

IMT-BT

Medical Mobile Tablet

User's Manual

(Android)



Manual Rev.: 1.00

Revision Date: March 31, 2017

Part No: 50-1Z230-1000



Revision History

Revision	Release Date	Description of Change(s)	
1.00	31/03/2017	Initial release	

ii Revision History

Preface

Copyright 2017 ADLINK Technology Inc.

This document contains proprietary information protected by copyright. All rights are reserved. No part of this manual may be reproduced by any mechanical, electronic, or other means in any form without prior written permission of the manufacturer.

Disclaimer

The information in this document is subject to change without prior notice in order to improve reliability, design, and function and does not represent a commitment on the part of the manufacturer.

In no event will the manufacturer be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or inability to use the product or documentation, even if advised of the possibility of such damages.

Environmental Responsibility

ADLINK is committed to fulfill its social responsibility to global environmental preservation through compliance with the European Union's Restriction of Hazardous Substances (RoHS) directive and Waste Electrical and Electronic Equipment (WEEE) directive. Environmental protection is a top priority for ADLINK. We have enforced measures to ensure that our products, manufacturing processes, components, and raw materials have as little impact on the environment as possible. When products are at their end of life, our customers are encouraged to dispose of them in accordance with the product disposal and/or recovery programs prescribed by their nation or company.

Trademarks

Product names mentioned herein are used for identification purposes only and may be trademarks and/or registered trademarks of their respective companies.

Preface iii



Conventions

Take note of the following conventions used throughout this manual to make sure that users perform certain tasks and instructions properly.



Additional information, aids, and tips that help users perform tasks.



Information to prevent *minor* physical injury, component damage, data loss, and/or program corruption when trying to complete a task.



Information to prevent **serious** physical injury, component damage, data loss, and/or program corruption when trying to complete a specific task.

iv Preface

Table of Contents

R	evisi	on History	ii
P	refac	e	iii
Li	st of	Figures	vii
Li	st of	Tables	ix
1	Intro	oduction	1
	1.1	Overview	1
	1.2	Features	1
	1.3	Specifications	2
	1.4	Package Contents	4
	1.5	Optional Accessories	4
	1.6	Product Layout	5
2	Gett	ting Started	7
	2.1	Using a microSD Card	7
	2.2	Installing a SIM Card (optional)	8
	2.3	Charging the Battery	9
	2.4	Initial Startup	10
3	Bas	sic Skills	13
	3.1	Turn On / Wake Up	13
	3.2	Turn Off	14
	3.3	Navigating the Touchscreen	14
	3.4	Home Screen	15
	3.5	Using Applications	17
	3.6	Navigation Bar	17
	3.7	Status Bar and Notifications Panel	18



	3.8	Entering Text	19
	3.9	Function Buttons	20
4	Wire	less Connections	21
	4.1	Airplane Mode	21
	4.2	Wi-Fi	21
	4.3	Bluetooth	22
	4.4	GPS	23
5	Exte	rnal Connections	25
	5.1	USB Host	25
	5.2	HDMI Display Output	25
	5.3	Using an SD Card	26
	5.4	Installing a SIM Card (optional)	27
	5.5	Audio Out	27
6	Mana	agement	29
6	Man a 6.1	agement Wireless and Networks Settings	
6		_	29
6	6.1	Wireless and Networks Settings	29 30
6	6.1 6.2	Wireless and Networks Settings Device Settings	29 30 30
6	6.1 6.2 6.3	Wireless and Networks Settings Device Settings Personal Settings	29 30 30 30
6 7	6.1 6.2 6.3 6.4 6.5	Wireless and Networks Settings Device Settings Personal Settings Accounts Settings	29 30 30 30 31
7	6.1 6.2 6.3 6.4 6.5	Wireless and Networks Settings Device Settings Personal Settings Accounts Settings System Settings	29 30 30 31 33
7	6.1 6.2 6.3 6.4 6.5	Wireless and Networks Settings Device Settings Personal Settings Accounts Settings System Settings and Maintenance	29 30 30 31 33 35
	6.1 6.2 6.3 6.4 6.5 Care	Wireless and Networks Settings Device Settings Personal Settings Accounts Settings System Settings and Maintenance tional Information	29 30 30 31 33 35 35
7	6.1 6.2 6.3 6.4 6.5 Care Addi 8.1 8.2	Wireless and Networks Settings Device Settings Personal Settings Accounts Settings System Settings and Maintenance tional Information Intended User Profile	29 30 30 31 33 35 35 38

vi Table of Contents

List of Figures

Figure 1-1:	IMT-BT Layout	5
inguic i i.	iivii Di Layout	U

List of Figures vii



This page intentionally left blank.

