advantech	Application to configure the Advantech MFocus (Kiosk Mode)
MTouch	Advantech	User can increase the sensitivity of the PCAP touchscreen to facilitate operation with gloves.
Search	Google®	Standard Android search application
Secure Policy Setting	Google®	Installation pack of OS Setting function for DeviceOn Android Agent.
Settings	Google®	Menu used to configure system, including roaming behavior.
Sound Recorder	Google®	Sound Recorder
Videos	Google®	Video Player
WebView Browser Tester	Google®	Standard Android web browser application

2.2.2. Optimized for enterprise use

For enhanced security and guaranteed system stability, Android for DLT-V73A is optimized for enterprise use. Some applications commonly found on Android based consumer devices are removed:

Application	Reason of removal	Description
Phone	Not supported on device	Telephony services
Camera	Not supported on device	Camera app
Contacts	Not relevant for device	An app to handle personal contacts
Torch	Not supported on device	Torch application using a camera's flash light
MMS	Not supported on device	Multimedia Messaging Service

2.2.3. Google® Mobile Services (GMS)

When using the DLT-V73A GMS certified image, you can use the following additional applications:

Application	Source	Description
Gmail	Google®	Standard Google® Mail application
Play Store	Google®	Store to download Google® certified applications
Chrome	Google®	Standard Google® Web Browser
Drive	Google®	Google® Workspace
Google	Google®	Google® Search Engine
Google TV	Google®	Google® TV application
Maps	Google®	Google® Maps
Meet	Google®	Google® application for online meetings
Photos	Google®	Google® application for Photos
		Please note that an external connected USB camera is required (not integrated).
YouTube	Google®	Online video sharing platform owned by Google®

2.2.4. Optimized for on-vehicle use

The DLT-V73A Industrial Computer has been optimized for on-vehicle, industrial use. This optimization results in a different behavior from consumer grade Android devices:

Aspect	Difference to consumer grade Android	Description
System Shutdown	No shutdown via soft buttons and menu.	Device shutdown is only possible via the power button integrated on the front panel to avoid unintended shutdowns caused by erroneous touch screen activity from operators.
Display brightness	None	Brightness is controlled using buttons on the front panel or by activating ALS (ambient light sensor) for "automatic" brightness control.
Battery (UPS)	DLT-V73A terminal's battery (UPS) support	Android indicates the battery (UPS) level of the DLT- V73A terminal's integrated UPS (UPS is optional available), but it doesn't measure the vehicle's battery status.
Integrated peripherals	No handheld / consumer peripherals	Certain HW components and related system applications are not supported because they are not suitable for the type of device, including:
		Notifications via vibration
		No camera support No integrated phone support
		No microphone
WLAN Support	None	DLT-V73A supports WLAN next to Bluetooth (no additional hardware is required).
Bluetooth Support	None	DLT-V73A supports Bluetooth next to WLAN (no additional hardware is required).
Optional GNSS Support	None	DLT-V73A supports GPRS / GNSS in case optional extension has been placed.
Support for legacy Scanners	Integrated	Serial port no.1 (COM1) has an optional 5/12V power supply, which can be enabled using MDevice to power external legacy scanners.

2.2.5. Licensing

By using Android, you implicitly accept the license terms of the Android Open-Source Project.

Detailed information on the related licenses and legal terms are available on **Android under Settings -> About tablet -> Legal information**.

Please note that specific applications from third parties may have individual license terms and may prompt you to accept these when first launching the app.

3. Getting Started

3.1. Native Mode and Kiosk Mode

Android has been optimized for enterprise use in the logistic industry. This and the following sections of this document describes how administrators can integrate the DLT-V73A Industrial Computer into their enterprise environment. This includes configuring the system, adding enterprise applications and creating new user profiles.

Android supports two basic options to set up the system:

- Native Mode
- Kiosk Mode

Native Mode

In this mode, the native launcher, called Quickstep, is used as home app. Administrators need to use Android 12 multi user support and additional Enterprise Mobility Management (EMM) software to configure and set up the device.

Configuration of multiple user profiles is described in section 7.8 Multiple Users.

NOTICE Prevent system malfunction.

Please note that there are some restrictions on multiple user profiles under Android 12 and that the use of an EMM suite is highly recommended.

Some features have been built into the device, which allow enhancing system startup behavior. These features can be configured using MDevice (refer to section <u>5.5 Startup</u> <u>Settings</u>).

Kiosk Mode

In this mode, Advantech MFocus will be used as home app. Administrators can define which applications are available to operators and/or auto-launched on the MFocus home screen.

Advantech provides a dedicated application for configuring Kiosk Mode (refer to section <u>3.6 Kiosk Mode / Advantech MFocus Configuration).</u>

3.2. Recommendations for configuring the system

Here are some additional hints / recommendations for administrators to configure the system for best performance:

System Power Management:

Android has been enriched with special features to manage the device's power up and down behavior for integration in industrial environments.

You can configure these features using the MDevice application as described in section <u>5.4 Power Settings.</u>

Installing Apps:

Android AOSP does not include Google Mobile Services to protect your enterprise's privacy.

For support, please use GMS image for DLT-V73A industrial terminal instead.

Chapter <u>7.5.1 APK Installation</u> describes how to install applications on Android.

Android is an ARMv8 64bit based system.

Please make sure that the applications you wish to install have been compiled for this configuration.

3.3. System startup (Power button / Ignition)

By default, the DLT-V73A industrial terminal can be switched on using two different ways:

1. By pressing the Power button

OR

2. By enabling Ignition signal

If one condition is available the system will perform the OS startup.



How the unit should handle switch-off situation can be configured using MDevice utility. See chapter <u>5.4 Power Settings</u> for further information.



3.4. Kiosk Mode / Advantech MFocus

When set up for Kiosk Mode, the system runs a single, pre-configured application in foreground thereby restricting the user's access to other apps and underlying system services.

NOTICE Prevent system malfunction and property damage.

It is highly recommended that administrators set up limited access rights for users by configuring Advantech MFocus accordingly.

The Kiosk Mode can be configured using the Advantech MFocus Configuration app.

The Advantech MFocus default screen is shown below:



Figure 3-1: Kiosk Mode – Advantech MFocus Screen

By default, no applications are enabled and need to be configured first.

Administrators can configure the Advantech MFocus Screen by terminating Kiosk Mode and opening the Advantech MFocus Configuration app as described in the section below.

3.5. Accessing the Android Home Screen

Administrators can access the Android home screen by terminating Kiosk mode:

1. To exit Kiosk Mode, press and hold the background Advantech logo until the password dialog appears.

Configurator Password Password CANCEL OK	

Figure 3-2: Exit Kiosk Mode

2. Input the Advantech MFocus password.

The factory setting for this password reads "gold" (Use USB or SW virtual keyboard).



Figure 3-3: Default home screen app selection

3. Change option to **Quickstep** home screen app.

The administrator will now have access to the Android home screen.



Figure 3-4: Android Home Screen

Scrolling up the main screen you can find all standard applications:

3:12 5 🌣 📼 5			\$ \$ 4
Search			
	Μ	٠	0
DLT-V73_FACTORY_TEST	Gmail	YouTube	Chrome
	All ap	pps	
Bevice0n IService	- × + =	31	0
Android Agent	Calculator	Calendar	Chrome
		Δ	
Clock	DLT-V73_FACTORY_TEST	Drive	Files
M	G		
Gmail	Google	Google TV	Keep notes
9	•	α.	8
	< 0		

Figure 3-5: Android Home Screen

4. Scroll up until the end of applications listed to see all the features present.



Figure 3-6: Android Home Screen

3.6. Kiosk Mode / Advantech MFocus Configuration

The Advantech MFocus Configuration app can be used to set the configuration parameters for Kiosk Mode.

The screen below shows the Advantech MFocus configuration mask:

		PASSWO	PD
GEOSE WALLFAFER SAVE	DIGADLE MALLI AI LI	140000	ND
MDevice advantech.mdevice		0 Dric	Chow
	autostart	FIIO	SHOW
MTouch		0	
advantech.mtouch	autostart	Prio	show
MWedge		0	
advantech.mwedge	autostart	Prio	show
DeviceOn Android Agent		0	
com.adv.client	autostart	Prio	show
OTA update		0	
com.advantech.otaupdate	autostart	Prio	show
Files		0	
com.google.android.documentsui	autostart	Prio	show
Coogle		0	
com.google.android.googlequicksearchl	XOC	Prio	show

Figure 3-7: Advantech MFocus Configuration

The following options can be selected on a per app basis:

Autostart	If checked, the application will be started automatically on each boot. If an application has been selected for Autostart , it will implicitly be whitelisted (cf. show below).
Prio	Sets the priority when multiple applications are to be started. Applications with the lowest priority will be started last. NOTE: Please define ascending priority numbers when more than one application should be started (Prio 0, 1, 2, etc.).
Show	Whitelists applications in kiosk mode. The application's icon will be shown on the Kiosk Mode Home Screen.

General options as follows:

Close	Close the application.				
Wallpaper	To exchange default wallpaper with customized one.				
Save	Save the settings.				
	NOTE: The application <u>is not auto-saving</u> the parameters on exit.				
Disable Wallpaper	To remove customized wallpaper.				
Password	To change password (standard reads " gold ").				
	Change Password Please enter your new password Enter new password Repeat new password CANCEL CHANGE Figure 3-8: Advantech MFocus Configuration – change Password				

3.6.1. Set customized Wallpaper

To exchange default Wallpaper with customized one follow the next instruction:

- 1. Copy a new Wallpaper to the DLT-V73A terminal using a standard USB-Stick or by USB ADB connection.
- For more details please refer to chapter <u>7.4 USB-Stick (file transfer)</u> / <u>7.9 ADB</u> <u>over USB (Type-C)</u>.
- 3. Open Advantech MFocus Configuration and press icon WALLPAPER
- 4. Press icon = at left upper corner.

Оре	en from
0	Recent
-	Images
	Documents
<u>+</u>	Downloads
	DLT-V7310AP

Figure 3-9: Advantech MFocus – Internal Memory Storage

- 5. Select from list item called **DLT-V7310AP**.
- 6. Change to subfolder containing the Wallpaper.

8:26 🌣 号 🖪 🗘 🔹			
\equiv DLT-V7310AP			٩ :
Alarms	Android	AndroidManager	Audiobooks
DCIM	Documents	Download	Movies
Music	Notifications	Pictures	Podcasts
Recordings	Ringtones		
ADV.jpg 46.03 kB 8:23 AM			
		• =	

Figure 3-10: Advantech MFocus – Wallpaper Location

7. Select the Wallpaper image (Example ADV.jpg).



Set Wallpaper

Figure 3-11: Advantech Launcher – Customized Wallpaper example

8. Press button **OK**, the following status dialog will be shown during save progress.



Figure 3-12: Advantech MFocus – Wallpaper save progress

Example view of updated Wallpaper (Kiosk Mode):



Figure 3-13: Advantech MFocus - Customized Wallpaper example

3.6.2. Switch default Home app (Advantech MFocus / Quickstep)

To activate the Kiosk Mode / Advantech MFocus or to restore the default Android Quickstep Home application, follow the instructions below.

1. Open Settings.apk (Option Apps).



Figure 3-14: Switch default Home app, open Settings.apk

2. Select MFocus app and scroll down until option Home app is visible.



Figure 3-15: Switch default Home app

3. Press item **Home app**, the following sub dialog will be shown:



Figure 3-16: Switch default Home app, select Home app

4. Select between Advantech MFocus and Quickstep.

The selected home app will be started automatically.



The home app will also be automatically restored after a performed system reboot until it is being changed again using the **Settings.apk** option as described above.



È

Once Advantech MFocus mode has started, please make sure that there are no open applications in background by pressing ticon.



Figure 3-17: Scroll up MFocus Window and check the applications in background

If the mask you have created contains applications to AUTOSTART, close only the additional applications in the background, otherwise select CLEAR ALL.



Figure 3-18: Select CLEAR ALL to close all background applications

5. Close the windows in addition the apps you chose in your mask.

Now MFocus is ready to be used by the operator. The administrator can easily change the mask by going to default Home and entering the Password (for more info read the section <u>3.5 Accessing the Android Home Screen</u>).

4. Settings Menu
4.1. Common Settings

Android can be configured using the **Settings** menu as found on commercial Android devices.



Please refer to documentation available on the Internet for common Android settings and features.

The following section provides an overview and addresses aspects, which are specific to **Android**.

Additionally, special features of **Android** and the DLT-V73A can be configured using MDevice as described in chapter <u>5 MDevice Utility</u>.

4.2. Suggestions

This section contains suggestions created automatically by the Android system.

4.2.1. Network & Internet

WLAN

The menu item shows you the current enablement and connection status. Clicking on the item is taking to the wireless settings menu, which is described in greater detail in manual section <u>7.1 WLAN Roaming</u>.

Ethernet

The menu item shows you the current enablement and connection status. Clicking on the item is taking to the Ethernet settings menu, which is described in greater detail in manual section <u>7.2 Ethernet settings</u>.

Mobile network

This item takes you to a submenu containing additional GPRS related configuration item, which is described in greater detail in manual section 7.3 GPRS / GNSS Settings.

4.2.2. Connected Devices

Bluetooth

This menu item shows the current status of the Bluetooth connection. This item can be used to enable/disable Bluetooth support as well as perform pairing with Bluetooth devices.

NFC

This menu item shows the current status of the NFC connection. This item can be used to enable/disable NFC support as well as perform pairing with NFC devices.

NFC uses frequency 13.56MHz specified by ISO/IEC 18000-3. NFCIP-1 and NFCIP-2, ISO/IEC 14443, ISO/IEC 15693, MIFARE.



For further information please see the DLT-V73A manual on our websites.

www.advantech.com

4.2.3. General Settings

Apps & Notifications

The menu item allows managing the apps installed on your device. Please note that apps, which have been pre-integrated into Android, cannot be uninstalled. To deactivate such an app, choose **Disable** in the related submenu. The submenu Notifications can be used to manage which type of notification privileges individual apps have on the system.

1:06 🗄 🖯		
÷		
Apps		
Recently opened apps		
MDevice 2 min. ago		
SecurePolicySetting 13 min. ago		
> See all 18 apps		
General		
Default apps		
	•	

Figure 4-1: General Settings – Apps & Notifications

Storage

This menu item shows you the current internal storage usage.



Figure 4-2: General Settings – Storage



If required, the internal storage can be enhanced with an optional SD card.

Sound

This item takes you to a submenu that allows tweaking the volume for different type of system sounds as well as select the related ringtones.

