

Rugged Android Tablet FIELDBOOK E1 User's Guide

Introduction

1. Please read these safety instructions carefully.
2. Please keep this User's Manual for later reference.
3. Please disconnect this equipment from connector before cleaning.
Don't use liquid or sprayed detergent for cleaning. Use moisture sheet or cloth for cleaning.
4. Make sure the equipments are connected to the power source with the correct voltage, frequency, and ampere.
5. All cautions and warnings on the equipment should be noted.

6. Never pour any liquid into opening: this could cause fire or electrical shock.
7. Never open the equipment. For safety reason, the equipment should only be opened by qualified service personnel.
8. If one of the following situations arises, get the equipment checked by a service personnel:
 - a. Liquid has penetrated into the equipment.
 - b. The equipment has been exposed to moisture.
 - c. The equipment has not worked well or you cannot get it work according to user manual.
 - d. The equipment has dropped and damaged. If the equipment has obvious sign of breakage.
9. Caution on use of battery: User the battery recommended by the manufacturer or the same type of battery installed by the manufacturer. If incorrect battery is used, it may cause explosion or fire hazard. Recycle or discard used batteries according the manufacturer's instruction or your local authority.
10. The computers use nonvolatile memory that requires a battery to retain system information when power is removed. The 3V lithium battery is on the system board. The battery life depends on the amount of time the computer is powered on. If the computer does not display the correct time and date, replace the battery.

IMPORTANT : Loss of BIOS settings occurs when the battery is removed. BIOS settings must be reconfigured whenever the battery is replaced.

WARNING : A risk of fire and chemical burn exists if the battery is not handled properly. Do not disassemble, crush, puncture, or short external contacts, or expose the battery to temperatures higher than 60 °C (140 °F). Do not dispose of a used battery in water or fire.

CAUTION : Danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

FCC Compliance Statement

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

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

CAUTION:

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

Labeling requirements

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

RF exposure warning

This equipment must be installed and operated in accordance with provided instructions and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be providing with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

SAR Value: 0.763 W/kg

This device is operation in 5.15 – 5.25GHz frequency range, then restricted in indoor use only, Outdoor operations in the 5150~5250MHz is prohibit.

This device is slave equipment, the device is not radar detection and not ad-hoc operation in the DFS band.

Canada, Industry Canada (IC) Notices

This Class B digital apparatus complies with Canadian ICES-003 and RSS-210.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Radio Frequency (RF) Exposure Information

The radiated output power of the Wireless Device is below the Industry Canada (IC) radio frequency exposure limits.

The Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized.

This device has been evaluated for and shown compliant with the IC Specific Absorption Rate ("SAR") limits when installed in specific host products operated in portable exposure conditions.

Canada, avis d'Industry Canada (IC)

Cet appareil numérique de classe B est conforme aux normes canadiennes ICES-003 et RSS-210.

Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

Informations concernant l'exposition aux fréquences radio (RF)

La puissance de sortie émise par l'appareil de sans fil est inférieure à la limite d'exposition aux fréquences radio d'Industry Canada (IC). Utilisez l'appareil de sans fil de façon à minimiser les contacts humains lors du fonctionnement normal.

Ce périphérique a été évalué et démontré conforme aux limites SAR (Specific Absorption Rate – Taux d'absorption spécifique) d'IC lorsqu'il est installé dans des produits hôtes particuliers qui fonctionnent dans des conditions d'exposition à des appareils portables.

Europe – EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC and EMC directive 2004/108/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC and EMC directive 2004/108/EC:

- < EN 55022: 2006 + A1: 2007
- < EN 61000-3-2 : 2006
- < EN 61000-3-3 : 1995 + A1 : 2001 + A2 : 2005
- < EN 55024: 1998 + A1: 2001 + A2: 2003
(IEC 61000-4-2: 2008;
IEC 61000-4-3: 2006 + A1:2007;

IEC 61000-4-4: 2004;
IEC 61000-4-5: 2005;
IEC 61000-4-6: 2003 + A1: 2004 +A2: 2006;
IEC 61000-4-8: 1993 +A1: 2000;
IEC 61000-4-11: 2004)

- < IEC/EN 60950-1: 2001
Safety of information technology equipment
- < EN 300 328 V1.7.1: 2006
- < EN 301 489-17 V2.1.1: 2009 and EN 301 489-1 V1.8.1: 2008
- < EN 62311: 2008

This device is a 2.4GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries under the following conditions and/or with the following restrictions:

- < In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.
- < This device may not be used for setting up outdoor radio links in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France.