viii List of Figures

List of Tables

Table 1-1:	IMT-BT (Android) Specifications	2
Table 2-1:	SD card support list	8

List of Tables ix



This page intentionally left blank.

x List of Tables

1 Introduction

1.1 Overview

The IMT-BT medical mobile tablet (Android) is designed for customers in the retail and field service markets requiring a semi-rugged mobile tablet running Android to act as a durable terminal with high performance computing and versatile features. The IMT-BT features a 1.5GHz dual-core TI OMAP5432 system-on-chip, NFC and RFID reader functions, drop protection, IP54 water and dust resistance and wide operating temperature range.

1.2 Features

- ► Intel® Celeron® Processor N2807 dual-core processor system-on-chip
- ▶ Android 4.4.2 operating system
- ▶ 10.1" sunlight readable display, capacitive touchscreen
- ▶ Wireless Connectivity:
- ▶ GPS, E-compass, G-sensor
- ▶ Data Capture: HF 13.56MHz NFC RFID, SAM encryption supported
- ▶ IP65 rating
- ▶ 1.2m drop resistance (1.5m with optional protective rubber housing)



1.3 Specifications

Physical	 Dimensions: 291 x 198 x 23 mm (L x W x T) Weight: 1150g
Processor	Intel® Celeron® Processor N2807 (1M Cache, up to 2.16 GHz)
Memory & Storage	4 GB DDR3 RAM 64 GB eMMC
Display	 10.1" sunlight readable display, 1280x800 resolution Projected capacitive touchscreen 600 nits brightness 2-point touch Corning Gorilla glass (7H hardness) HDMI port (Type A)
Buttons	1x power button4x function buttons
Expansion Slots	 1x SIM slot 1x microSD slot (SDHC up to 64GB, Class 2 to 10) 1x USB 3.0 (Type-A)
Wireless LAN	 IEEE 802.11 a/b/g/n/ac (combo Mini PCIe half-size card) WEP, WPA/WPA2, WAPI 802.11a: up to 54 Mbps; 802.11b: up to 11 Mbps; 802.11g: up to 54 Mbps; 802.11n: up to 65 Mbps Distance: 50 meters indoors, 150 meters outdoors
Wireless PAN	Bluetooth 4.0 (combo Mini PCle half-size card)
Wireless WAN	 3.5G HSPA+, 4G LTE (Mini PCIe half-size card, optional) LTE: 150Mbps downlink, 50Mbps uplink WCDMA: HSDPA, HSUPA, HSPA+ GSM/GPRS/EDGE: GSM, GPRS/EDGE Class 12
GPS	 GPS Module: uBlox AMY-6M Accuracy: 20 Meters Hot start: 1 second Warm start: 40 seconds
RFID	 HF Reader 13.56 MHz Tag support: ISO15693, ISO14443A/B, NFC 18000-3 SAM card support

Table 1-1: IMT-BT (Android) Specifications

Built-in Sensors	 G sensor: 3-axis, 2g, at least 8-bits accuracy E-Compass: 3-axis, at least 8-bits accuracy Gyroscope: 12-bits accuracy Illuminance sensor: 0 to 100,000 lux
Status LEDs	Power, Wi-Fi, Charging
Camera	Back: 5 megapixel color camera with flash, autofocus Top: 2 megapixel color camera
Audio	 Speaker, 100dB 1kHz @10 cm, 8 ohms Stereo headphone jack (3.5mm) Bluetooth headset support Built-in microphone
Battery	Li-ion 6300 mAh, 7.4V Full charge time < 4 hrs
Power Adapter	Input: 100-240 V AC, 47-63 HzOutput: 12V DC, 2.5A max.
os	Android 4.4.2
Environmental	 Operating Temperature: 0°C to 40°C Charging Temperature: 0°C to 40°C Storage Temperature: -10°C to 50°C Humidity: 10% to 90% non-condensing Drop: 1.2 meters (1.5 m with optional protective housing) Ingress Rating: IP65
Certifications	CB, CE, FCCEN 60601-1RoHS

Table 1-1: IMT-BT (Android) Specifications



1.4 Package Contents

Please check that your package contains the items below. If you discover damaged or missing items, please contact your vendor.