1:09 5	5				
÷					
Sc	ound				
ſ	Media volume	•			
e	Call volume		•		
Ó	Alarm volume				
ņ	Notification volume			•	
		•	•		

Figure 4-3: General Settings – Sound

Display

This item takes you to a submenu that provides configuration options for the user interface such as selecting a wallpaper or defining font sizes. Please note that display brightness is managed by the related buttons on the front panel or by activating the ALS (ambient light sensor) "automatic" brightness control.

1:09 5 5		
\		
Display		
Brightness		
Brightness level		
Adaptive brightness		
Lock display		
Lock screen Show all notification content		
Screen timeout		
	•	

Figure 4-4: General Settings – Display

Accessibility

Accessibility allows configuring various aspects of the user interface of your device. A submenu opens when you click on this item.



Figure 4-5: Security and location - Accessibility

System - Multiple Users

This item allows you to add multiple users to the device. Details are described in section <u>7.8 Multiple Users</u>.



Figure 4-6: General Settings – Multiple users

4.2.4. Security & location

Device Security

This item takes you to a submenu for managing the system's security settings.

Screen lock provides the option to enable and configure the timeout for a lock screen. This option is disabled by default.

Location allows you to enable device location.

Show passwords defines if password characters are visible on screen when typing passwords or not.

Device admin apps allows managing the privileges for device administration.

SIM card lock (option only available at DLT-V73A GPRS enabled device).

Encryption & credentials allows you to encrypt the device completely.

Trusted Credentials contains a list of certificate authorities, which are regarded trusted by the Android Open-Source Project. If you wish to install applications that have been signed, the certificates used for signing the apps need to be rooted back into one of the Trusted CAs listed.

User credentials allows managing user passwords.

Install certificates from storage allows installing certificates via storage devices or via downloading from a web site.

Clear credentials perform a wipe of all certificates installed.

1:14 5 5			
<			
Security			
Security status			
Device security			
Screen lock Swipe			
Device admin apps			
Managed device info Changes & settings managed by your organization			
Encryption & credentials	•		

Figure 4-7: Security and location - Device Security

Passwords & accounts

This item allows managing accounts on your device.



Figure 4-8: Security and location – Passwords & accounts (AOSP)



Figure 4-9: Security and location – Passwords & accounts (GMS)

4.2.5. System

About Tablet: Obtaining information about your device

About Tablet provides you with a wealth of information about your device.

Legal Information provide details about the licenses of the Android system as well as any 3rd party applications.

Model is the DLT-V73A.

Android Version provides Google's Version number for the Android installed on your system.

Android security update represents the information, which is the last security update that has been integrated into Android. Clicking on this item will open a hyperlink and guide you to the related Android security bulletin.

Kernel Version provides detailed version information on the underlying Linux Kernel of Android.

Advantech Version provided Advantech's Version number for the Android installed on your system.

6:10 5 🤝 5			
← Android version			
Android version			
Android security update September 5, 2023			
Google Play system update			
Baseband version EM06ELAR03A08M4G			
Kernel version 4.19.157 #2 Mon Sep 4 14:45:44 CEST 2023			
Build number 12QA.1.A.0001.20230901-userdebug			
4	•		

Figure 4-10: System – About tablet

Languages & input

This item allows configuring various input options such as the keyboard language and layouts as well as spelling checking and user dictionaries.

1:20 5 5
\leftarrow
Languages & input
XA Languages English (United States)
Keyboards
On-screen keyboard Android Keyboard (AOSP)
Physical keyboard Advantech PCM-A70 / V73 Keyboard
Tools
Spell checker Android Spell Checker (AOSP)

Figure 4-11: System – Languages & input

Date & time

This item displays the current time zone that is set on this device and allows you to adjust the time zone.

Please note that the option to update the time zone via a mobile network is not functional, as Android and the DLT-V73A do not have mobile network support.

1:22 5 5	
~	
Date & time	
Set time automatically	
Date September 28, 2023	
Time 1:22 PM	
Time zone	
Set time zone automatically	
Time zone	

Figure 4-12: System – Date & time

Reset options

This item allows wiping the device via a factory reset. Details are described in section <u>7.7 Factory Reset.</u>

5. MDevice Utility

5.1. Basic safety notes

The MDevice Utility allows changing the configuration of your DLT-V73A device.

NOTICE Prevent system malfunction and property damage.

Only IT skilled persons (qualified personnel) with a good knowledge of PCs, operating systems and wireless networks are permitted to configure the DLT-V73A with MDevice.

If improper changes of MDevice are performed by the customer, the releases Advantech Co., Ltd. from all liability for warranty claim.

MDevice should not be whitelisted for all users. It should be only accessible for administrators.

5.2. Start MDevice Utility

By clicking the MDevice icon from the Apps screen, the user can launch the utility.



Figure 5-1: Apps screen → MDevice utility

5.2.1. User and Admin modes

The MDevice Utility differentiates two privilege levels: User and Admin.

In **User mode**, MDevice can only be used to review system configuration, retrieve device specific information (e.g., serial number, software versions, etc.) and check system health status (e.g., system temperature).

In **Admin Mode**, MDevice provides full access to modifying the configuration and settings of your DLT-V73A.

446 ♥ S ■ O • ✓

When launched, the login screen of MDevice pops up:

Figure 5-2: MDevice login screen

If you want to login in **User mode**, simply click **READONLY LOGIN.** A password is not required.

To launch in Admin mode, enter the MDevice password and click LOGIN.

The default MDevice password: gold

NOTICE Prevent system malfunction and property damage.

For security reasons it is highly recommend to change the MDevice password when you first login.

To change the password, use the **MDevice Settings** menu on the left side of the MDevice screen:



Figure 5-3: MDevice Settings – Change Password

5.3. MDevice Functional overview



You need to perform a power cycle of the device to activate the new device settings of MDevice.

Please wait at least 10 seconds after last settings change before power cycle is being initiated.

The MDevice menu is on the left side of the MDevice screen.

Click one of the menu items to switch to the corresponding menu.

System Information
Power Settings
Startup Settings
Front Key Settings
Display Settings
Radio Settings
MDevice Settings

Figure 5-4: MDevice Functional overview

System Information	Displays system specific information and health status (e.g., serial number, system temperature, etc.)
Power Settings	Configures the automatic start and shutdown behavior including related parameters
Startup Settings	Configures how the system starts up and which programs are automatically started when booting the device
Front Key Settings	Allows assigning function keys to the physical special keys on the DLT-V73A front panel
Display Settings	Configures the touch panel, e.g., touch sensitivity and calibration (calibration only available at resistive touch front)
Radio Settings	To configure (WLAN \ Bluetooth) modules including "internal/external" antenna feature
MDevice Settings	Configuration of MDevice

5.3.1. System Information

In the **System Information** menu, device system information is displayed. All the items are read-only. Multiple sections are provided. You may need to scroll down and up accordingly.

HARDWARE section:



Figure 5-5: MDevice – System Information, HARDWARE

This section summarizes key system HARDWARE information:

Serial number	Serial number of your DLT-V73A
Manufacturing date	Calendar week and year
Industrial PC model	Model number of your DLT-V73A
Processor	Shows CPU manufacture and type
Touchscreen	Shows type, model and firmware

BATTERY (UPS) section: (optional)

4:52 🗟 🖪 오 号	∠i û 100%
System Information	
Power Settings	Battery information
Startup Settings	Part number DL-BTRG79461600
Front Key Settings	Status Fully Charged
Display Settings	runy charged
Radio Settings	Charge 100%
MDevice Settings	Health Good
	Temperature 23.9 °C
	Voltage 7708 mV
•	•

Figure 5-6: MDevice – System Information, Battery information

This section displays battery (UPS) information.

Part number	Advantech part number of battery (UPS)
Status	Displays current status (Charging, Discharging)
Charge	Current remaining battery (UPS) capacity
Health	HW status of battery (UPS) detected
Temperature	Current measured temperature
Voltage	Current measured voltage



Battery (UPS) information is only displayed if installed at DLT-V73A terminal (optional).

SOFTWARE section:



Figure 5-7: MDevice – System Information, SOFTWARE

This section summarizes key system SOFTWARE information:

Firmware version (BU/FU)	Firmware versions of the MDevice microcontrollers (Baseunit / Frontunit)
OS version	Android and versions
MDevice version	Revision of the MDevice utility
Uptime	Current session runtime since last system startup
Total operation time	Aggregate power-on hours of your DLT-V73A

TEMPERATURE section:



Figure 5-8: MDevice – System Information, Board Temperature

This section displays TEMPERATURE information of the board.

Board temperature	The current board temperature of your DLT-V73A
Minimal standby temperature	The lowest board temperature that was logged while your DLT-V73A was switched off
Maximal standby temperature	The highest board temperature that was logged while your DLT-V73A was switched off
Minimal run temperature	The lowest board temperature that was logged while your DLT-V73A was switched on
Maximal run temperature	The highest board temperature that was logged while your DLT-V73A was switched on



Figure 5-9: MDevice – System Information, Front Temperature

This section displays TEMPERATURE information of the front.

Front temperature	The current front temperature of your DLT-V73A
Minimal temperature	The lowest front temperature that was logged while your DLT-V73A was switched on
Maximal temperature	The highest front temperature that was logged while your DLT-V73A was switched on

5.4. Power Settings

The **Power Settings** menu allows configuring the shutdown behavior of your DLT-V73A and other power related settings.



Figure 5-10: MDevice – Power Settings menu

	Allows listen to Ignition signal for powering on/off the device. If this feature is enabled the delay time overlay screen will be displayed when ignition signal gets lost .
	NOTE:
Listen to Ignition	A system reboot is required to apply changes to this option.
to power on/off	If the Ignition signal gets lost, there will be a 3 seconds delay to enter Follow-up time dialog.
	In case UPS battery (optional) is inserted and Ignition / DC signals are dismissed at same time, the Follow-up time dialog will be skipped. In this case, please use the Power key to perform a switch off of the terminal instead.
Disable Power key	Option is only available when option Listen to Ignition to power on/off was enabled before. By activating this feature the Power key behavior will be set automatically to option Nothing .

	NOTE:			
	To perform a system shutdown without enabled Power button perform a long press at Power button greater than 8 seconds.			
	Power key behavior			
	O Nothing			
	 Global actions menu 			
	O Power off (with confirmation)			
	O Power off (without confirmation)			
	Figure 5-11: MDevice – Power Settings menu – Power key behavior			
Power key behavior	 Nothing → don't perform any action when pressing at Power key. Global actions menu → show overlay screen after press and hold Power key for at least two seconds and releasing afterwards (Power off / Restart) options can then be selected next by touch. Power off (with confirmation) → show user request to perform shutdown after press and hold Power key for at least two seconds and releasing afterwards. Power off → perform shutdown immediately after press and hold Power key for at least two seconds and releasing afterwards. NOTE: To perform a system shutdown without enabled Power button perform a long press at Power button greater than 8 seconds. 			
Follow-up time	Specifies the time until Ignition signal can be re-enabled before system will initiate a system shutdown (after the timer expired).			
5/12V on COM1	If enabled, 5 or 12 Volts will be supplied on the COM1 serial port connector for powering peripherals such as a barcode scanner.			
Serial port standard for COM1	Allow switch between (Loopback, RS-232)			

5.5. Startup Settings

The **Startup Settings** menu is used to define the startup behavior of the device.



Figure 5-12: MDevice - Startup Settings menu

If **Startup** is switched **ON**, the device will try to establish a connection with the server specified over the specified interface. If the connection is successful, the specified application will be launched automatically. If the feature is enabled (i.e., Startup is switched to **ON**), the system will show a full screen page while the server connection status after boot-up.

Startup	If checked, the Startup feature is enabled.
Interface name	Specifies the network interface for connecting to the specified server.
Server IP address	Specifies the server's IP address.
Program for Startup	Choose one application from list that will be started automatically when defined network IP address becomes available. The list contains all current installed Android apps by default to choose from.
Seconds waiting for network	Timeout in seconds for establishing a connection to the server.
Info text	The string entered here will be displayed while the system is connecting to the server.
Start programs even without network	If checked, the startup programs will be launched regardless of the connection status to the server.
Validate interface	If checked, the network adapter related to the specified network will be validated before connecting to the server.

5.6. Front Key Settings

6:32 🏟 🖯 🖪 💟 🔸		Zi
System Information	Front keys	
Power Settings	FN key	
Startup Settings	Special Keys S1-S12	
Front Key Settings	Brightness controls	
Display Settings	Backlight Key	~
Radio Settings	Touch disable Key	
MDevice Settings	Function keys	
	Keyboard Function Key of S1 F1	
	Keyboard Function Key of S2 F2	
	Keyboard Function Key of S3	
•	•	

Figure 5-13: MDevice – Function Key Settings menu

In this menu, the physical function keys (also called special function keys) located on the DLT-V73A Industrial Computer's front panel can be programmed.

Each key can be configured as one of the keyboard function keys (F1~F24), special keystroke combination (ALT + TAB), single characters or even keystroke combinations like (SHIFT + a / CTRL + ALT + DEL) for example.

NOTE

The physical function keys designed on the DLT-V73A front are labeled from **Sx** where "x" equals the key numbers. Different models of the DLT-V73A implement a different number of physical keys. Key labels **Sx** have a 1:1 correspondence with the **Fx** labels used in MDevice, e.g., **S1** physical key is **F1** soft-key in MDevice.

5.6.1. Assigning special function keys

You can configure the special function keys by the following steps:

1. Click one of the special function keys in this menu, and the configuration dialog will pop-up.

		×
6:32 🗘 5 🛛 🕑 •		∠!
System Information	Front keys	
Power Settings	FN key	
Startup Settings	Special Keys S1-S12	
Front Key Settings	Brightness controls	
Display Settings Keyboard Function	Key of S1	
Radio Settings		
MDevice Setting	CANCEL OK	
	Keyboard Function Key of S1 F1	
	Keyboard Function Key of S2 F2	
	Keyboard Function Key of S3	
•	• •	

Figure 5-14: MDevice – Assigning special function keys

After clicking on the icon select one of keyboard function keys (F1~F24, ALT + TAB) for this special function key from the list or select **Custom** to program any possible key from an attached USB-keyboard or the ASOP integrated software keyboard.

Λ	IOTE

The AndroidTM software keyboard does not contain all standard keys possible to program so it is recommended to use an USB attached keyboard specially for programming key combinations.

		1
6:32 🗢 5 🗚 🖯 •		∠!
System Information	Front keys	
Power Settings	FN key	
Startup Settings	Special Keys S1-S12	
Front Key Settings	Brightness controls	
Display Setting: Keyboard Function	Key of S1	
Radio SettingsCustomMDevice SettinF1F2F3F3F4F5F6F7F8F9F10F11F1		
•	• •	

Figure 5-15: MDevice – Assigning special function keys, keyboard function

In case **Custom** was selected, another dialog will open to program the new key assignment:

Custom key Please press the desired key	

Figure 5-16: MDevice – Assigning special function keys, Custom key

3. Press key or key combination at external connected USB-keyboard for new key assignment (In the following example Shift + a for uppercase output).