Chapter 1

General Information

1.1. Introduction

FIELDBOOK E1 rugged tablet PC is TI® OMAP Platform (OMAP4460) processor core architecture based rugged Tablet with a bright 10.1 inch LED backlight LCD display. FIELDBOOK E1 is a high-performance tablet that runs on Google ® Android ® operating system.

All FIELDBOOK E1 tablets have been engineered and tested to meet Military Standards for Environmental Extremes (MIL STD 810G). Your tablet includes the following features that make it exceptionally rugged and durable:

- Android 4.0 ICS supported
- Highest rugged standard on the market: IP65, MIL-STD-810G; 6 feet drop resistance
- Fully communication: Wi-Fi 802.11 a/b/g/n, Bluetooth V4.0, GPS, NFC (RFID).
- Dual camera: 1.2MP FF front camera for HD video conference; 5MP AF rear camera w/ LED flash
- Programmable physical buttons: users can define the hot key by

themselves FieldControl AP.

1.2. Specification

The FIELDBOOK E1 rugged tablet PC is a flexible, multi-functional flat tablet. With following specifications that can be applied in diverse operational environments and implemented in multi-faceted applications.

1.2.1. Main System

- Platform:
Google ® Android 4.0.4 ICS
- CPU:
TI® OMAP Platform (OMAP4460 dual-core 1.5GHz)
- System Memory:
1GB LPDDRII Memory
- Storage:
1 x 32G Flash eMMC
- LCD Panel:
10.1 inch LED Backlight Screen
10.1" WXGA (1366x768) 400nits LCD + T/P(sunlight readable technology)
- Touch Panel
2-pointed Capacitive Touch Screen
- Audio:
-1 x High Quality Speaker (1W)

-Internal Microphone : 1 x in front Bezel

➤ **Communication :**

- Wi-Fi 802.11 a/b/g/n ; Bluetooth 4.0

- GPS built-in

-NFC built-in

➤ **Webcam:**

Front - 1.2 mega-pixel camera

Rear - 5 mega-pixel Auto-focus camera with LED Flash light

1.2.2. I/O Interface

- **External I/O :**

- 1 x Micro USB OTG
- 1 x Audio Combo Jack
- 1 x Micro -out Jack
- 1 x Micro SD slot
- 1 x Docking Connector
- 3 x Pass-through Connectors
- 1 x DC-Jack

- **LED Status Indicator:**

- Power LED Status: 1 x Green/Red Colors

1.2.3. In Front Control

- **Switch :**

- 1 x Power Button
- 1 x Battery on/off Switch

- **Button :**
 - Program Function Buttons : 4 x Function keys (Programmable)

1.2.4. Power Management

- **Power Adapter :**
 - AC input: 100V ~ 240V / 50~60Hz
 - DC output: 12VDC@2A, 24W
- **Battery (Internal Battery) :**
 - Internal Lithium Polymer Battery, 9600mAh/35.52Wh, 3.7V

1.2.5. Environment

- **Operation Temperature :**
 - -20°C to +60°C (MIL-STD-810G Method 501.5 and 502.5)
- **Storage Temperature :**
 - -20°C to +70°C (MIL-STD-810G Method 501.5 and 502.5)
- **Humidity :**
 - 5-95% without condensation (MIL-STD-810G Method 507.5)
- **Drop :**
 - 6-ft drop to Plywood (MIL-STD-810G Method 516.6 Procedure IV)
- **Vibration :**
 - Operating : SSD (MIL-STD-810G Method 514.6 Procedure I)
- **Mechanical Shock :**
 - Operating : 40g (peak), 11ms, sawtooth
- **Water/Dust Resistance :** IP65 equivalent

1.2.6. Material

- **Chassis :**
 - Rugged Tablet Form Factor
- **Enclosure :**
 - PC/ABS Plastic, PC/ABS and TPU Double Injection with Protective Rubber Grips Set
- **Dimension (W x H x D mm) :**
 - 277.5 x 179.7 x 22.4mm (w/o rubber corner bumper)
 - 283.5x185.7x22~28mm (w/ rubber corner bumper)
- **Weight :**
 - Approximate 1.075kg (with internal battery)

1.2.7. Operation OS

- Android 4.0.4 ICS

1.2.8. Certifications

- **EMI :**
 - FCC part 15 Class B
 - CE (EN55022 / EN55024)
- **Safety :**
 - CB (IEC60950)
- **RF (Wi-Fi+Bluetooth+GPS+RFID) :**
 - FCC part 15 subpart C
 - CE R&TTE
 - Canada IC