- ► IMT-BT medical mobile tablet (Android)
- AC power adapter x1
- Hand Strap



DO NOT install or apply power to equipment that is damaged or if there is missing/incomplete equipment. Retain the shipping carton and packing materials for inspection. Please contact your ADLINK dealer/vendor immediately for assistance. Obtain authorization from your dealer before returning any product to ADLINK.

1.5 Optional Accessories

► Office Dock (P/N: 93-D0000-100E)

► Vehicle Dock (P/N: 93-D0001-100E)

▶ Protective Rubber Housing (P/N: 58-80068-0000)

1.6 Product Layout





Figure 1-1: IMT-BT Layout



This page intentionally left blank.

2 Getting Started

2.1 Using a microSD Card

Inserting a microSD card

- 1. Locate the microSD slot on the right side of the tablet and open the cover.
- 2. Insert the card into the slot with the contacts pointing into the slot and the label facing the front of the tablet.
- 3. Close the cover.

Removing a microSD card

You can safely remove the microSD card when the tablet is shut down. If you need to remove the card while the tablet is on, unmount the card first to prevent corrupting or damaging the card

- 2. Open the cover and press the edge of the card to release it, then pull the card out of the slot.
- 3 Close the cover



SD card support list

Speed Class	Manufacturer	Model
	Transcend	TS8GUSDHC4
		TS16GUSDHC4
Class 4		TS32GUSDHC4
Class 4	Kingstone	SDC4/8G
		SDC4/16G
		SDC4/32G
Class 10	Kingstone	SDCX10/64G
	Sandisk	SDSDQUA-008G
UHS-1		SDSDQUA-016G
0113-1		SDSDQUA-032G
		SDSDQUA-064G

Table 2-1: SD card support list

2.2 Installing a SIM Card (optional)

Inserting a SIM card

- 1. Locate the SIM slot on the right side of the tablet and open the cover.
- 2. Insert the card into the slot with the chip side facing the back of the tablet and the beveled corner pointing into the slot.
- Close the cover.

To remove a SIM card, gently press the edge of the card to release it, then pull the card out of the slot.

2.3 Charging the Battery

Be sure to fully charge the battery before using your device for the first time.

1. Locate the DC input socket on the left side of the tablet and open the cover.



- 2. Insert the DC jack end of the AC adapter into the socket and the AC plug into the wall socket.
- 3. The power status LED glows red when charging. If charging for the first time, do not disconnect your device from AC power until the battery is fully charged, indicated by the power status LED glowing green. This may take up to 4 hours.



4. Close the cover when charging is completed.



A blinking power status LED indicates an abnormal charging condition. Check that the AC adapter is properly inserted into the DC input socket and that the device is not charging in high temperature conditions, resulting in an overheated battery.





For optimum performance of your battery:

- · Only use the AC adapter provided
- Do not charge the battery when the temperature is high (e.g. in direct sunlight).
- Do not store the device in high temperature environments
- Only charge the battery when its temperature is between 0°C and 40°C
- If you are not using the device for an extended period of time, be sure to fully charge the battery at least once every two weeks. Over discharge of the battery can affect its performance.

2.4 Initial Startup

After turning on your device for the first time, the onscreen display will guide you through a setup process.

- 1. Make sure that the tablet is either connected to AC power or the battery has been fully charged.
- 2. Press the power button. The tablet powers up and displays the initial screen.



3. Touch the circle to see all available apps. They can be dragged onto the Home Screen for easy access.







This page intentionally left blank.

3 Basic Skills

This chapter describes how to perform basic operations with the tablet.

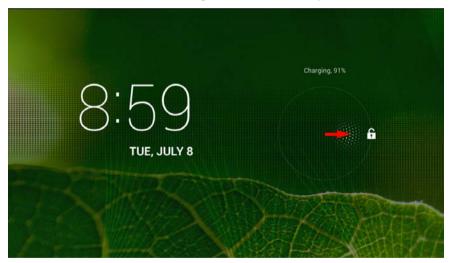


The device can get uncomfortably warm when used in warm environments. Take care to protect yourself (e.g. by wearing gloves). Prolonged body contact can cause discomfort and potentially a burn.