Custom key Please press the desired key		
[SHIFT + A]		
	CANCEL	ок



4. Click **OK** to save this change.

The new assignment will be displayed for each function key:



Figure 5-18: MDevice – Assigning special function keys, new assignment



With image v3.01, only English US characters are supported to be programmed using this functionality. By changing the keyboard layout to another language, the display / output will change to different selected layout. Special keys only available on specific layouts like (AltGr / German layout) are not supported at all and will be interpreted as AltGr r (right) instead.

5.7. Display Settings

The **Display Settings** menu provides a capability to configure the touch screen.

DLT-V73A has different front types (PCAP / Resistive Touch) available, so screen layout differs as described in detail next.

12:00 9 9		Zi
System Information	Display settings	
Power Settings	PCAP Touch default sensitivity mode Non Glove Mode	
Startup Settings		
Front Key Settings		
Display Settings		
Radio Settings		
MDevice Settings		
•	•	

Figure 5-19: MDevice menu Display Settings (PCAP)

If glove mode is selected, the PCAP touchscreen sensitivity is enhanced.

NOTE:

PCAP Touch default sensitivity mode

This feature needs to be enabled if you want to operate DLT-V73A with gloves.

At DLT-V73A version there are three options available to switch between **non glove**, **glove or thick glove** mode.



Figure 5-20: MDevice menu Display Settings (Resistive Touch)

5.8. Radio Settings

This module can be used to change module configuration and (internal / external) antenna configuration.

6:33 🌣 🖯 🛛 🗘 🔹		Zi
System Information	Enable Wifi Hardware enable WiFi module	\checkmark
Power Settings	Enable Bluetooth	
Startup Settings	Hardware enable Bluetooth module	_
Front Key Settings	Enable GPRS Hardware enable GPRS module	
Display Settings	Enable CNSS	
Radio Settings	Hardware enable GNSS module	\checkmark
MDevice Settings	Antenna configuration	
	WLAN Antenna Internal	
	Advanced GNSS/GPRS modem configuration	
	AT command terminal	
	Modem configuration	
4	• •	

Figure 5-21: MDevice – Radio Settings

Enable WLAN	Enable / Disable WLAN module	
Enable Bluetooth	Enable / Disable Bluetooth module	
Enable GPRS	Enable / Disable GPRS module IMPORTANT NOTE: This option can only be changed in case a SIM-card is available and inserted using the defined SIM-card slot located under the upper antenna-cap. Additional information can be found in the DLT-V73A Hardware manual.	
Enable GNSS	Enable / Disable GNSS module (optional)	
Antenna configuration	Select between Internal and External WLAN / WWAN antenna support.	
	IMPORTANT NOTE: Due to 802.11n/ac antenna diversity characteristic of the ADV SIoT WLAN WWAN antenna by selecting External antenna both functions (WLAN / GPRS) will be affected by this.	
AT command terminal	both functions (WLAN / GPRS) will be affected by this. This feature can be used, to send AT commands to the Quectel module. In the following example, the current installed firmware of the module will be read out (AT+CGMR): Warning: This console is for test purpose only. For permanent AT commands at init, please consider the field in WWAN/GPS Module setting -> Initial AT command WWAN enabled GPS enabled AT OK AT OK AT OK AT OK Figure 5-22: MDevice – Modem AT terminal IMPORTANT NOTE: For available AT command list & additional information please refer to the homepage of module manufacture. https://www.quectel.com/product/Ite-a-em06-series	

For specific configuration before GPRS / GPS connection is being established this function can be used to send commands to the module at every system startup.

Please note that the above-described command line (AT command terminal) should be used for testing because module is reacting with return answers in case the entered command was not correct about syntax or content.



Figure 5-23: MDevice – Modem configuration

As part of the example text inside the dialog entering more than one command to be sent to the module requires a semicolon character as separator in between.

IMPORTANT NOTE:

For available AT command list & additional information please refer to the homepage of module manufacture.

https://www.quectel.com/product/lte-a-em06-series

Modem configuration
5.9. MDevice Settings

In the **MDevice Settings** menu, the user can configure the MDevice utility.

6:34 🗢 🖯 🛛 🗘 •		Ź!
System Information	Export Customer Settings	
Power Settings	Import Customer Settings	
Startup Settings	Load factory defaults	
Front Key Settings	Change Password	
Display Settings		
Radio Settings	Export logs	
MDevice Settings		
4	• •	

Figure 5-24: MDevice Settings

Export Customer Settings …	Export current MDevice settings to a file. The exported items include the Power settings, Startup settings and Function key settings. See chapter <u>5.9.1 Export Customer Settings</u> for further description.
Import Customer Settings …	Import custom MDevice settings from a file. The imported items include the Power settings , Startup settings and Function key settings. See chapter <u>5.9.2 Import Customer Settings</u> for further description.
Load factory default	Reset the MDevice Settings to default factory status after user confirmation. Load factory default Are you sure you want to restore the factory defaults?
	NO YES
	Figure 5-25: MDevice Settings – Load factory default

	Affects only the Power settings and Front Function ke	ey settings.		
	Please note that performing this option the key assignm front special keys will be reverted to default (F1-F12) de available front keys.	ent of all pending on		
	To change the MDevice password.			
Change Password	NOTE:			
	The password will be reset to gold in case factory defaults are loaded.			
This function will create a ".txt" file that contains system info collected from current session.				
	Please only use this for maintenance purpose requested engineers from Advantech Service-IoT.	d by		
	7:26 € ♥ €	⊡ :		
	Files in Downloads	≣		
Export logs				
	No items			
	logcat_logs.txt	SAVE		
	Figure 5-26: MDevice – logfile			
	An USB-Stick or ADB connection can be used to collect from the terminal. For USB-Stick file transfer, follow chapter <u>7.4 USB-Stick</u> <u>transfer).</u> For ADB connection, follow chapter <u>7.9 ADB over USB</u>	t this file <u>k (file</u> <u>(Type-C)</u> .		

5.9.1. Export Customer Settings

The following example shows how to export customer settings of MDevice utility.

1. Press button Export Customer Settings.

6:34 💠 号 🖪 🗘 🔹					∠!
System Information		Export Customer S	Settings		
Power Settings		Import Customer S	Settings		
Startup Settings		Load factory defau	ılts		
Front Key Settings					
Display Settings	Export Please enter tl	ne export path			
Radio Settings					
MDevice Settings	/sdcard/export	file.conf			
		С	ANCEL	ОК	
	•	•			

Figure 5-27: MDevice – Export Customer Settings

2. Change name or leave at default description (exportfile.conf).

Export file saved to /data/user/0/advantech.mdevice/files/exportData -> /sdcard/ exportfile.conf

Figure 5-28: MDevice – Export Customer Settings (Information pop-up)

3. An information pop-up will be displayed at lower part of screen.

5.9.2. Import Customer Settings

The following example shows how to import customer settings of MDevice utility.

1. Press button Import Customer Settings.

6:35 🛱 号 🖪 🗘 🔹			Ź!
DCIM			
Documents			
📄 Download			
Movies			
Music			
Notifications			
Pictures			
Podcasts			
Recordings			
📄 Ringtones			
exportfile.conf			
	•	•	

Figure 5-29: MDevice – Import Customer Settings

2. Select file to be imported (example file reads exportfile.conf).



Figure 5-30: MDevice - Import Customer Settings - Importing data...

3. An information pop-up will be displayed at lower part of screen.

Import successful

Figure 5-31: MDevice – Import Customer Settings – Import successful

6. MBlank

6.1. MBlank Settings

MBlank option is being used to prevent display content view and terminal access by the user while the vehicle is in motion.

This module can be used to change MBlank configuration and to enable / disable feature.

2:46 🖯 🧧 🖯		\Diamond
System Information	MBlank Settings	
Power Settings	Logo configuration	
Startup Settings	Screen blanking enabled system reboot required to take effect	
Front Key Settings	· · ·	
Display Settings	Show logo	\checkmark
Radio Settings	Show time	\checkmark
MDevice Settings	Sensitivity configuration (very low to very high)	
MBlank		
•	• •	
	< 0 ≡	

Figure 6-1: MDevice – MBlank

6.1.1. Logo configuration

You can easily set your logo.

1. Click on Logo configuration.

11:58 🕄 🤣 🗐 号 🔹		,
System Information	MBlank Settings	
Power Settings	Logo configuration	
Startup Settings	Screen blanking enabled system reboot required to take effect	
Front Key Settings		_
Display Settings	Show logo	\checkmark
Radio Settings	Show time	~
MDevice Settings	Sensitivity configuration (very low to very high)	
MBlank		
	4 • B	
	< ○ ≡	

Figure 6-2: MBlank – Logo configuration

By default, the Advantech logo will be displayed.



Figure 6-3: MBlank – Default logo

The new logo can be selected by choosing a file that has been copied before to the internal storage (EMMC flash) or from an attached USB-Stick.



Figure 6-4: MBlank - New custom logo copied to the internal storage

For further information about using file explorer please see section <u>7.4 USB-Stick (file transfer).</u>

NOTE



IMPORTANT:

Please once you copied your image to the internal storage, MAKE SURE that is being stored in the section Google PHOTOS. For doing this, please click the image copied at internal storage and choose Photos for opening it. The image will be saved automatically in Google Photos-Library section.

4:26 9	€ 🗂 5 •			\$ 5
	Search			
	Chrome	Clock	Drive	Files
	M	G		
	Gmail	Google	Google TV	Keep Notes
	9			
	Maps	MDevice	Meet	MTouch
	Ø	0	*	
	MWedge	OTA update	Photos	Play Store
	inter Line View	\$	opp	-
S	ecurePolicySetting	Settings	Sound Recorder	Vysor
		O		
	VouTube	VT Music	• •	
		<	0 ≡	

Figure 6-5: MBlank – New custom logo in Google Photos



Figure 6-6: MBlank – New custom logo in Google Photos-Library

2. Change back to MDevice-MBlank and click on **SELECT IMAGE**.



Figure 6-7: New logo to select - Part I

The logo to select will be shown in the following page:



Figure 6-8: New logo to select - Part II



3. Click on the new logo and confirm with **OK**.

Figure 6-9: MBlank – New logo



Possible file formats are: png, jpg, gif, bmp. The display size of the logo is automatically adjusted to the display size by the screen blanking software. The logo is scaled – with fixed aspect ratio – so that the available display area is optimally filled. A frame is only left clear for the optional display of the time.

6.1.2. Enable MBlank

System Information MBlank Settings Power Settings Logo configuration Startup Settings Screen blanking enabled system reboot required to take effect Front Key Settings Image: Constraint of the system reboot required to take effect
Power Settings Logo configuration Startup Settings Screen blanking enabled system reboot required to take effect
Startup Settings Screen blanking enabled system reboot required to take effect Front Key Settings
Front Key Settings
Display Settings
Radio Settings
MDevice Settings Sensitivity configuration (very low to very high)
MBlank
< ● ■
<pre>< 0 =</pre>

Enable the highlighted checkbox and reboot the device.

Figure 6-10: MBlank – Screen blanking enabled

6.1.3. Show Logo

To see the logo when the screen is blanked enable the checkbox **Show logo**. If this is disabled, the screen will appear simply black.

2:09 🖯 🧂 5		\Diamond
System Information	MBlank Settings	
Power Settings	Logo configuration	
Startup Settings	Screen blanking enabled system reboot required to take effect	
Front Key Settings		
Display Settings	Show logo	\checkmark
Radio Settings	Show time	
MDevice Settings	Sensitivity configuration (very low to very high)	
MBlank	· · · · · · · · · · · · · · · · · · ·	
•	•	
	 < ○ ≡ 	

Figure 6-11: MBlank - Show logo

6.1.4. Show Time

This setting specifies whether or not the current time is to be shown on the blanked display. The time format corresponds to the MS Windows country settings for the Advantech VMT in question. Example for the US: hh:mm:ss / AM/PM.

2:17 🖯 🧧 🖯		\bigtriangledown
System Information	MBlank Settings	
Power Settings	Logo configuration	
Startup Settings	Screen blanking enabled system reboot required to take effect	\checkmark
Front Key Settings		
Display Settings	Show logo	\checkmark
	Show time	
Radio Settings		
MDevice Settings	Sensitivity configuration (very low to very high)	
MBlank		
•	•	
	< 0 ≡	

Figure 6-12: MBlank – Show time

6.1.5. Sensitivity Configuration

The sensitivity must be defined here so that the DSMS MBlank Solution detects whether or not the vehicle is in motion or stationery.

The sliding controller provides five sensitivity levels: **high / medium / low** and **two intermediate values** (between high & medium and between medium & low).

That means with a sensitivity set at low a big shock required to blank the screen.

At the same time a sensitivity set at high, a little shock is more than enough to blank the screen. The terminal is really sensitive to any kind of vibration.

The following criteria determine which value should be set:

- Condition and evenness of the ground on which the vehicle is moving.
- Type of vehicle: different vibration strength of electronic vehicles, petrol vehicles, etc.
- Where is the VMT fitted on the vehicle? Vibrations vary depending on the mounting location (console, under the roof, etc.).
- What has been used to mount the VMT to the vehicle? Vibrations vary depending on the mounting type (long or short RAM mounts, Advantech mounting bracket, etc.).



The sensitivity level that needs to be set for the VMT depends on a wide range of criteria and must be determined on a case-by-case basis. The following information on the Sensitivity setting can therefore be regarded as non-binding recommendations.

High Mid High Medium If the vehicle is smooth running (e.g. electric vehicles) and the ground is relatively level.

Medium Low Low

High Mid High

Medium Medium Low Low If the vehicle is vibrating heavily (e.g. petrol vehicles) and the ground is uneven.

4:15 🖯 🗂 🖯		Ŧ
System Information	MBlank Settings	
Power Settings	Logo configuration	
Startup Settings	Screen blanking enabled system reboot required to take effect	
Front Key Settings		
Display Settings	Show logo	
Radio Settings	Show time	
MDevice Settings	Sensitivity configuration (very low to very high)	
MBlank		
•	•	
	< 0 ≡	

Figure 6-13: MBlank – Sensitivity configuration

7. Advanced

7.1. WLAN Roaming



It is mandatory to perform proper configuration of the WLAN parameters under Android to achieve comparable roaming performance to DLT-V73 Industrial Computers running other Operating Systems such as MS-Windows.

To configure WLAN roaming parameters, follow the instructions below:

- 1. Go to settings Network & Internet -> WLAN.
- 2. Select the target network that the DLT-V73A will be operated in (Advantech-GUEST in this example).