1.2.9.2Barcode Scanner :

Decoded Mode :

- 1D Symbologies : EAN/UPC, RSS, Code 39, Code 128, UCC/EAN 128, ISBN, ISBT, Interleaved, Matrix, Industrial and Standard 2 of 5, Codabar, Code 93/93i, Code 11, MSI, Plessey, Telepen, postal codes.
- 2D Symbologies: Data Matrix, PDF417, Micro PDF 417, Maxicode, QR, Aztec, EAN.UCC composite.

1.3. Packing List

- FIELDBOOK E1 Unit
- AC adapter
- Stylus
- Micro USB to USB type A cable
- Hooks for prehension accessories
- Handstrap
- Handle
- Shoulder strap

Chapter 2

System Setup

2.1. Exploring Your FIELDBOOK E1

Before starting to set up the FIELDBOOK E1, get familiar with the locations and purpose of controls, connectors and I/O ports, which are illustrated in the figures below. When placed upright, the front panel of the FIELDBOOK E1 appears as shown in below.

2.1.1. FIELDBOOK E1 IO

The FIELDBOOK E1 I/O is as described below.



- **Camera/2 Mega-pixel**

The built-in camera can be used as a communication device for allowing you to capture images, record videos, and have video chats. It is 2M pixels and transmitting instant image through network for conference.

- **Digital Microphone**

The built-in microphone receives sounds and voices when used with the built-in camera.

- **LED Power**

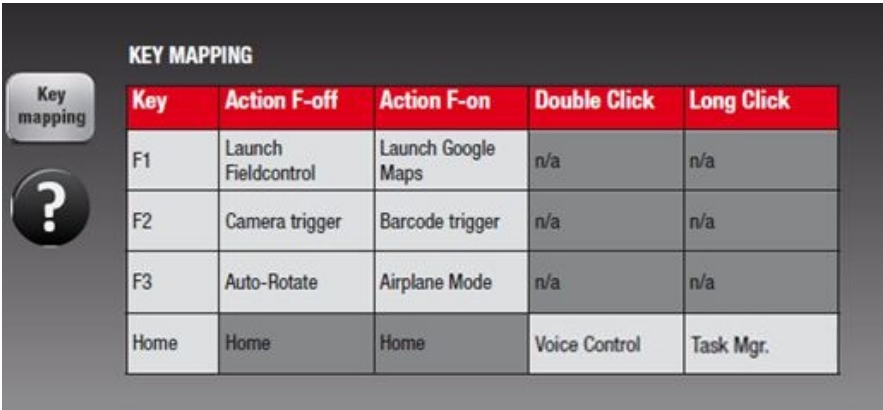
Keeps you informed of your system's current power status, Storage access status, and Wi-Fi ON/OFF status.

- **Power Indicator LED**

To let you know that system is turned on and indicate the battery charging status.

< Lights green when the battery is fully charged

- < Lights blinking amber 1Hz when battery capacity is under 15%.
- < Lights blinking amber 3Hz when battery capacity is under 8%.



The screenshot shows a 'KEY MAPPING' interface. On the left, there is a 'Key mapping' button and a circular button with a question mark. To the right is a table with five columns: 'Key', 'Action F-off', 'Action F-on', 'Double Click', and 'Long Click'. The table contains four rows of data.

Key	Action F-off	Action F-on	Double Click	Long Click
F1	Launch Fieldcontrol	Launch Google Maps	n/a	n/a
F2	Camera trigger	Barcode trigger	n/a	n/a
F3	Auto-Rotate	Airplane Mode	n/a	n/a
Home	Home	Home	Voice Control	Task Mgr.

- **Camera/5Mega-pixel**

The built-in camera can be used as a communication device for allowing you to capture images, record videos, and have video chats. It is 5.0 M pixels and transmitting instant image through network for conference.

- **Power Button**

Switch the computer power on and off, or resumes whenever it is in Suspend mode (by OS define).

- **USB Port**

The Micro USB OTG ports allows you to connect USB devices (for example, mouse, keyboard and so on) to your Tablet and connect to your PC.

- **3.5mm Headphone Jack**

Allows you to connect an external 3.5mm 4-conductor TRRS (stereo-plus-mic) headphone for personal listening and sound recording.

- **Micro SD Slot**

Support Micro SD HD/XD standard up to 64GB memory.