3.1 Turn On / Wake Up

The tablet sleeps after a period of inactivity (1 minute by default). You can also manually put your device to sleep by briefly pressing the power button.

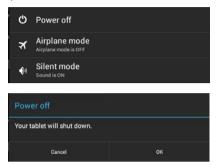
- 1. To turn on or wake up the tablet, press the power button.
- 2. At the lock screen, drag the lock icon in any direction.





3.2 Turn Off

To shut down the tablet, press and hold the power button until a menu pops up. Touch "Power off" and then "OK".



3.3 Navigating the Touchscreen



Be careful not to damage the touchscreen with sharp objects. Use your finger or a stylus specifically intended for touch-screens.

The following actions can be performed with the touchscreen.

- ▶ Touch: touch the screen once
- ▶ Touch and hold: touch and hold on an item to see a list of options available
- ▶ **Drag:** touch and hold an item, then move across the screen without lifting your finger (stylus) to the target location
- ► **Swipe:** move your finger (stylus) across the screen without pausing when you first touch it (e.g. scrolling up and down)
- ▶ **Pinch:** touch the screen with two fingers and pinch them together to zoom in, spread them apart to zoom out

Landscape and Portrait View

The tablet supports landscape and portrait view, and will automatically adjust the display orientation depending on how it is held our mounted.

3.4 Home Screen

The Home screen is your starting point for accessing features and functions on your tablet. Initially, it contains only the clock and Google search bar widgets. You can customize it with application icons, shortcuts, widgets and other features.

At the bottom of every Home screen is the Favorites tray.



To return to the Home screen at any time, touch at the bottom of the screen.

Extensions to the Home Screen

You can swipe left or right on the Home screen to see additional screens. Extensions to the Home screen provide more space for widgets, shortcuts, and other items. On the screen to the left of the main Home screen, you will find the Quick Settings widget. You can drag this widget to your desired location.





Quick Settings Widget

The Quick Settings widget lets you quickly access frequently used functions: Wi-Fi, Bluetooth, GPS, screen rotation lock, and screen brightness (Auto, dim, medium, bright).

Customizing the Home Screen

You can add application shortcuts, widgets, and other items to any part of the Home screen where there is space available. You can also change the wallpaper.

Adding an Item to the Home Screen

- 1. Touch (in the Favorites tray) on the Home screen.
- 2. Touch APPS or WIDGETS depending on the type of item you want to add.
- 3. Touch and hold an item, drag it to the where you want to place it, then release it.

Removing an Item from the Home Screen

Touch and hold the item you want to remove, then drag it to the "X Remove" icon at the top center of the screen.

Changing the Wallpaper

- 1. Touch and hold an empty area on the Home screen.
- In the menu that opens, touch the wallpaper source you want to use and select your wallpaper. Follow the instructions to set your new wallpaper.

3.5 Using Applications

Touch on the Home screen to open the Applications & Widgets screen. This screen holds icons for all of the applications on your device. Touch an icon to open the application.



Most applications have a Menu icon near the top right corner of the screen. The menu provides access to options or functions of the application.

3.6 Navigation Bar

The navigation bar at the bottom of the screen provides buttons for navigation purposes.

Back: Goes back to the previous screen.

Home: Opens the Home screen.

Recent: Opens a screen containing thumbnails of applications recently used. Touch a thumbnail to open that application. Swipe upwards on the thumbnail to close the application.



3.7 Status Bar and Notifications Panel

The Status bar appears at the top of most screens. It displays the time, battery and other status icons, and notification icons.



The Notifications panel can be opened by swiping down from the top of the screen. To respond to a notification, touch it in the panel.



3.8 Entering Text

You can enter text, numbers, and symbols using the onscreen keyboard. Some applications open the keyboard automatically. Others require you to touch the input field where you want to enter text to open the keyboard.



To enter text, touch the keys on the keyboard to type. To enter numbers or symbols, touch the Symbols key to switch to the numbers and symbols keyboard. Touch the Settings key to set the input language and access the Android keyboard settings menu.



3.9 Function Buttons

The function buttons at the top right of the tablet perform the following functions: Home, Back, Volume Up, Volume Down.



4 Wireless Connections

The IMT-BT (Android) supports wireless connectivity via Wi-Fi, Bluetooth and mobile networks (optional).

4.1 Airplane Mode

When it is necessary to turn off all wireless radios, you can put the tablet into Airplane mode. To quickly enter Airplane mode, press and hold the power button until the power menu pops up. Touch Airplane mode. The icon displays in the Status bar.