Figure 7-1: WLAN settings network selection

3. Enter required **Password** followed by **Return** key.



Figure 7-2: WLAN profile connection status

4. To modify or delete the WLAN profile click at icon:

7:48 5 5		Ź
~		0
Network details		
	-	
	$\mathbf{\overline{\mathbf{v}}}$	
	ADVANTECH-GUEST	
	Disconnected	
	ŝ	盟
FORGET	CONNECT	SHARE
Signal strength		
Fair		
o Security		
	< • I	

Figure 7-3: WLAN roaming settings (Android image version v2.01.2 or higher)

5. Password can be modified by clicking at icon:



6. To delete a profile made before use icon: FORGET

7.2. Ethernet Settings

To configure Ethernet parameters, follow the instructions below:



By default, Ethernet is configured to DHCP. Ethernet settings dialog is being used to set static IP address configuration including Gateway and DNS server.

- 1. Go to settings **Network & internet -> Ethernet**.
- 2. Use **Ethernet IP mode** to switch between **static** and **DHCP**. By activating **static** all other fields (IP address, netmask, etc.) getting active as shown below.

7:41 5 🐄 6		Ź
← Ethernet		
Ethernet eth0		
MAC address 4e:3d:17:f4:e5:52		
IP address		
Gateway 0.0.0.0		
Netmask 0.0.0.0		
DNS 1 0.0.0.0		
	•	

Figure 7-4: Ethernet settings

3. Individual fields can be clicked to be updated.

Ethernet

IP address

192.168.1.128

Gateway

192.168.1.1

Netmask

255.255.255.0

DNS 1 (unless overridden by Private DNS)

0.0.0.0

DNS 2 (unless overridden by Private DNS)

0.0.0.0

CANCEL CONNECT

Figure 7-5: Ethernet settings – Set IP address

7.3. GPRS / GNSS Settings

At DLT-V73A terminals GPRS / GNSS settings are available as optional feature.

For GNSS no additional settings are required.

The GPRS settings can be changed inside settings Network & internet.



1. Choose option Mobile network.

7:43 S S	Zi
← Vodafone	0
O B used	
0 B	2.00 GB
2.00 GB data warning 29 days left	
Mobile data Access data using mobile network	
Roaming Connect to data services when roaming	
App data usage	
Data warning & limit	

Figure 7-7: GPRS settings – Mobile network settings

Mobile Data	Enable / Disable access data using mobile network (GPRS)		
Roaming	Enable / Disable data services when roaming		
App data usage	Shows actual mobile date used		
Data warning & limit	Enable / Disable Set data warning including Data warning size and limit		
Preferred network type	 Select one of the following (depends on installed SIM-card) 4G (recommended) 3G 2G LTE 		
Automatically select network	While disabled, choose a network operator (Depends on SIM-card attached to the terminal)		
Access Point Names	Select provider (depends on installed SIM-card)		



2. Select the provider by clicking on one of the entries.

7.4. USB-Stick (file transfer)

To use an USB-Stick at Android for file transfer you can follow the next chapter with instructions.

1. Attach an USB-Stick (FAT32 formatted) at DLT-V73A terminal.



Figure 7-9: Use an USB-Stick at Android for file transfer

2. At home screen, swipe down notification bar.

3. Select as below shown the **Setup** option beneath the **USB-Stick** list entry to configure the attached USB-Stick.

7:55 F	Fri, Sep 8	Ź
⊿:	E Internet > X Bluetooth $igodot$ Do	not Disturb (Ö Alarm >
6	Android System USB debugging connected Tap to turn off USB debugging	^
Sile	lent	×
•	Settings Intenso USB drive For transferring photos and media EXPLORE EJECT	^
9		

Figure 7-10: Setup option beneath the General USB-Stick list entry

4. Select option **EXPLORE**.



Figure 7-11: Android File Explorer (Internal storage)

The **DLT-V7310AP** stands for internal storage.

After clicking at left side on **DLT-V7310AP** by default the **\SDCARD** folder content will be displayed.

As shown in the next picture as an example a "log_%" file (or more, in case MDevice export was done multiple times before) can be selected.

Alarms	Android	AndroidManager	Open with
data	DCIM	Documents	Sort by
Movies	Music	Notifications	Select all
			Copy to
Podcasts	Recordings	Ringtones	Move to
			Compress
			Rename
_			Get info
► exportfile.conf	logcat_logs.txt		

5. At right corner, select options and then **Copy to...**

Figure 7-12: Copy progress from internal storage to USB drive

6. Select **USB drive** and then **COPY**.

DLT V7310AP 🛛 📾 🗑 🖸 🌣			_ 🗆 X
\equiv Intenso USB dr	ive		⊡ :
Intenso USB drive			
Files on Intenso USB drive			≣
afuwin	amd	a r1100	Batches
CE	Data	DLTV62	ghost
i5	ISCabVU14	LOST.DIR	mpc5
net net	pqdc	Pqmagic	rs
System Volume In	term90	tools	TweakUI
Util	V72	wamas	
CANCEL			
	•	• =	

Figure 7-13: USB-Stick (file transfer) - Paste

8:18 🕾 🤝 🖞 🕾			Źi
\equiv Intenso USB dr	ive		Q :
killdrv.exe 7.43 kB Feb 6, 2004	killhd.exe 11.97 kB Jun 24, 2010	Klima.bat 41 B Mar 19, 2007	kunde.bat 51 B Mar 21, 2007
logcat_logs.txt 2.71 MB 8:18 AM	Digtemp.exe 36.86 kB Dec 28, 2004	M7104A02.rom 1.05 MB Apr 4, 2013	M7I04AB0.ROM 1.05 MB Aug 13, 2014
	۹ (•	

The copied log file is now part of USB-Stick content.

Figure 7-14: USB-Stick (file transfer) - Copied log file

7. Close application and press once again at right corner to open **USB Settings** and **Eject** as shown in the example picture above the USB-Stick.

8:1	9 Fri, Sep 8	Ź
	Tap to turn off USB debugging	~
s	ilent	×
	Connect to open Wi-Fi network KVisitor	~
•	Settings Intenso USB drive For transferring photos and media EXPLORE EJECT	^
	Serial console enabled Performance is impacted. To disable, check bootloader.	~

Figure 7-15: USB-Stick (file transfer) - USB Settings - Eject

8. Afterwards the USB-Stick can be removed from **DLT-V73A** terminal.

7.5. Files Explorer

Files Explorer is used to install applications onto the device without connecting to an app store.



Due to the security policies integrated with the Security Enhanced Linux Kernel (SEL) underlying Android, USB storage devices have to be enabled on Android before first use. This includes device formatting. To perform the related actions, follow the instructions of the USB storage menu. To access this menu, drag down the notification bar after inserting the USB storage device and click on the USB icon.

7.5.1. APK Installation

To install applications using **Files Explorer** follow the steps below:

- 1. Copy the package of the application you wish to install (".apk" format) to a USB storage device.
- 2. Open Files Explorer and click USB storage with your APK.
- 3. Click on ".apk" file to start the installation process.



Figure 7-16: Files Explorer

4. At request confirm following message with **CONTINUE.**

Your tablet and personal data are more vulnerable to attack by unknown apps. By installing this app, you agree that you are responsible for any damage to your tablet or loss of data that may result from its use.

CANCEL CONTINUE



5. Continue with button **INSTALL.**



Figure 7-18: XARP Manager – Do you want to install this app?

6. At the end choose between **DONE** or **OPEN** to start newly installed application.



Figure 7-19: XARP Manager – App installed.

7.6. Power off / Restart System

User can **Power off** or **Restart** the system via the **Power** button.

To **Power off** or **Restart** the device press and hold the **Power** button for around 2 seconds on the front panel.



Figure 7-20: Power off / Restart System option

1. Choose either **Power off** or **Restart** from shown menu. Menu can be dismissed by pressing short time at **Power** button again.

NOTE

To perform a system shutdown without enabled Power button perform a long press at Power button greater than 8 seconds.

7.7. Factory Reset

User can reset the device configuration via software menu.

To reset the device to factory defaults:

1. Go to Settings -> System -> Reset options.

8:28 5 ⊠ ¥ 5 ←			21
Reset options			
Reset Wi-Fi, mobile & Blue	etooth		
Reset app preferences			
Erase downloaded SIMs			
Erase all data (factory res	et)		
		•	

Figure 7-21: Settings menu – Backup and reset

2. Click Erase all data (factory reset).

It will erase all data on the DLT-V73A, including Google account, system data, app data and settings, downloaded apps and other user data.



Figure 7-22: Factory data reset



Figure 7-23: Factory data reset - warning note



Once the factory reset is complete, you will return to the Android home screen again.

Figure 7-24: Android home screen (GMS)

٨	IOTE

At GMS image version Google Welcome Wizard will be shown instead.
7.8. Multiple Users

Android is supporting multiple user profiles on the same device. Administrators can use this feature in Native Mode to set up distinct profiles for operators and normal users. Follow the steps below to add new user.



Multiple user profiles should only be used in Native Mode. Kiosk Mode (Advantech DeviceOn/iService) have been optimized for devices with a single user profile.

Add a new user profile in Settings -> System -> Multiple Users.

1. Click the **Add user** item.



Figure 7-25: Settings – users menu

2. Confirm the upcoming message with OK.



Figure 7-26: Settings – users menu – select user type

3. Choose either standard User or Restricted profile.



Figure 7-27: Settings - user menu - add new user confirmation request

4. Enter a name for the new user and continue with OK.



Figure 7-28: Settings – user menu – set name of new user

A new user is created.



Figure 7-29: Settings – user menu – Switch to newly created user

With option Switch to test the new user can be enabled.



Figure 7-30: Settings – Request Set up user now?

At request continue with **SET UP NOW.**

1. Click on the right corner to choose a different user to login.



Figure 7-31: Lock screen with multiple user option

7.9. ADB over USB (Type-C)

NOTICE Prevent system malfunction.

<u>The use of ADB requires in-depth knowledge of the Android</u> <u>system. It's only intended to be used by Android experts for</u> <u>advanced troubleshooting and maintenance. Advantech Co., Ltd.</u> <u>expressly disclaims any warranty or liability related to the use of</u> <u>ADB.</u>

Android supports ADB over USB (Type-C).

PC that gets connected to DLT-V73A industrial terminal required to have ADB utilities installed either Windows or Linux version.

An USB-A to Type-C connector cable is required to setup connection between PC and DLT-V73A terminal.



Please be aware of, that the USB (Type-C) OTG port which is located under the blue antenna cap works currently only in host mode.

It is not possible to plug in USB sticks and keyboards to be used inside Android OS.

Please make sure to connect the USB (Type-C) cable between your PC and the DLT-V73A terminal BEFORE switching on the unit. This will set the required (function mode) for ADB connection automatically.

About security reason this feature is by default **disabled** and needs to be activated by user in case required.

1. Unscrew the blue antenna cap from top of DLT-V73A terminal.



Figure 7-32: USB-C connector (top view)

2. Connect the USB-A to Type-C connector cable between PC and DLT-V73A.



Figure 7-33: USB cable connected to port (top view)

- 3. Switch on the DLT-V73A or perform a system reboot.
- 4. Change to **Settings -> About tablet**.

8:49 🌣		\Diamond
⋳	Security Screen lock, Find My Device, app security	
0	Privacy Permissions, account activity, personal data	
0	Location On - 2 apps have access to location	
*	Safety & emergency Emergency SOS, medical info, alerts	
0	Passwords & accounts Saved passwords, autofill, synced accounts	
(j	System Languages, gestures, time, backup	
Ì	About tablet DLT-V7310AP	
	< ● ■	

Figure 7-34: Settings – About tablet

- 5. Scroll down to see the **Build number**.
- 6. Press multiple times using the touch at **Build numbe**r until the text "**You are now a developer!**" appears. You must, at least, press seven times.

Build number 12QG.240829.STD.MR.003

You are now a developer!

Figure 7-35: Build number – system message pop-up

- 7. Change back to **Settings -> System**.
- 8. Click now at enabled option **Developer options**.



Figure 7-36: Settings – System – Reset options

9. Scroll down to option **USB Debugging** and enable it.

Allow USB debugging?		
USB debugging is intended for development copy data between your computer and your o your device without notification, and read log	purposes only. Use in device, install apps of g data.	t to n
	CANCEL	ок
Figure 7-37: user message – Allow	USB debugging	

10. Confirm above shown upcoming message with **OK**.



Figure 7-38: user message – Always allow from this computer

11. At request, enable checkbox and continue with **ALLOW**.

7.10. ADB Commands

After enabling the ADB Connection described in chapter <u>7.9 ADB over USB (Type-C)</u> standard ADB commands can be executed at DLT-V73A.

NOTICE PC that gets connected to DLT-V73A industrial terminal required to have ADB utilities installed either Windows or Linux version.

Each Linux distribution has own way to install the Android ADB utilities so please check vendor.

Refer the link <u>http://developer.android.com/tools/help/adb.html</u> for more ADB commands.

7.10.1. Open / Close ADB connection

To open / close an ADB connection from PC side with installed ADB utilities.

Open → Input the command on Windows/ Linux PC to connect target device

\$ adb shell

Close → Exit and disconnect

\$ exit

7.10.2. Screen Capture using ADB

It is used to create to capture screenshots of Android.

Capture \rightarrow screen and save to local DLT-V73A storage.

\$ adb shell screencap -p /sdcard/pic1.png

Copy \rightarrow the picture to PC

\$ adb pull /sdcard/pic1.png

	GE Administrator: Command Prompt	_		Х
٦	D:\android>adb shell screencap -p /sdcard/pic1.png			^
C /	D:\android≻adb pull /sdcard/pic1.png /sdcard/pic1.png: 1 file pulled, 0 19.5 MB/s (292536 byte	es in	0.014s))
٥	D:\android>			

Figure 7-39: Capture Screen with ADB (Windows OS)

7.10.3. Upload files using ADB

To upload files.

Copy \rightarrow a file to the DLT-V73A terminal

\$ adb push test.png /sdcard/test.png



Figure 7-40: Upload files with ADB (Windows OS)

7.10.4. Install apk files

To install new applications.

Remote install \rightarrow an application (.apk) file to the DLT-V73A terminal

\$ adb install DLT_V73_FACTORY_TEST.apk



Figure 7-41: install apk files with ADB (Windows OS)

7.11. External Partners

The DLT-V73A supports several software, used in logistics.

List of software supported:

- SOTI: Enterprise enrollment mobile software
- StayLinked: Warehouse management software



For a detailed instruction about latest available SOTI and StayLinked client including feature list please refer to manufacture homepage.

7.12. SOTI support

This chapter contains general information for SOTI support at Android12 for DLT-V73A.