- **Video-out Jack**

Support FHD video output by micro HDMI cable

- **Speaker**

Integrated stereo speaker for sound and audio output for your multimedia presentations or listening pleasure.

- **Protective Rubber**

To prevent system harm from vibration or shock, the system is designed with installing protective rubber on four corners.

- **DC-Jack**

Lets you connect the AC power adapter in supplying continuous power to your Tablet PC and recharging the battery.

The AC adapter provides external power source to your system and charges the internal battery pack at the same time. The AC adapter also has an auto-switching design that can connect to any 100VAC ~ 240VAC power outlets.

To connect the power adapter:

1. Plug the AC adapter connector to the DC-Jack socket on the right side of the system.

2. Plug the power cord to the AC adapter.

Plug the other end of the power cord to a live wall outlet, at the same time, the Power LED at front panel lights up.

-- ***For the power supply of this equipment, an approved power***

cord has to be used.

-- *Make sure the socket and any extension cord(s) you use can support the total current load of all the connected devices.*

-- *Remove all power from the device prior to installing or removing any accessories, hardware, or cables*

-- *Before cleaning the system, make sure it is disconnected from any external power supplies (i.e. AC adapter).*

- **Docking Connector**

To extend the interface for the specific peripheral.

- **Battery on/off Switch**

To connect/disconnect battery power

2.2.Preparing for Installation

Your FIELDBOOK E1 is designed and pre-configured for easy setup and use. This section describes the installation steps you should follow to get the system running as quickly as possible.

2.2.1.Switch ON the main battery

Switch Battery on/off switch to "ON"

2.2.2.Plugging to the DC supply

The AC adapter provides external power source to your system and charges the internal battery pack at the same time. The AC adapter also has an auto-switching design that can connect to any 100VAC ~ 240VAC power outlets.

To connect the power adapter:

3. Plug the AC adapter connector to the DC-Jack socket on the left side of the system.
4. Plug the power cord to the AC adapter.
5. Plug the other end of the power cord to a live wall outlet, at the same time, the Power LED at front panel lights up.

-- ***For the power supply of this equipment, an approved power cord has to be used.***

-- ***Make sure the socket and any extension cord(s) you use can support the total current load of all the connected devices.***

-- ***Remove all power from the device prior to installing or removing any accessories, hardware, or cables***

-- ***Before cleaning the system, make sure it is disconnected from any external power supplies (i.e. AC adapter).***

2.2.3. Starting Your System

The Power button is found on the left side of the Tablet. Press the Power button to start your system and check that if the Power LED turns on.

After a few seconds, the system's display will turn on and your system will begin to execute.

Chapter 3

Maintenance

Your FIELDBOOK E1 needs occasional cleaning to prolong their life. Please read this section carefully to ensure proper care of FIELDBOOK E1. When it is necessary to clean it, use a soft, lint-free cloth, slightly dampened with a mild detergent solution or use the contents of any commercially available computer cleaning kit.

Never use petroleum-based solvents, or harsh detergents to clean the system. Also never spray any liquids directly on the computer case or screen. If the display screen has become smeared or dusty, clean the screen by first applying a mild glass cleaner to a soft, clean, lint-free cloth, and gently wipe the glass. Never apply liquids directly on the screen surface. Moreover, do not use paper towels to clean the display screen. Paper can scratch the display screen matte.

3.1.Maintaining the Battery

- Do not expose heat or attempt to disassemble the battery, and do not place the battery in water or in a fire.
- Do not subject the battery to strong impact, such as a blow from a hammer, or stepping on or dropping it.
- Do not puncture or disassemble the battery.
- Do not attempt to open or service the battery.
- Replace only with batteries designed specifically for this product.
- Keep the battery out of reach of children.
- Dispose of used batteries according to local regulations.

3.2.Maintaining the LCD Display

- Do not scratch the surface of the screen with any hard objects.
- Do not spray liquid directly on the screen or allow excess liquid to drip down inside the device.
- Do not place anything, such as food and drink, on the screen at any time to prevent damage to the screen.
- Clean the LCD display only with a soft cloth dampened with denatured alcohol or a proprietary LCD screen cleaner.

3.3.Cleaning the FIELDBOOK E1

- Turn off the FIELDBOOK E1 and unplug the power adapter.
- Wipe the screen and exterior with a soft, damp cloth moistened only with water. Do not use liquid or aerosol cleaners on the screen, as these will discolor the finish and damage the screen.