4.2 Wi-Fi

To turn Wi-Fi on or off, touch the icon on the Quick Settings widget on the Home screen.

Or perform the following steps:

- 1. Touch e on the Home screen and open Settings
- 2. Find the Wi-Fi item under WIRELESS & NETWORKS. Slide the Wi-Fi switch on or off.

When the Wi-Fi radio is turned on and your device finds a network that you previously connected to, it will re-connect to it.



Leaving the Wi-Fi radio on will consume more power. To save battery power, turn it off when not in use.



Connecting to a Wi-Fi Network

- 1. Touch (iii) on the Home and open Settings. Turn on Wi-Fi as described above and touch **Wi-Fi**.
- 2. The tablet will scan for available networks and display them on the screen.
- 3. Touch the network you wish to connect to.
- 4. If the network is secured, you will be prompted to enter a password. If the network is open, you will be prompted to confirm that you want to connect to it.

4.3 Bluetooth

To turn Bluetooth on or off, touch the icon on the Quick Settings widget on the Home screen.

Or perform the following steps:

- 1. Touch e on the Home screen and open Settings
- 2. Find the Bluetooth item under WIRELESS & NET-WORKS. Slide the Bluetooth switch on or off.



Leaving the Bluetooth radio on will consume more power. To save battery power, turn it off when not in use.

Pairing with a Bluetooth Device

The first time you use a new Bluetooth device with your tablet, you must "pair" them, so that they know how to connect securely to each other. Afterwards, you will only need to connect to a previously paired device.

- 1. Make sure that the Bluetooth device you wish to pair is set as "discoverable" and within range.
- 2. Make sure the Bluetooth radio is turned on.
- 3. Touch e on the Home screen, open Settings and touch Bluetooth

- 4. The tablet will scan for and display the IDs of all available Bluetooth devices within range.
- 5. On the list of discovered devices, touch the ID of the device you wish to pair with.
- 6. If prompted, enter the pass code of the device (usually 0000 or 1234). Refer to the documentation that came with the device.
- If the pairing is successful, your tablet will connect to the device

4.4 **GPS**

To turn GPS on or off, touch the icon on the Quick Settings widget on the Home screen.

Or perform the following steps:

- 1. Touch e on the Home screen and open Settings
- 2. Touch Location Access under PERSONAL. Slide the Access to my location switch on or off.

When the GPS radio is turned on and your device finds a network that you previously connected to, it will re-connect to it.



Leaving the GPS radio on will consume more power. To save battery power, turn it off when not in use.

Wireless Connections



This page intentionally left blank.

5 External Connections

The IMT-BT (Android) has a USB 3.0 port, an HDMI display output, SD card slot and SIM card slot (optional) on the right side of the tablet, and an audio output on the left side. To access the connectors, use your fingernail to open the protective covers. Fully close the covers to maintain IP65 protection for the tablet.

5.1 USB Host

To connect a USB device to the tablet, such as a flash drive or external storage, use the USB 3.0 port (Type A) on the right side of the tablet.



5.2 HDMI Display Output

The HDMI (Type A) port is on the right side of the tablet.





5.3 Using an SD Card



Inserting an SD card

- 1. Locate the SD slot on the right side of the tablet and open the cover.
- Insert the card into the slot with the contacts facing upwards and the label facing the back of the tablet (refer to the drawing next to the SD card slot).
- 3 Close the cover

Removing a SD card

You can safely remove the SD card when the tablet is shut down. If you need to remove the card while the tablet is on, eject the card first to prevent corrupting or damaging the card.

- Eject the SD card (if necessary, depending on your device policy settings) by opening Windows Explorer and locating the SD card in "This Computer". Right-click on the SD card and click "Eject". The "Safe to Remove Hardware" notification will appear in the system tray.
- 2. Open the cover and press the edge of the card to release it, then pull the card out of the slot.
- Close the cover.

5.4 Installing a SIM Card (optional)

For models with optional 3G/LTE Mini PCIe card:



Inserting a SIM card

- 1. Locate the SIM slot on the right side of the tablet and open the cover.
- Insert the card into the slot with the contacts side facing the back of the tablet and the beveled corner pointing into the slot (refer to the drawing next to the SIM card slot).
- 3. Close the cover.