SOTI client software is provided by external partner. Software functionality and support can be changed due to SOTI client software releases. For a detailed instruction about latest available SOTI client including feature list please refer to manufacture homepage.

7.12.1. AOSP Installation

Installation requirements

The following SW version (or newer) is required to support SOTI at Android 12 AOSP for Advantech DLT-V73A:

Agent Version: v2024.0.3

Additionally, it is recommended to get the latest available SOTI MobiControl Device Agent for new installation available for DLT-V73A (Android 12) from the following SOTI webpage:

https://docs.soti.net/mobicontrolagentdownloads

Agent	
Manufacturer	
Advantech	Ψ.
Model	
Advantech DLT-V7312AP	*
Agent Version	
v2024.0.3	*
Download	
Download via QR Code	

Figure 7-42: SOTI MobiControl Device Classic Agent download site

After the download of the Classic SOTI agent .apk file you can use an USB-Stick to transfer the file to the DLT-V73A. This is described in more detail at section <u>7.4 USB-Stick (file transfer)</u>.

1. After the file transfer, perform a double click to start the installation.

12:04 号 🖾 🖞		
≡ DLT-V7310AP	Q	:
DLT-V7310AP		
🔣 Images) (🛐 Audio) 🔛 Videos) (🏲 Documents) (🟷 Large files) 🖓 This week		
Files on DLT-V7310AP	B	∃
Alarms Your tablet and personal data are more vulnerable to attack by unknown apps. By installing this app, you agree that you are responsible for any damage to your tablet or loss of data that may result from its use.	obooks	
CANCEL CONTINUE	asts	
Recordings Ringtones		
< ● ■		

Figure 7-43: SOTI MobiControl Device Agent (AOSP) installation

2. Proceed with **CONTINUE**.



Figure 7-44: SOTI MobiControl Device Agent (AOSP) installation

3. Proceed with INSTALL.



Figure 7-45: SOTI MobiControl Device Agent (AOSP) installation

4. Choose DONE.

5. Open Settings – Apps.

12:06 🕾 🖪 🖞			
÷			
Apps			
Recently opened apps			
Files 0 min. ago			
> See all 20 apps			
General			
Default apps WebView Shell			
Unused apps			
	<	•	

Figure 7-46: SOTI MobiControl Device Agent (AOSP) set Permission

6. Click at See all %number of current installed apps% apps.



Figure 7-47: SOTI MobiControl Device Agent (AOSP) set Permission

7. Scroll down and click at SOTI MobiControl.

12:09 🕄 🖪 🌵		
÷		
Appinfo		
Арріпто		
	_	
	<u>M</u>	
	SOTI MobiControl	
12	Ē	A
OPEN	UNINSTALL	FORCE STOP
Notifications ~0 notifications per week		
Permissions Nearby devices		
	• •	1

Figure 7-48: SOTI MobiControl Device Agent (AOSP) set Permission

8. Click next at Permissions.



Figure 7-49: SOTI MobiControl Device Agent (AOSP) set Permission

9. Click at Location.



Figure 7-50: SOTI MobiControl Device Agent (AOSP) set Permission

- 10. Enable option **Allow all the time**.
- 11. Close Settings Apps.

12. Start SOTI MobiControl agent.

	M	
	D	
	Allow SOTI MobiControl to take pictures and record video?	
Enroll	WHILE USING THE APP	
	ONLY THIS TIME	
	DON'T ALLOW	

Figure 7-51: SOTI MobiControl Device Agent (AOSP) set Permission

12:13 🖯 🖪 🖞		
	V a	
	Allow SOTI MobiControl to access your phone call logs?	
Enrolli		
	ALLOW	
	DON'T ALLOW	
	< • •	

13. Select WHILE USING THE APP.

Figure 7-52: SOTI MobiControl Device Agent (AOSP) set Permission

- 14. Select ALLOW.
- 15. Repeat selecting **ALLOW** for all upcoming requests until you see the SOTI login screen.

12:14 🖱 🖪 🜵		
	M	
	SOTI MOBICONTROL	
	Enrollment ID or Server Address	
	ENROLL	

Figure 7-53: SOTI MobiControl Device Agent (AOSP) Enrollment

16. Now enter your **Enrollment ID** or **Server Address** to get access to your company SOTI environment.

٨	10	С	7	Έ
	1111	P	ì	

For further instruction how to use SOTI MobiControl features in general please refer to manufacture homepage.

https://docs.soti.net/

7.12.2. GMS Installation

While using the GMS version of DLT-V73A Android12 image please use the Google Play Store to download the latest available SOTI client.



Please be sure not to use the Android Classic SOTI agent at GMS image version because should only be used in combination with Android12 AOSP image version for Advantech DLT-V73A.

1. Open Google Play Store and search for SOTI mobicontrol.



Figure 7-54: SOTI MobiControl Device Agent (GMS) installation

2. Continue with Install.



Figure 7-55: SOTI MobiControl Device Agent (GMS) installation

3. After installation done continue with **Open**.



Figure 7-56: SOTI MobiControl Device Agent (GMS) set Permission

4. At request, please select at all questions **ALLOW** to continue.

12:42 🖯 🌣	A_																	\$ 🖓
									M									
							SOT		BIC	ONT	ROL							
		Enro	Ilment	ID or S	Server	Addres	S											
		_														_		
1	2		3	3		4		5		6		7		8	3		9	0
(11) (1																		
q	W		е		r		τ		У		u		1		0		р	×
а		s		d		f		g		h		j		k		1		\rightarrow
								Ŭ				1						
Û	Z		Х		С		V		b		n		m		!		?	Û
?123	,																	?123
					,	•			•				1					
								<	0									

Figure 7-57: SOTI MobiControl Device Agent (GMS) Enrollment

5. Now enter your **Enrollment ID** or **Server Address** to get access to your company SOTI environment.

NO)T	E
----	----	---

For further instruction how to use SOTI MobiControl features in general please refer to manufacture homepage.

https://docs.soti.net/

7.12.3. Android Enterprise installation

Before you start with the Android Enterprise installation you have to perform a factory reset (see chapter <u>7.7 Factory Reset</u>).

After the factory reset, follow the setup until the Login to your Google Account:

- 1. Click Start Button
- 2. Setup WIFI with internet connection
- Copy apps & data (You can choose to transfer your apps, photos, contacts, Google Account, and more).
 NOTE: Choose, don't copy!

Sign in with your Google Account:

Enter %#mobicontrol and confirm with NEXT.

Enter your **company ID** for the placeholder %.

SOTI is installed automatically.

Android Enterprise installation can be started now:

- 1. Enter your **Enrollment ID** and click on **ENROLL**.
- 2. After the enrollment, the setup of your work profile starts.

5:17 🕄 🏟 🖪	🐨 🛱 100%
â	
Let's set up your work profile	
View terms	
	Accept & continue
4	• •
<	○ =

Figure 7-58: SOTI Android Enterprise –Set up your work profile

3. Click on Accept & continue.



Figure 7-59: SOTI Android Enterprise - Setting up

4. Wait until setup is done.



Figure 7-60: SOTI Android Enterprise

5. Click on **Next** and wait until the setup process has been completed.

9:12 5 🌣 🛛 📥			🖘 🕻 87%
Search			
	*	Μ	0
YouTube	Photos	Gmail	Chrome
	PERSONAL	WORK	
DeviceOn IService	- × + =	31	0
Android Agent	Calculator	Calendar	Chrome
	4		Μ
Clock	Drive	Files	Gmail
G			9
Google	Google TV	Keep Notes	Maps
	4D	•	0
	<	0 ≡	

Figure 7-61: SOTI Android Enterprise - Set work profile

6. Go back to the home screen and set your profile as **WORK PROFILE**. Click on **WORK**.

9:15 S 🌣 🛛 📥			☞ 190%
Search			
YouTube	Photos	Gmail	Chrome
	PERSONAL	WORK	
W	ork apps are badged an GO	d visible to your IT ad	dmin
Chrome	Files	Play Store	SOTI MobiControl
	< (⊃ ≡	

Figure 7-62: SOTI Android Enterprise – SOTI MobiControl

7. Click on SOTI Mobicontrol and open your SOTI Android Enterprise section.

9:16 🖯	¢ 🛛 📥					🖆 🗣 🛿 91%
Andr DLT-V73	oidEnterprise 00021					
	App Catalog					
Ē	Content Library					
	Message Center					
0	Device Configuration					
?	Support					
<-	Log In					
		•		•		
			<	0		

Figure 7-63: SOTI Android Enterprise - Device Configuration

8. Click on Device Configuration.



Figure 7-64: SOTI Android Enterprise - Device Information



The displayed Device Information is needed for reactivating MDevice and MTouch.

When setting the work profile, applications that are included in the personal profile, such as MDevice and MTouch, are deactivated by default.

To continue using it with a work profile, you must reactivate it with the SOTI MobiControl console via your PC.

- 9. Go to the link and access to the SOTI Mobicontrol console: https://eu.identity.soti.net/
- 10. Settings in your device can be managed here.



Figure 7-65: SOTI MobiControl console – Log In

11. Login with your credentials and click on **NEXT.**

Enter Compar	ny ID	
Enter Company ID		
Forg	ot Company ID?	
ВАСК	NEXT	

Figure 7-66: SOTI MobiControl console - Enter Company ID

12. Enter Company ID and click on NEXT.

SOTI		
SOTI Identity	ssword	
R manuel.bollma	ann@advantech.de	
Remember me	Forgot password?	
LOG	IN	

Figure 7-67: SOTI MobiControl console - Enter Password

13. Enter Password and click on LOG IN.

Frequents	SOTI ONE Apps	Company Ap	ps
\mathbf{h}		5	
MOBICON	TROL-A0	SOTI	

Figure 7-68: SOTI MobiControl console – Select MOBICONTROL

14. Click on the icon of **MOBICONTROL-xx** NOTE: The number behind MOBICONTROL can be different.

SOTI MOBICON	TROL Device	25						0 L A	manuel.bollmann	@a 🗸
🕸 🛱 All Devices 🔇	Device Family	= Android Plus							×	CHARTS
GROUPS ②	LAST CONNEC	T DATES (ALL TIME)	0	MANUFAG	CTURER MODEL		0	DEVICE FAMILY C	OS VERSION	
,O Search groups				,	imobile					
🛱 View All	2							6		
🗸 My Company 🥚	1							4		
Management Devices 🤇			● <90 days :	1				2		
Sales Devices 😑	5200	17 57 days 5 14 days 5 20 days	5.30 days - 30 days			Advantech		0	1.00	×
Warehouse Devices 😑										
	DEVICES (1 - 7	of 7) 50 V Per Page	\leftarrow 1 of 1 \rightarrow	C•				Colum	ns View: Default 🗸	2
	O DEVI	CE NAME	MODEL	MANUFA	OS VERSION	BATTERY PERCENTAGE	AVAIL	ABLE MEMORY	PHONE NUMBER	USERNAI
	0	AndroidClassic 00001	DLT-V7310AP	Advantech	12	100%	-	1.92 GB / 3.59 GB	Unknown	Unknowr
	0	AndroidEnterprise 00009	AIM-75	Advantech	12	85%	-	1.57 GB / 3.59 GB	Unknown	Unknowr
	0	AndroidEnterprise 00004	AIM-75	Advantech	12	89%	-	1.46 GB / 3.59 GB	Unknown	Unknowr
	0	AndroidEnterprise 00010	AIM75-WIFI	AlMobile	10	86%	-	1.63 GB / 3.59 GB	Unknown	Unknowr
+ NEW GROUP	0	AndroidEnterprise 00018	DLT-V7310AP	Advantech	12	94%	-	1.49 GB / 3.57 GB	Unknown	Unknowr

Figure 7-69: SOTI MobiControl console

15. Select My Company

SOT		rices					0) Q A "	nanuel.bollmann@a ∨
æ	All Devices » Device Fan	nily = Android Plus						•	,O (© CHARTS
1 0	20 ₀₀ - 20 ₀₀ - 20 ₀₀₀ - 20 ₀₀₀	[™] 80 daya			J. Advantech	2		·····	
CES (1 -	7 of 7) 50 v Per Page	\leftarrow 1 of 1 \rightarrow (3•					Columns Vi	ew: Default 🗸 🕜
DE	EVICE NAME	MODEL	MANUFA	OS VERSION	BATTERY PERCENTAGE	AVAILABLE MEMORY	PHONE NUMBER	USERNAME	MAC ADDRESS
DE	AndroidClassic 00001	MODEL DLT-V7310AP	MANUFA	OS VERSION	BATTERY PERCENTAGE	AVAILABLE MEMORY	PHONE NUMBER	USERNAME	MAC ADDRESS 0E95B4ECF293
DE	CVICE NAME AndroidClassic 00001 AndroidEnterprise 00009	MODEL DLT-V7310AP AIM-75	MANUFA Advantech Advantech	OS VERSION 12 12	BATTERY PERCENTAGE 100% 85%	AVAILABLE MEMORY 1.92 GB / 3.59 GB 1.57 GB / 3.59 GB	PHONE NUMBER Unknown Unknown	USERNAME Unknown Unknown	MAC ADDRESS 0E95B4ECF293 Unknown
DE	AndroidClassic 00001 AndroidClassic 00009 AndroidEnterprise 00009	MODEL DLT-V7310AP AIM-75 AIM-75	MANUFA Advantech Advantech Advantech	OS VERSION 12 12 12	BATTERY PERCENTAGE 100% 85% 85%	AVAILABLE MEMORY AVAILABLE MEMORY	PHONE NUMBER Unknown Unknown Unknown	USERNAME Unknown Unknown Unknown	MAC ADDRESS 0E95B4ECF293 Unknown Unknown
DE	VICE NAME AndroidClassic 00001 AndroidEnterprise 00009 AndroidEnterprise 00004 AndroidEnterprise 00001	MODEL DLT-V7310AP AIM-75 AIM-75 AIM-75	MANUFA Advantech Advantech Advantech AlMobile	OS VERSION 12 12 12 12 12 10	BATTERY PERCENTAGE	AVAILABLE MEMORY 1.92 GB / 3.59 GB 1.57 GB / 3.59 GB 1.46 GB / 3.59 GB 1.63 GB / 3.59 GB	PHONE NUMBER Unknown Unknown Unknown Unknown	USERNAME Unknown Unknown Unknown Unknown	MAC ADDRESS 0E9584ECF293 Unknown Unknown 3619049CE617
DE	CVCE NAME AndroidClassic 00001 AndroidEnterprise 00009 AndroidEnterprise 00004 AndroidEnterprise 00010 AndroidEnterprise 0010	MODEL DLT-V7310AP AIM-75 AIM-75 AIM75-WIFI DLT-V7310AP	MANUFA Advantech Advantech Advantech AlMobile Advantech	OS VERSION 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 13	BATTERY PERCENTAGE	AVAILABLE MEMORY 1.92 GB / 1.59 GB 1.57 GB / 1.59 GB 1.46 GB / 3.59 GB 1.63 GB / 3.59 GB 1.49 GB / 3.57 GB	PHONE NUMBER Unknown Unknown Unknown Unknown Unknown	USERNAME Unknown Unknown Unknown Unknown	MAC ADDRESS OE95B4ECF293 Unknown Unknown 3619049CE617 Unknown
DE	CVCE NAME AndroidClassic 00001 AndroidEnterprise 00009 AndroidEnterprise 00004 AndroidEnterprise 0010 AndroidEnterprise 00103 AndroidEnterprise 0013	MODEL DLT-V7310AP AIM-75 AIM-75 AIM75-WIFI DLT-V7310AP DLT-V7310AP	MANUFA Advantech Advantech Advantech AlMobile Advantech Advantech	OS VERSION 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12	BATTERY PERCENTAGE	AWULABLE MEMORY 1.92 GB / 1.59 GB 1.57 GB / 1.59 GB 1.46 GB / 3.59 GB 1.63 GB / 1.57 GB 1.49 GB / 1.57 GB 1.81 GB / 3.57 GB	PHONE NUMBER Unknown Unknown Unknown Unknown Unknown Unknown	USERNAME Unknown Unknown Unknown Unknown Unknown Unknown	MAC ADDRESS oE9584ECF293 Unknown Unknown 3619049CE617 Unknown o00af5afdad8

16. Check whether your device is entered in the **DEVICE NAME** column.

Figure 7-70: SOTI MobiControl console – All devices

17. Select **Android Enterprise 00021** related to the model DLT-V7310AP.The number of Android Enterprise <u>must match</u> the number of Android Enterprise section in your DLT. Check the number as described in Step 6 and 7 (Figure 7-64: SOTI Android Enterprise – Device Information).

DEVICE DETAILS	COMPLIANCE	CONFIGURATIONS	APPLICATIONS	LOCATION	SECURITY	COLLECTED DATA	
,O Search for Prop	erty Name or Value						
COMPLIANCE	0		DEV	ICE STATUSES			
Compliance Statu	s 🗸 Com	pliant	Ager	nt Upgrade Enabled	No		
Agent Compatible	Yes		Pass	code Enabled	No		
			Devi	ce Admin Active	Yes		
DEVICE DETAILS	5		Can	Reset Passcode	Yes		
Device Kind	Android E	nterprise	Encr	ypted	Yes		
Device ID	50e0de11	1aad3cfb	OSS	ecure	Yes		
Enrollment Time	2024-06-2	7 9:00:29 AM	ELM	Status	n/a		
Device Family	🛱 And	roid Plus	And	roid Enterprise Mig	N/A		
IP Address	192.168.3	9.44	Ager	nt Mode	User		
Agent Online	true		KPE	Status	n/a		

7.12.3.1. Add applications to work profile

Figure 7-71: SOTI MobiControl console - Device details

1. Click on the first icon **SEND SCRIPT** on the right side of the page.

(I) SEND SCRIPT	
Provide a script that will be executed by the MobiControl agen supported script commands and syntax. ①	t on the selected devices. Refer to the MobiControl help for
igt A Changing the values of this form will refresh the compatib	ility check
Scripts	MANAGE SCRIPTS
Script Type	Legacy 🗸
Execute Saved Script	Please Select V
Script Editor	
1	
Delivery	MobiControl Agent
Script will be sent directly to the MobiControl agent.	
Queue messages for offline devices	
✓ 1 of 1 device(s) will receive this action.	CANCEL SEND SCRIPT

Figure 7-72: SOTI MobiControl console - Manage scripts

2. Select Legacy in Script Type.

्री SEND SCRIPT	
Provide a script that will be executed by the MobiControl agent on the selected devices. Refer to the MobiControl help for supported script commands and syntax. ①	
🛕 Changing the values of this form will refresh the compatibili	ty check
Scripts	MANAGE SCRIPTS
Script Type	Legacy V
Execute Saved Script	Please Select 🗸
Script Editor	(
<pre>1 enable_system_app advantech.mdevice 2 enable_system_app advantech.mtouch 3</pre>	
Delivery Script will be sent directly to the MobiControl agent. Queue messages for offline devices	MobiControl Agent
✓ 1 of 1 device(s) will receive this action.	CANCEL SEND SCRIPT

Figure 7-73: SOTI MobiControl console – Script Editor

3. Enter in the Script Editor:

enable_system_app advantech.mdevice
enable_system_app advantech.mtouch

- 4. Finish all steps to re-enable MDevice and MTouch and sending the script.
- 5. Click on **SEND SCRIPT**.
| 2:56 🕾 🌣 🖪 | | | | † 🐨 100% |
|------------|------------------|---|---------|--------------------|
| Search | | | | |
| YouTube | Photos | | Gmail | Clock |
| | PERSONAL | | WORK | |
| Chrome | Files | | MDevice | MTouch |
| Play Store | SOTI MobiControl | | | |
| | | | | Turn off work apps |
| | • | • | | |
| | < | 0 | ≡ | |

Figure 7-74: SOTI Android Enterprise - Home screen

6. MDevice and MTouch are now displayed on the home screen in the work profile.

7.13. DeviceOn/iService support

Advantech's DeviceOn/iService is a next-generation unified device management solution based on the WISE-DeviceOn platform. Designed to enable centralized monitoring and remote management, DeviceOn/iService supports Advantech devices equipped with Windows, Linux or Android operating systems. The software also supports the management of applications and integrated peripherals, such as a barcode scanner, card reader, camera and printer. Users can remotely access and control connected devices, take screenshots, rollout OTA updates and use remote desktop capabilities for troubleshooting from any location at any time.

The main features of Advantech's DeviceOn/iService reads:

- Device runtime status overview dashboard
- Real-time alarm and notifications features
- Device grouping and management
- Remote real-time device runtime status monitoring
- Over-the-air (OTA) software updates (app and OS)
- Remote desktop features
- Kiosk mode settings

Moreover, DeviceOn/iService supports batch operations to facilitate the management of multiple devices simultaneously for easy and convenient device configuration and deployment.

Installation requirements

The following Android OS version (or newer) is required to support Advantech's DeviceOn/iService at Android 12 for Advantech DLT-V73A:

Android12 Image version v3.01.x

More information about Advantech's DeviceOn/iService can be reviewed at official Homepage:

http://www.deviceon-iservice.com/

7.14. Resistive Touch Controller (PenMount)

Resistive touch controller (PenMount) will be supported by Android image release v3.01 and higher.

The calibration process is part of MDevice utility (Display Settings).

5:23 💠 🖯 🖯	Á
System Information	Display settings
Power Settings	Resistive Touch Settings start touch calibration
Startup Settings	
Front Key Settings	
Display Settings	
Radio Settings	
MDevice Settings	
•	

Figure 7-75: MDevice – Resistive touch calibration



The calibration process inside MDevice utility is only available at resistive touch controller (PenMount) and not for PCAP touch controller.

7.14.1. Touchscreen Calibration

After starting the calibration process with **start touch calibration**, the following dialog will be shown:

8:02 🌣 🖯 🖙 🖯	2
PenMount TouchScreen Calibration	
Calibration Mode	
	\frown
9	•
Calibration Offset	
	\frown
7	•
Calibrate	
Draw Test	
Output Debug Message	
Exit	
4	

Figure 7-76: MDevice – Resistive touch calibration settings (PenMount)

1. Press button Calibrate.



Figure 7-77: MDevice – Resistive touch calibration (PenMount)

2. Touch the defined nine points at screen in predefined order.



Figure 7-78: MDevice – Resistive touch calibration (PenMount)

3. At request press button **YES** to save the new calibration data to the system.

8. OTA Update

8.1. Functional description

Starting with Android 12 OS support at DLT-V73A there is currently one type of OTA update possible to use:

"Full" → Major build of a standard Android 12 image release for DLT-V73A

Update can be applied using integrated standard utilities and GUI extensions as described in detail as part of this chapter.



OTA updates are designed to upgrade the underlying operating system including the read-only apps installed on the system partition; these updates do <u>not</u> affect user and app data installed by the user.

OTA updates can be applied at Android AOSP and GMS images.

When using MDM SOTI® SW please note, that OTA feature is only available using the following two enrollment methods:

- Android Classic Device (AOSP)
- Company Owned Device (GMS)

8.2. Image Versioning / Release policy

With each of new image release, a unique version number can be read out using the **Settings -> About tablet** feature:

9:41 5 5			
← About tablet			
Wi-Fi MAC address To view, choose saved network			
Device Wi-Fi MAC address Unavailable			
Bluetooth address 22:22:d0:4a:82:cf			
Up time 18:48			
Advantech Build number V3.01.5			
Build number 12QA.1.A.0001.20230901-userdebug			
	4	•	

Figure 8-1: Settings - About tablet

Major build versions are always as V3.xx.x named.

8.3. Version update / downgrade information

To keep better control of image update / downgrade possibilities the following simple rules exist in general:

At **full** image updates, there is no limitation from down- or upgrading to earlier / newer available images using OTA. During this process the full image content **(keeping user space untouched with installed programs and settings)** the system partition is being completely overwritten with new content.

NOTE

In dependency of used space and number of changes, each major build release ADV will not state the total amount of incremental updates for future release.

This depends on changes being performed and individual cases between major build image releases.



It's not possible switching from Android AOSP image version to GMS version image of Android and vice versa. If your device has Android AOSP image version, every update will be related to AOSP version.

If your device has Android GMS image version, every update will be related to GMS version.

If you require a GMS image, and your devices contains the AOSP image, contact your distributor, sales representative or an Advantech Service Center for technical support.

8.4. Different ways to perform OTA updates

In general, there are three different ways available how to apply OTA updates (full) at Android12 for DLT-V73A:

- 1. Apps Screen \rightarrow OTA update
- 2. Using an ADB over USB (Type-C) connection
- 3. Using an MDM (Mobile Device Management) SW like (SOTI®)

8.4.1. Way1: Apps Screen \rightarrow OTA update

An application has been prepared to allow updating the Android12 system by selecting a file during the process.

The OTA update application can be found at Apps Screen.

6:36 🕄 🖪 🕄			
OTA update			
Info:			
Readly to select an OTA file			
-		0%	
START			
	•	•	

Figure 8-2: Apps Screen \rightarrow OTA update

- 1. Click on button **Start** to select an OTA file.
- 2. In case, **Recent** file selection is displayed click on icon == once.

3. Choose an OTA file (.zip) from local storage or an attached USB-Stick.

The OTA update will be performed, status can be checked via progress bar.

7:00 S 🖪 🖞 S
OTA update
Info:
Selected file content//com android externalstorage document/1FC-424D%3Adlt_v73-12QA.1.A.0001.20230914-V3.01.5-5 usedebug ota zip copy update to local destination, please wat File aze: 680707
START
< ● ■

Figure 8-3: Apps Screen \rightarrow OTA update \rightarrow OTA update in progress



In case all requirements are correct, the OTA will be performed automatically.



T2:10 © 10 © T2:10 © 10 © OTA update Nor Weissense Weissensen

After the update has been performed successfully the following dialog will be displayed.

Figure 8-4: Apps Screen \rightarrow OTA update \rightarrow reboot required

4. To finish process, click at **REBOOT** button to initiate required reboot.



As described **user partition is not changed or deleted** during this process allows direct IP communication with terminal again after finished process using ADB or an MDM SW.

8.4.2. Way2: ADB over USB (Type-C) Connection

An integrated INTENT can be called from ADB Shell to initiate an OTA update command.

This can be done by using the USB OTG port at terminal (under the blue antenna cap) to transfer an image from a connected laptop using an USB- Type-C cable.

The following example will demonstrate OTA update using ADB Shell connection. This process requires to be at the terminal next to it to allow a direct communication between the DLT-V73A terminal and a standard laptop to transfer the OTA update file and to initiate the OS installation.

For general USB ADB (Type-C) connection and setup please see section <u>7.9 ADB over</u> <u>USB (Type-C)</u> first.

After connection established start copying the file to terminal using adb push command: adb push ota update.zip /sdcard/ (filename example)



Figure 8-5: Apps Screen \rightarrow OTA update \rightarrow reboot required

Perform the OTA update using the following adb shell command:

adb shell am start -n com.advantech.otaupdate/.MainActivity --es
"ota update" "/sdcard/ota update.zip"



Figure 8-6: Apps Screen \rightarrow OTA update \rightarrow reboot required

The installation progress can be watched at DLT-V73A terminal in between.

The terminal will do an automatic reboot after the update has been completed.

8.4.3. Way 3: SOTI® (Send Intent)

Please go to SOTI console https://eu.identity.soti.net/

Search for your connected DLT-V73A and click on that.

🛞 📑 All Devices 《	Device	e Family = Android Plus						× / (0	CHARTS	
GROUPS ⑦	DEVICES (1 - 10 of 10) 50 \checkmark Per Page $\left(\leftarrow 1 \text{ of } 1 \rightarrow \right) \mid \mathcal{O}$						Columns View: Default 🗸			
		DEVICE NAME	MODEL	MANUFA	OS VERSION	BATTERY PERCENTAGE	AVAILABLE MEMORY	PHONE NUMBER	USERNA	
My Company		AndroidClassic 00001	DLT-V7310AP	Advantech	12	100%	 1.92 GB / 3.59 GB 	Unknown	Unknow	
Management Devices 🧃		AndroidEnterprise 00004	AIM-75	Advantech	12	89%	— 1.46 GB / 3.59 GB	Unknown	Unknow	
Sales Devices 😐		AndroidEnterprise 00010	AIM75-WIFI	AlMobile	10	86%	1.63 GB / 3.59 GB	Unknown	Unknow	
Warehouse Devices 😑		AndroidEnterprise 00018	DLT-V7310AP	Advantech	12	94%	1.49 GB / 3.57 GB	Unknown	Unknow	
		AndroidEnterprise 00019	DLT-V7310AP	Advantech	12	No Battery	 1.81 GB / 3.57 GB 	Unknown	Unknow	
		AndroidEnterprise 00021	DLT-V7310AP	Advantech	12	94%	● 1.97 GB / 3.59 GB	Unknown	Unknow	
		AndroidEnterprise 00009	AIM-75	Advantech	12	85%	■ 1.57 GB / 3.59 GB	Unknown	Unknow	
		AndroidClassic 00009	DLT-V7312AP+	Advantech	12	No Battery	● 1.88 GB / 3.59 GB	Unknown	Unknow	
		AndroidEnterprise 00024	DLT-V7310AP	Advantech	12	No Battery	■ 1.7 GB / 3.59 GB	Unknown	Unknow	
	0	AndroidClassic 00011	DLT-V7310AP	Advantech	12	No Battery	 1.84 GB / 3.59 GB 	Unknown	Unknow	
+ NEW GROUP										

Figure 8-7: SOTI Console Screen \rightarrow OTA update

Click on the icon SEND SCRIPT.