To remove a SIM card, gently press the edge of the card to release it, then pull the card out of the slot.

5.5 Audio Out

Insert your headphone connector into the 3.5 mm stereo audio jack on the left side of the tablet.





6 Management

The Settings application allows you to configure and customize your tablet. To open Settings, touch (iii) on the Home screen and open Settings..



Available setting items are dependent on the specific model of your tablet.

6.1 Wireless and Networks Settings

Item		Description		
Wi-Fi		Configure and use Wi-Fi		
Bluetooth		Configure and use Bluetooth		
Data usage		View the amount of data uploaded or downloaded by your tablet during a given period. You can set conditions for data usage.		
Mc	ore			
	Airplane mode	Turns off all wireless radios.		
	VPN	Add a new VPN or view previously configured VPNs		
	Tethering & portable hotspot	Share your tablet's mobile data connection via USB or as a portable Wi-Fi hotspot.		
	NFC	Turns NFC on/off		
	Android Beam	Allows data exchange when the tablet touches another device		
	Mobile networks	Set up your tablet's mobile data networks connection		



6.2 Device Settings

Item	Description	
Sound	Configure sound settings such as volume, notification sound, touch sound, etc.	
Display	Set brightness, wallpaper, sleep timeout, and font size	
Storage	View the amount of storage used and available on your tablet	
Battery	View battery usage data	
Apps	View details about installed applications and manage them.	

6.3 Personal Settings

Item	Description	
Location access	Configure how your tablet determines its location and how it shares your location with Google and others.	
Security	Configure screen lock, power-on password, visibility of passwords, device administration, and credential storage	
Language & input	Set up display language, spell checker, personal dictionary, keyboard language, input method, voice search, text-to-speech output and mouse/trackpad pointer speed	
Backup & reset	Back up data and settings, reset to factory default state	

6.4 Accounts Settings

Item	Description	
+ Add account	Add new account, manage an existing account	

6.5 System Settings

Item	Description	
Date & time	Use automatic date and time or to enter manually, choose date and time format	
Accessibility	Set up your tablet's accessibility settings	
About tablet	Get status information (battery, network, etc.), legal information model number, Android version, kernel version and build	



7 Care and Maintenance

- Avoid exposure to excessive moisture and extreme temperatures.
- ► Avoid exposure to direct sunlight or strong ultraviolet light for extended periods of time.
- ▶ Do not place anything on top of your tablet or drop objects on your tablet.
- ▶ Do not drop your tablet or subject it to severe shock.
- ▶ Do not subject your tablet to sudden and severe temperature changes. This may result in moisture condensation inside the unit and subsequent damage. In the event of moisture condensation, allow your tablet to dry out completely before powering it on.
- ▶ Avoid touching it with sharp objects to prevent scratches.
- ▶ Use a soft, lint-free cloth to clean the screen and the exterior of your device.
- Never attempt to disassemble, repair or make any modifications to your device. Disassembly, modification or any attempt at repair could cause damage to your device and even bodily injury or property damage and will void the warranty.
- ▶ Do not store or carry flammable liquids, gases or explosive materials in the same compartment as your device, its parts or accessories.



8 Additional Information

8.1 Intended User Profile

Age preference 50-70 (Intended User Profile 1)

Education: - vocational high school graduate

- major in electrical or electronics

- no maximum

Knowledge: - minimum:

- understanding of the definition of voltage,

current and frequency.

 understanding of the definition of Class I (basic insulation) and Class II (double

insulation)

 can recognize the symbols of alternating current (AC), direct current (DC), protective earth (ground), earth (ground), Class II equipment, caution, operating instructions,

"ON' (power) and "OFF" (power)

- no maximum

Language Skills: - Languages as specified in the marketing plan

for power supply.

Experience: - minimum:

- under 75 years old: training under

surveillance

- other: no special experience needed

no maximum

Permissible Impairments: - mild reading vision impairment or vision corrected to log MAR 0,2 (6/10 or 20/32)

- two arms / hand system capable of guiding

and holding device

- average degree of aging-related short term

memory impairment

- impaired by 40% resulting in 60% of normal

hearing at 500 Hz to 2 kHz



Age preference 30-50 (Intended User Profile 2)

Education: - vocational high school graduate

- major in electrical or electronics

- no maximum

Knowledge: - minimum:

- understanding of the definition of voltage,

current and frequency.