AndroidClassic	00011	S			2	¢,	C (0	E		
DEVICE DETAILS COMP	LIANCE	CONFIGURATIONS	APPLICATION	IS LOCATIO	ON SEC	URITY	COLLE	ECTED D/	ATA	<	>
,O Search for Property Nar	ne or Value										
COMPLIANCE ②				DEVICE STATU	SES						
Compliance Status	🗸 Compl	iant		Agent Upgrade E	Enabled No						
Agent Compatible	🗸 Yes			Passcode Enable	ed No						
				Device Admin Ac	ctive Yes	;					
DEVICE DETAILS				Can Reset Passo	ode Yes	5					
Device Kind	Android Plu	s		Encrypted	Yes	6					
Device ID	8666800412	60953		OS Secure	Yes	6					
Enrollment Time	2024-07-23	10:12:53 AM		ELM Status	n/a	1					
Device Family	🛱 Androi	id Plus		Android Enterpr	rise Mig N//	A					
IP Address	192.168.39.5	52		Agent Mode	Us	er					
Agent Online	true			KPE Status	n/a	3					

Figure 8-8: SOTI Console Screen \rightarrow OTA update

SOTI® MDM (Mobile Device Management) offers functionality to send a script to the terminal including Send Intent command to perform an example OTA update at DLT-V73A.

Please note that the following description can be changed by SW vendor in future and might be slightly different in usage as described.

1. Create a new Legacy script:

دله SEND SCRIPT						
Provide a script that will be executed by the MobiControl agent on the selected devices. Refer to the MobiControl help for supported script commands and syntax. ① A Changing the values of this form will refresh the compatibility check						
Scripts	MANAGE SCRIPTS					
Script Type	Legacy V					
Execute Saved Script	Legacy					
Script Editor 1 sendintent -a "intent:#Intent;action=and	JavaScript Legacy PowerShell 32-bit Compatibility PowerShell Native					

Figure 8-9: SOTI console Screen \rightarrow OTA update

2. In the Script Editor enter the following text:

```
sendintent -a
"intent:#Intent;action=android.intent.action.MAIN;component=com.
advantech.otaupdate/.MainActivity;S.ota_update=/sdcard/ota.zip;e
nd"
```

The example path and file name read **/sdcard/ota.zip** and must match with the name saved in local store, in your DLT-V73A.

8:19 🖯			
≡ DLT-V7310AP			Q :
Alarms	Android	AndroidManager	Audiobooks
DCIM	Documents	Download	Movies
Music	Notifications	otaupdate	Pictures
Podcasts	Recordings	Ringtones	
ta.zip 1.38 GB Jul 23	•	•	
	<	○ ≡	

Figure 8-10: Apps Screen → Section FILES > DLT-V73AP → OTA update

Please be careful to use capital letters. The file name has to match perfectly to the file name used in locale store.

3. Afterwards, the dialog should look like this:

Scrip	Editor	
1	<pre>sendintent -a "intent:#Intent;action=android.intent.action.MAIN;component=com.advan</pre>	ntech
	Figure 8-11: Console SOTI Screen → OTA update	

4. You can use the **Manage Script** feature in case you want to save the script to use later again.

MANAGE SCRIPTS MANA		0
SCRIPTS Filters: Legacy	Create New Script Provide a script that will supported script comma	be executed by the MobiControl agent on the selected devices. Refer to the Mo ands and syntax.
Activate Connection	Script Editor	
Log Event Show Message Wipe Device	1 onent=com	SAVE SCRIPT Script Name DLT-V73A performOTA update CANCEL SAVE

Figure 8-12: SOTI console Screen \rightarrow OTA update \rightarrow reboot required

- The example reads DLT-V73A performOTA update.
 Otherwise you can enter the SOTI intent manually, in the script Editor.
- 6. Click the **SAVE** button to complete the process.
- 7. Next copy the OTA update file to the client you want to perform the update using **SOTI® Packages** functionality.

NO	ΤE
----	----

If you are not familiar with SOTI® Packages please check the manual of SOTI manufacturer.

Afterwards the newly created script file can be sent to the SOTI® agent installed at the DLT-V73A.

- 8. Select the newly created script.
- 9. Execute at selected terminal by clicking **SEND SCRIPT** button. If everything goes properly a pop-up message of SUCCESS will show.

AndroidClassi		5 6 C 6 B			SUCCESS × Successfully sent the Send Script action to 1			
DEVICE DETAILS COM	PLIANCE CONFIGURATIONS	APPLICATIC	DNS LOCATION	SECURITY	COLLECTED DATA	device(s).		
						Colum	ns View: Default 🗸	Û
C Search for Property Na	ame or Value					- 88	PHONE NUMBER	USERN
COMPLIANCE ③			DEVICE STATUSES			GB	Unknown	Unkno
Compliance Status	✓ Compliant		Agent Upgrade Enabled	No		GB	Unknown	Unkno
Agent Compatible	✓ Yes		Passcode Enabled	No		GB	Unknown	Unkno
			Device Admin Active	Yes		GB	Unknown	Unkno
DEVICE DETAILS			Can Reset Passcode	Yes		GB	Unknown	Unkno
Device Kind	Android Plus		Encrypted	Yes		GB	Unknown	Unkno
Device ID	866680041260953		OS Secure	Yes		GB	Unknown	Unkno
Enrollment Time	2024-07-23 10:12:53 AM		ELM Status	n/a		GB	Unknown	Unkno
Device Family	ndroid Plus		Android Enterprise Mig.	N/A		GB	Unknown	Unkno
IP Address	192.168.39.52		Agent Mode	User		GB	Unknown	Unkno
Agent Online	true		KPE Status	n/a				

Figure 8-13: SOTI console Screen \rightarrow OTA update \rightarrow reboot required

The terminal will reboot automatically after the OTA update has been completed. The newly installed image will load afterwards for the first time.

8.5. OTA problem solving

8.5.1. OTA update not compatible

If the selected file is not compatible (for example the release date is lower than the current installed one detected), the following dialog will be displayed:



Figure 8-14: Apps Screen \rightarrow OTA update failed

In this case, please confirm message with **OK** and select a correct image file to update to a newer version then already installed.

8.5.2. OTA update failed

In case of an unexpected power loss during the update process, the DLT-V73A terminal can eventually lead into a non-booting situation.

In this situation standard way of using Android OS features to restore the image cannot be used anymore.

Advantech offers a special way to use FASTBOOT connection from an external PC or laptop using USB type-C (OTG) port to restore the Android OS image again.

This process does not require an RMA and can be handled directly at side following a dedicated SOP (Standard operating procedure) provided by Advantech.

For more information and to receive the SOP please contact your Advantech Service Center for further support.



It's not possible switching from Android AOSP image version to GMS version image of Android and vice versa.

This is also valid in case the **FASTBOOT** image will be applied following the SOP!

9. GOTA Update

9.1. Functional description

GOTA (Google OTA) requirements:

- DLT-V73A with installed GMS image (Android AOSP image is not supported!)
- The DLT-V73A needs access to internet-based Google OTA update server



OTA updates are designed to upgrade the underlying operating system including the read-only apps installed on the system partition; these updates do <u>not</u> affect user and app data installed by the user.

Starting with Android 12 OS support at DLT-V73A there is currently one type of GOTA update possible to use:

"Full" \rightarrow Major build of a standard Android 12 image release for DLT-V73A

9.2. GOTA update is available

There are two ways to apply GOTA updates at Android12 for DLT-V73A.

9.2.1. Apply GOTA Update via update icon

On the left of the screen a symbol of update availability will be showed.



Figure 9-1: Nofitication of update availability

1. Perform a swipe down to open notification screen.

2. Scroll down the screen and see the notification in the window: **New** system software available.



Figure 9-2: New system software available

3. Click on New System Software available.

Continue with section <u>9.3 Perform GOTA update</u>.

9.2.2. Apply GOTA Update via Settings



1. Scroll down the home screen, go to **Settings** and click on that.

Figure 9-3: Apps Screen - Settings

2. Once, you are in **Settings**, scroll down until you find **System** and click on **System**.

Continue with section <u>9.3 Perform GOTA update</u>.

9.3. Perform GOTA update

This page shows information about available new version to be installed.



1. Click on **Download and Install**.

Figure 9-4: New version information



Figure 9-5: System update download in progress

3. After the download completed, the installation of new image will be started automatically.

9:33 🖱 🏟	: 0				<>
	€				
Paus	Installing system	update		Downloading and installing update Software version: 12QG.240321.IR.003 Android security update: 2024-03 This update introduces: •AT Command terminal as Advanced GNSS/ WWAN modem configuration •An update of Power settings including an enhancement of Ignition in MDevice •Integrity Security Patch 2024-03 including system improvements and security updates for your DLTs	
		•	٠		
		<	0	i ≡	

Figure 9-6: Installation system update

NOTE

The progress bar will update multiple times during process and the whole process will take about **10 minutes** to complete.

Please don't interrupt the installation process and don't switch off the terminal in between! \rightarrow can lead into non-booting device condition!



Figure 9-7: System update done - Restart now

After the successful reboot the system will inform you about performed update automatically after a few seconds.



Figure 9-8: System first start after GOTA update

9.4. GOTA problem solving

9.4.1. Network connection not available (before GOTA update)



Figure 9-9: network connection not available (before GOTA update)

1. In this case, please check network connection and try again.

9.4.2. Network connection lost (during GOTA update)



Figure 9-10: network connection lost (during GOTA update)

1. Check network connection and click **Resume** to continue with GOTA image installation. Text will change back to **Installing** system update.

9.4.3. GOTA update failed

In case of an unexpected power loss during the update process, the DLT-V73A terminal can eventually lead into a non-booting situation.

In this situation standard way of using Android OS features to restore the image cannot be used anymore.

Advantech offers a special way to use FASTBOOT connection from an external PC or laptop using USB (Type-C) OTG port to restore the Android OS image again.

This process does not require an RMA and can be handled directly at side following a dedicated SOP (Standard operating procedure) provided by Advantech.

For more information and to receive the SOP please contact your Advantech Service Center for further support.



It's not possible switching from Android AOSP image version to GMS version image of Android and vice versa.

This is also valid in case the **FASTBOOT** image will be applied following the SOP!

10. MTouch

10.1. MTouch

MTouch is a software utility provided by Advantech to allow users during normal operation to change the PCAP touch sensitivity setting between different modes for glove usage without the need to have Administrator rights.

By default, the permanent value of this settings is normally set by the Administrator inside the Advantech MDevice utility and will be automatically restored during an OS boot up.

For further information about general configuration of PCAP touch sensitivity level please check the following chapter <u>5.7 Display Setting.</u>



Changes done for PCAP touch sensitivity setting using MTouch application are not permanent saved.

The original set value inside MDevice utility will always be restored at an OS boot up.

To permanently change, enable or disable the PCAP touch sensitivity level can only be done by a system Administrator inside MDevice utility.

The DLT-V73A supports three (non glove, glove and thick glove) sensitivity modes.

10.1.1. MTouch application

To change the PCAP touch sensitivity level using MTouch, launch the MTouch application from Apps Screen.



Figure 10-1: Apps Screen → MTouch

10.1.2. MTouch (PCAP)

At DLT-V73A MTouch utility will allow switching between three sensitivity settings:



Figure 10-2: MTouch – (PCAP)
10.1.3. MTouch (PENMOUNT)

At non supported resistive touch controller (PENMOUNT), the following information will be displayed after opening the MTouch application:



Figure 10-3: MTouch – (PENMOUNT)

11. MWedge

11.1. MWedge

MWedge is a software utility to transfer scanner data into the Android OS from external connected scanners attached to the DLT-V73A via the COM1 serial port.

The software contains two items:

- A background service that is responsible to transfer the incoming scanner data into the Android OS.
- A user settings app that allows user to update the settings for attached serial scanner and software setup.

NOTICE Prevent system malfunction and property damage.

Incorrect settings of the Scanner Wedge can interfere with or interrupt the function of the system. MWedge settings may therefore only be made by skilled personnel such as IT administrators with professional experience in software handling. Improper changes to the MWedge settings will void any warranty of the Advantech Co., Ltd.

11.1.1. MWedge configuration



To change the Scanner Wedge settings, launch the MWedge application.

Figure 11-1: App Screen – MWedge

11.1.2. MWedge (Serial)

1:24 😌 😌		T
🌲 Serial	Serial settings	
Change Input	Status Disconnected	
🗘 Test Input	Device /dev/ttyMSM1	
	Baudrate 9600 baud	
	Databits 8 bit	
	Parity None	
	Stopbits 1 Stop Bit	
	Flowcontrol	
•	• •	
	< ○ ≡	

The first section **Serial** contains serial port parameters.

Figure 11-2: MWedge (Serial) – serial port parameters

Please make sure that status is **Connected.** To do this, enable the checkbox.

1:46 5 5		7
🌲 Serial	Serial settings	
Change Input	Connected	
• • • • • • • • • •	Device /dev/ttyMSM1	
	Baudrate 9600 baud	
	Databits 8 bit	
	Parity None	
	Stopbits 1 Stop Bit	
	Flowcontrol	
	< ○ ≡	

Figure 11-3: MWedge (Serial) – Status connected

The following settings depend on current attached serial scanner configuration.

٨	10	T	Έ
	Р Ш		

Please refer to the scanner manufacturer manual for further information how to setup.

Status	Option to enable / disable MWedge. COM1 port will be available for other programs while status reads Disabled .
	Android only supports external provided power at COM1 port (5/12V support).
Device	This option needs to be enabled inside MDevice utility as described in chapter <u>5.4 Power Settings</u> .
	The related system device name reads "/dev/ttyMSM1".
	IMPORTANT NOTE : Do not make any changes to this entry.
BaudRate	BaudRate to be used: Possible values to select from are 1200 to 230400 Baud. Default value: 9600

Databits	Databits to be used: Possible values to select from are 5 to 8 bits. Default value: 8					
Parity	Parity to be Possible va space. Default val	Parity to be used: Possible values to select from are none / odd / even / mark / space. Default value: none				
Stopbits	Stopbits to Possible va Default val	be used: alues to select f ue: 1	from are 1 / 2.			
Flowcontrol	Flowcontrol to be used: Possible values to select from are none / RTSCTS / Xon-Xoff / RS485-HalfDuplex (RTS). Default value: none					
	By default, automatica	HID is selected ally sent as keyl	d that incoming scanner data is board data input (cursor position)			
	1:59 5 5 Serial	ut	Device /dev/ttyMSM1			
	🗘 Test Input		Baudrate 9600 baud			
Output		Output HID Intent				
			1 Stop Bit			
			Flowcontrol			
			Output HID			
		•	•			
	Fierry					
	Figur					
Output	message: "advantech "barcode_o	n.mwedge.BAR data" scanned b	CODE_SCANNED", extra filed			

NOTE

Important:

A

If the scanner configuration differs, make sure to set identical settings to MWedge configuration, otherwise the communication will not work correctly!

The settings will be auto-saved when closing the app.

11.1.3. MWedge (Change Input)



In this section, incoming scanner data format can be manipulated.

Figure 11-5: MWedge (Change Input)

By default configuration, the scanner data is transferred to the Android OS without modification. The following settings are available:

Change Inpu	ut
Delete first characters	Defines the amount of characters to be deleted at the start of the string received from the scanner before sending to the Android OS.
	will lead to software malfunction
Delete last characters	Defines the amount of characters to be truncated from the end of the string received from the scanner before sending to the Android OS. <i>IMPORTANT NOTE</i> : <i>Default setting is "0"</i> . <i>Do not make any</i> <i>changes to this entry</i> .
Delete string at beginning	A static string to be removed from the beginning of each string received from the scanner can be defined in this section. <i>IMPORTANT NOTE</i> : The string defined here must be identical to incoming data from the scanner to be removed successfully before sending to Android OS.
Delete string at the end	A static string to be removed from the end of each string received from the scanner can be defined in this section. <i>IMPORTANT NOTE:</i> The string defined here must be identical to incoming data from the scanner to be removed successfully before sending to Android OS.
Add to beginning	Defines a string that will be added in front of the string received from the scanner before sending to Android OS.
Add to end	Defines a string that will be appended to the string received from the scanner before sending to Android OS.

Search and replace

Search String	A static string to be searched within each string received from the scanner can be defined in this section.
Replace String	A static string to be added, replacing the one searched previously, within each string received from the scanner can be defined in this section. You can also delete the string searched, just leaving this entry blank.

11.1.4. MWedge (Test)



This dialog text field can be used to test the current settings.

Figure 11-6: MWedge (Test)

1. Perform a double click on the Text field called **Test Input** to begin a test scan. The string received from the scanner will be shown in the **Test Input** pop up window. In the screenshot below this is the text light blue background fill.

🌲 Serial		Test		
Change Input	Test Input			
Test Input	Test Input			
			CANCEL	ок

Figure 11-7: MWedge – Test Input

2. Close window with **CANCEL** or **OK**.

				Ŷ
Test				
Test	Input			
	•			
<	0	=		
	Test	Test Input	Test Test Input	Test Test Input

Figure 11-8: MWedge – Test Input

3. Press button \blacksquare and perform a touch swipe to close the MWedge.



Figure 11-9: Close MWedge Android OS 12

Parameters will be auto-saved on exit.

12. List of figures

Figure 2-1: Android for DLT-V73A – Advantech home screen (GMS)	13
Figure 3-1: Kiosk Mode – Advantech MFocus Screen	22
Figure 3-2: Exit Kiosk Mode	23
Figure 3-3: Default home screen app selection	24
Figure 3-4: Android Home Screen	24
Figure 3-5: Android Home Screen	25
Figure 3-6: Android Home Screen	25
Figure 3-7: Advantech MFocus Configuration	26
Figure 3-8: Advantech MFocus Configuration – change Password	27
Figure 3-9: Advantech MFocus – Internal Memory Storage	28
Figure 3-10: Advantech MFocus – Wallpaper Location	29
Figure 3-11: Advantech Launcher – Customized Wallpaper example	29
Figure 3-12: Advantech MFocus – Wallpaper save progress	30
Figure 3-13: Advantech MFocus – Customized Wallpaper example	30
Figure 3-14: Switch default Home app, open Settings.apk	31
Figure 3-15: Switch default Home app	31
Figure 3-16: Switch default Home app, select Home app	32
Figure 3-17: Scroll up MFocus Window and check the applications in background	33
Figure 3-18: Select CLEAR ALL to close all background applications	34
Figure 4-1: General Settings – Apps & Notifications	38
Figure 4-2: General Settings – Storage	39
Figure 4-3: General Settings – Sound	40
Figure 4-4: General Settings – Display	41
Figure 4-5: Security and location – Accessibility	42
Figure 4-6: General Settings – Multiple users	43
Figure 4-7: Security and location – Device Security	44
Figure 4-8: Security and location – Passwords & accounts (AOSP)	45
Figure 4-9: Security and location – Passwords & accounts (GMS)	45
Figure 4-10: System – About tablet	46
Figure 4-11: System – Languages & input	47
Figure 4-12: System – Date & time	48
Figure 5-1: Apps screen → MDevice utility	50
Figure 5-2: MDevice login screen	51
Figure 5-3: MDevice Settings – Change Password	52
Figure 5-4: MDevice Functional overview	53
Figure 5-5: MDevice – System Information, HARDWARE	54
Figure 5-6: MDevice – System Information, Battery information	55
Figure 5-7: MDevice – System Information, SOFTWARE	56
Figure 5-8: MDevice – System Information, Board Temperature	57
Figure 5-9: MDevice – System Information, Front Temperature	58
Figure 5-10: MDevice – Power Settings menu	59
Figure 5-11: MDevice – Power Settings menu – Power key behavior	60
Figure 5-12: MDevice – Startup Settings menu	61
Figure 5-13: MDevice – Function Key Settings menu	63
Figure 5-14: MDevice – Assigning special function keys	64
Figure 5-15: MDevice – Assigning special function keys, keyboard function	65
Figure 5-16: MDevice – Assigning special function keys, Custom key	65

Figure 5-17: MDevice – Assigning special function keys, Custom key	66
Figure 5-18: MDevice – Assigning special function keys, new assignment	66
Figure 5-19: MDevice menu Display Settings (PCAP)	67
Figure 5-20: MDevice menu Display Settings (Resistive Touch)	68
Figure 5-21: MDevice – Radio Settings	69
Figure 5-22: MDevice – Modem AT terminal	70
Figure 5-23: MDevice – Modem configuration	71
Figure 5-24: MDevice Settings	72
Figure 5-25: MDevice Settings – Load factory default	72
Figure 5-26: MDevice – logfile	73
Figure 5-27: MDevice – Export Customer Settings	74
Figure 5-28: MDevice – Export Customer Settings (Information pop-up)	74
Figure 5-29: MDevice – Import Customer Settings	75
Figure 5-30: MDevice – Import Customer Settings – Importing data	75
Figure 5-31: MDevice – Import Customer Settings – Import successful	75
Figure 6-1: MDevice – MBlank	77
Figure 6-2: MBlank – Logo configuration	78
Figure 6-3: MBlank – Default logo	78
Figure 6-4: MBlank – New custom logo copied to the internal storage	79
Figure 6-5: MBlank – New custom logo in Google Photos	80
Figure 6-6: MBlank – New custom logo in Google Photos-Library	80
Figure 6-7: New logo to select – Part I	81
Figure 6-8: New logo to select – Part II	81
Figure 6-9: MBlank – New logo	82
Figure 6-10: MBlank – Screen blanking enabled	83
Figure 6-11: MBlank - Show logo	84
Figure 6-12: MBlank – Show time	85
Figure 6-13: MBlank – Sensitivity configuration	87
Figure 7-1: WLAN settings network selection	89
Figure 7-2: WLAN profile connection status	90
Figure 7-3: WLAN roaming settings (Android image version v2.01.2 or higher)	91
Figure 7-4: Ethernet settings	92
Figure 7-5: Ethernet settings – Set IP address	93
Figure 7-6: GPRS settings	94
Figure 7-7: GPRS settings – Mobile network settings	95
Figure 7-8: GPRS connection – Select provider	96
Figure 7-9: Use an USB-Stick at Android for file transfer	97
Figure 7-10: Setup option beneath the General USB-Stick list entry	98
Figure 7-11: Android File Explorer (Internal storage)	99
Figure 7-12: Copy progress from internal storage to USB drive	100
Figure 7-13: USB-Stick (file transfer) - Paste	100
Figure 7-14: USB-Stick (file transfer) - Copied log file	101
Figure 7-15: USB-Stick (file transfer) - USB Settings - Eject	101
Figure 7-16: Files Explorer	102
Figure 7-17: Files Explorer	103
Figure 7-18: XARP Manager – Do vou want to install this app?	103
Figure 7-19: XARP Manager – App installed	103
Figure 7-20: Power off / Restart System option	104

Figure 7-21: Settings menu – Backup and reset	105
Figure 7-22: Factory data reset	106
Figure 7-23: Factory data reset – warning note	106
Figure 7-24: Android home screen (GMS)	107
Figure 7-25: Settings – users menu	108
Figure 7-26: Settings – users menu – select user type	109
Figure 7-27: Settings – user menu – add new user confirmation request	109
Figure 7-28: Settings – user menu – set name of new user	110
Figure 7-29: Settings – user menu – Switch to newly created user	111
Figure 7-30: Settings – Request Set up user now?	111
Figure 7-31: Lock screen with multiple user option	112
Figure 7-32: USB-C connector (top view)	114
Figure 7-33: USB cable connected to port (top view)	
Figure 7-34: Settings – About tablet	115
Figure 7-35 ⁻ Build number – system message pop-up	115
Figure 7-36. Settings – System – Reset options	116
Figure 7-37: user message – Allow USB debugging	116
Figure 7-38: user message – Always allow from this computer	116
Figure 7-39: Capture Screen with ADB (Windows OS)	118
Figure 7-40: Unload files with ADB (Windows OS)	118
Figure 7-41: install and files with ADB (Windows OS)	118
Figure 7-42: SOTI MobiControl Device Classic Agent download site	120
Figure 7-43: SOTI MobiControl Device Agent (AOSP) installation	121
Figure 7-44: SOTI MobiControl Device Agent (AOSP) installation	127
Figure 7-45: SOTI MobiControl Device Agent (AOSP) installation	122
Figure 7-46: SOTI MobiControl Device Agent (AOSP) set Permission	123
Figure 7-47: SOTI MobiControl Device Agent (AOSP) set Permission	123
Figure 7-48: SOTI MobiControl Device Agent (AOSP) set Permission	124
Figure 7-49: SOTI MobiControl Device Agent (AOSP) set Permission	124
Figure 7-50: SOTI MobiControl Device Agent (AOSP) set Permission	125
Figure 7-51: SOTI MobiControl Device Agent (AOSP) set Permission	126
Figure 7-52: SOTI MobiControl Device Agent (AOSP) set Permission	126
Figure 7-53: SOTI MobiControl Device Agent (AOSP) Enrollment	120
Figure 7-54: SOTI MobiControl Device Agent (GMS) installation	128
Figure 7-55: SOTI MobiControl Device Agent (GMS) installation	120
Figure 7-56: SOTI MobiControl Device Agent (GMS) set Permission	120
Figure 7-57: SOTI MobiControl Device Agent (GMS) Enrollment	130
Figure 7-58: SOTI Android Enterprise –Set up your work profile	132
Figure 7-59: SOTI Android Enterprise – Setting up	133
Figure 7-60: SOTI Android Enterprise	133
Figure 7-61: SOTI Android Enterprise – Set work profile	134
Figure 7-62: SOTI Android Enterprise – SOTI MohiControl	134
Figure 7-63: SOTI Android Enterprise - Device Configuration	135
Figure 7-64: SOTI Android Enterprise – Device Information	135
Figure 7-65: SOTI MohiControl console – Log In	136
Figure 7-66: SOTI MobiControl console – Enter Company ID	137
Figure 7-67: SOTI MobiControl console – Enter Password	138
Figure 7-68: SOTI MobiControl console – Select MORICONTROL	130
	109

Figure 7-69: SOTI MobiControl console	139
Figure 7-70: SOTI MobiControl console – All devices	140
Figure 7-71: SOTI MobiControl console – Device details	141
Figure 7-72: SOTI MobiControl console – Manage scripts	142
Figure 7-73: SOTI MobiControl console – Script Editor	143
Figure 7-74: SOTI Android Enterprise – Home screen	144
Figure 7-75: MDevice – Resistive touch calibration	146
Figure 7-76: MDevice – Resistive touch calibration settings (PenMount)	147
Figure 7-77: MDevice – Resistive touch calibration (PenMount)	148
Figure 7-78: MDevice – Resistive touch calibration (PenMount)	148
Figure 8-1: Settings - About tablet	151
Figure 8-2: Apps Screen → OTA update	153
Figure 8-3: Apps Screen \rightarrow OTA update \rightarrow OTA update in progress	154
Figure 8-4: Apps Screen \rightarrow OTA update \rightarrow reboot required	155
Figure 8-5: Apps Screen \rightarrow OTA update \rightarrow reboot required	156
Figure 8-6: Apps Screen \rightarrow OTA update \rightarrow reboot required	156
Figure 8-7: SOTI Console Screen → OTA update	157
Figure 8-8: SOTI Console Screen → OTA update	157
Figure 8-9: SOTI console Screen → OTA update	158
Figure 8-10: Apps Screen \rightarrow Section FILES > DLT-V73AP \rightarrow OTA update	159
Figure 8-11: Console SOTI Screen → OTA update	159
Figure 8-12: SOTI console Screen \rightarrow OTA update \rightarrow reboot required	160
Figure 8-13: SOTI console Screen \rightarrow OTA update \rightarrow reboot required	161
Figure 8-14: Apps Screen → OTA update failed	162
Figure 9-1: Nofitication of update availability	166
Figure 9-2: New system software available	167
Figure 9-3: Apps Screen - Settings	168
Figure 9-4: New version information	169
Figure 9-5: System update download in progress	170
Figure 9-6: Installation system update	171
Figure 9-7: System update done – Restart now	172
Figure 9-8: System first start after GOTA update	173
Figure 9-9: network connection not available (before GOTA update)	174
Figure 9-10: network connection lost (during GOTA update)	175
Figure 10-1: Apps Screen → MTouch	179
Figure 10-2: MTouch – (PCAP)	179
Figure 10-3: MTouch – (PENMOUNT)	180
Figure 11-1: App Screen – MWedge	183
Figure 11-2: MWedge (Serial) – serial port parameters	184
Figure 11-3: MWedge (Serial) – Status connected	185
Figure 11-4: MWedge (Serial – Output configuration	186
Figure 11-5: MWedge (Change Input)	187
Figure 11-6: MWedge (Test)	189
Figure 11-7: MWedge – Test Input	189
Figure 11-8: MWedge – Test Input	190
Figure 11-9: Close MWedge Android OS 12	190