- understanding of the definition of Class I

(basic insulation) and Class II (double

insulation)

 can recognize the symbols of alternating current (AC), direct current (DC), protective earth (ground), earth (ground), Class II

equipment, caution, operating instructions,

- no maximum

Language Skills: - Languages as specified in the marketing plan

for power supply.

Experience: - minimum:

- under 50 years old: training under

"ON' (power) and "OFF" (power)

surveillance

- other: no special experience needed

no maximum

Permissible Impairments: mild reading vision impairment or vision corrected to log MAR 0,2 (6/10 or 20/32)

- two arms / hand system capable of guiding

and holding device

- average degree of aging-related short term

memory impairment

- impaired by 40% resulting in 60% of normal

hearing at 500 Hz to 2 kHz

Age preference 18-30 (Intended User Profile 3)

Education: - vocational high school graduate

- major in electrical or electronic

- no maximum

Knowledge: - minimum:

- understanding of the definition of voltage,

current and frequency.

- understanding of the definition of Class I

(basic insulation) and Class II (double

insulation)

- can recognize the symbols of alternating current (AC), direct current (DC), protective earth (ground), earth (ground). Class II

earth (ground), earth (ground), Class II equipment, caution, operating instructions,

"ON' (power) and "OFF" (power)

Language Skills: - Languages as specified in the marketing plan

for power supply.

Experience: - minimum:

- under 30 years old: training under

surveillance

- other: no special experience needed

- no maximum

Permissible Impairments: mild reading vision impairment or vision corrected to log MAR 0,2 (6/10 or 20/32)

- two arms / hand system capable of guiding

and holding device

- average degree of aging-related short term

memory impairment



8.2 EMC Information

Guidance and manufacturer's declaration - electromagnetic emissions

The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.

Emissions test	Compliance	Electromagnetic environment – guidance	
RF emissions CISPR 11	Group 1	The device uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.	
RF emissions CISPR 11	Class B	The device is suitable for use in all establishments, including domestic establishments and those directly connected to the	
Harmonic emissions IEC 61000-3-2	Class A	public low-voltage power supply network that supplies build- ings used for domestic purposes.	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies		

Guidance and manufacturer's declaration - electromagnetic immunity

The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance	
Electrostatic	±6 kV contact	+6 kV contact	Floors should be wood, concrete or	
discharge (ESD) IEC 61000-4-2	±8 kV air	±8 kV air	ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.	
Electrical fast	±2 kV for power	±2 kV for power	Mains power quality should be that of a	
transient/burst	supply lines	supply lines	typical commercial or hospital environment.	
IEC 61000-4-4	±1 kV for input/out- put lines	±1 kV for input/out- put lines		
Surge IEC 61000-4-5	±1 kV line(s) to line(s)	±1 kV line(s) to line(s)	Mains power quality should be that of a typical commercial or hospital environment.	
	±2 kV line(s) to earth	±2 kV line(s) to earth		
Interruptions	<5% <i>U</i> T	<5% <i>U</i> T	Mains power quality should be that of a	
and	(>95% dip in <i>U</i> T)	(>95% dip in <i>U</i> T)	typical commercial or hospital environ-	
voltage varia- tions	for 0,5 cycle	for 0,5 cycle	ment. If the user of the device requires continued operation during power mains	
on power supply	40% <i>U</i> T	40% <i>U</i> T	interruptions, it is recommended that the	
input lines	(60% dip in <i>U</i> T) for 5 cycles	(60% dip in <i>U</i> T) for 5 cycles	device be powered from an uninterruptible power supply or a battery.	
IEC 61000-4-11	70% <i>U</i> T	70% <i>U</i> T		
	(30% dip in <i>U</i> T)	(30% dip in <i>U</i> T)		
	for 25 cycles	for 25 cycles		
	<5% <i>U</i> T	<5% <i>U</i> T		
	(>95% dip in <i>U</i> T)	(>95% dip in <i>U</i> T)		
	for 5 sec	for 5 sec		
Power frequency	3 A/m	3 A/m	Power frequency magnetic fields should	
(50/60 Hz)			be at levels characteristic of a typical	
magnetic field			location in a typical commercial or hospital environment.	
IEC 61000-4-8				
NOTE: UT is the A	.C. mains voltage p	rior to application of	the test level.	



Guidance and manufacturer's declaration - electromagnetic immunity

The model device is intended for use in the electromagnetic environment specified below. The customer or the user of the model device should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance	
			Portable and mobile RF communications equipment should be used no closer to any part of the device, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.	
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	Recommended separation distance $d = 1.2 \sqrt{P}$	
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3 V/m	$d = 1,2 \sqrt{P}$ 80 MHz to 800 MHz $d = 2,3 \sqrt{P}$ 800 MHz to 2,5 GHz	
			where <i>P</i> is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and <i>d</i> is the recommended separation distance in meters (m).	
			Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, ^a should be less than the compliance level in each frequency range. ^b	
			Interference may occur in the vicinity of equipment marked with the following symbol:	

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

- ^a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the device is used exceeds the applicable RF compliance level above, the device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the device.
- ^b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Recommended separation distances between portable and mobile RF communications equipment and the device

The device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the device as recommended below, according to the maximum output power of the communications equipment.

Rated maximum out- put power of transmit-	Separation distance according to frequency of transmitter			
ter W	150 kHz to 80 MHz	80 MHz to 800 MHz	800 MHz to 2,5 GHz	
VV	$d=1,2\sqrt{P}$	$d=1,2\sqrt{P}$	$d = 2,3\sqrt{P}$	
0,01	0,12	0,12	0,23	
0,1	0,38	0,38	0,73	
1	1,2	1,2	2,3	
10	3,8	3,8	7,3	
100	12	12	23	

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies. NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by

absorption and reflection from structures, objects and people.



Important Safety Instructions

For user safety, please read and follow all **instructions**, **WARNINGS**, **CAUTIONS**, and **NOTES** marked in this manual and on the associated equipment before handling/operating the equipment.

- Read these safety instructions carefully.
- ▶ Keep this user's manual for future reference.
- ▶ Read the specifications section of this manual for detailed information on the operating environment of this equipment.
- ▶ To avoid electrical shock and/or damage to equipment:
- ▶ Never attempt to fix the equipment. Equipment should only be serviced by qualified personnel.
- Equipment must be serviced by authorized technicians when:

 - ▷ It has been exposed to high humidity/moisture;
 - It is not functioning or does not function according to the user's manual;
 - ▷ It has been dropped and/or damaged; and/or,
 - > It has an obvious sign of breakage.
- Do not use a battery other than one approved for your device.



Risk of explosion if battery is replaced with one of an incorrect type. Dispose of used batteries appropriately.



- ▶ Do not use an AC adapter other than one approved for your device. Use of another type of AC adapter may result in malfunction and/or danger.
 - Do not use the AC adapter in a high moisture environment. Never touch the AC adapter when your hands or feet are wet.
 - Allow adequate ventilation around the AC adapter when using it to operate the device or charge the battery. Do not cover the AC adapter with paper or other objects that will reduce cooling. Do not use the AC adapter while it is inside a carrying case.
 - Connect the AC adapter to a proper power source. The voltage and grounding requirements are found on the product case and/or packaging.
 - Do not use the AC adapter if the cord becomes damaged.
 - Do not attempt to service the adapter. There are no user serviceable parts inside. Replace the unit if it is damaged or exposed to excess moisture.

Getting Service

Ask an Expert: http://askanexpert.adlinktech.com

ADLINK Technology, Inc.

9F, No.166 Jian Yi Road, Zhonghe District

New Taipei City 235, Taiwan Tel: +886-2-8226-5877 Fax: +886-2-8226-5717

Email: service@adlinktech.com

Ampro ADLINK Technology, Inc.

5215 Hellyer Avenue, #110 San Jose, CA 95138, USA

San Jose, CA 95138, USA Tel: +1-408-360-0200

Toll Free: +1-800-966-5200 (USA only)

Fax: +1-408-360-0222 Email: info@adlinktech.com

ADLINK Technology (China) Co., Ltd.

300 Fang Chun Rd., Zhangjiang Hi-Tech Park Pudong New Area, Shanghai, 201203 China

Tel: +86-21-5132-8988 Fax: +86-21-5132-3588 Email: market@adlinktech.com

LiPPERT ADLINK Technology GmbH

Hans-Thoma-Strasse 11 D-68163 Mannheim, Germany

Tel: +49-621-43214-0 Fax: +49-621 43214-30 Email: emea@adlinktech.com

Please visit the Contact page at **www.adlinktech.com** for information on how to contact the ADLINK regional office nearest you.

Getting Service 45