



## Toughpad FZ-E1 / FZ-X1 FAQs

The world's most rugged 5" handheld tablets, with data and voice technology.

### GENERAL

#### WHAT IS THE DIFFERENCE BETWEEN THE TOUGHPAD® FZ-E1 AND THE TOUGHPAD FZ-X1?

Both the Toughpad FZ-E1 and the Toughpad FZ-X1 are fully-rugged, 5" handheld tablets built for mission-critical mobile workers. The Toughpad FZ-E1 is powered by Windows® Embedded 8.1 Handheld, while the Toughpad FZ-X1 is powered by the Android™ 4.2.2 operating system, giving customers a choice of the right device to meet their needs.

#### WHO ARE THE TARGET USERS FOR THESE RUGGED HANDHELD TABLETS?

These handheld devices have been designed for field workers who require enterprise-class computing and connectivity in the field, including outdoor or harsh environments. This includes mobile professionals such as first responders, military service members and those in transportation and logistics, maintenance, utilities, manufacturing, retail, and field services and sales.





## WHAT ARE SOME OF THE STANDOUT FEATURES OF THE TOUGHPAD® FZ-E1 AND THE TOUGHPAD FZ-X1?

The Toughpad FZ-E1 and the Toughpad FZ-X1 have been built from the ground up to meet the needs of a broad range of mobile professionals. This includes voice and data connectivity options; a 6200mAh, hot-swappable battery providing up to 14 hours of continuous use based on Panasonic test conditions; and intelligent noise cancelling and dual front speakers reaching an astounding maximum volume of 100 decibels. They also offer fully-rugged designs that go beyond MIL-STD-810G criteria—including resistance to drops of up to 10' to concrete, submergibility in up to 5' of water for up to 30 minutes, and an operating temperature range of -4° F to 140° F.

## WHAT IS THE SIZE OF THE TOUGHPAD FZ-E1 AND THE TOUGHPAD FZ-X1?

For the standard configuration, the devices are 15 oz. in weight and 1.2" thin.

## WHY ARE THE TOUGHPAD FZ-E1 AND THE TOUGHPAD FZ-X1 CATEGORIZED AS HANDHELD TABLETS?

The Toughpad FZ-E1 and Toughpad FZ-X1 represent a significant expansion of Panasonic's Toughpad line, the world's most comprehensive portfolio of enterprise-focused tablets, to serve an evolving market that is increasingly in need of smaller, more portable mobile devices. Both the Toughpad FZ-E1 and the Toughpad FZ-X1 will offer options for telephony, data broadband and WiFi-only connectivity. We expect a fair portion of our customers to use the devices as tablets without telephony. For these reasons, we are referring to the devices as handheld tablets.

## WHAT IS THE WARRANTY ON THE TOUGHPAD FZ-E1 AND TOUGHPAD FZ-X1?

The Toughpad FZ-E1 and Toughpad FZ-X1 are backed by the industry's most comprehensive 3-year warranty and U.S.-based customer support.

## HOW CAN I BUY A TOUGHPAD FZ-E1 OR TOUGHPAD FZ-X1?

All Toughpad devices can be purchased through authorized Panasonic resellers.

## OPERATING SYSTEM, SECURITY AND APPLICATIONS

### WHAT APPLICATIONS ARE AVAILABLE FOR THE TOUGHPAD FZ-E1 AND TOUGHPAD FZ-X1?

Both devices offer best-of-breed vertical market-specific application solutions from leading vendors. An up-to-date list of application providers can be found on our website.

### DOES THE TOUGHPAD FZ-E1 USE THE WINDOWS PHONE OPERATING SYSTEM?

No, the Toughpad FZ-E1 is powered by the Windows® Embedded 8.1 Handheld operating system. This operating system is focused on professional usage for enterprise customers, while offering the manageability, security, and rich, multi-touch experience found on Windows® 8 and Windows® Phone 8.1.

### WHY DOES THE TOUGHPAD FZ-X1 USE THE ANDROID™ 4.2.2 OPERATING SYSTEM?

We chose to use Android 4.2.2 to give our customers an operating system that is tried, tested, proven and reliable.

### WILL PANASONIC BE PROVIDING A SOFTWARE DEVELOPMENT KIT (SDK) FOR THESE DEVICES?

Yes, we will provide the necessary API and plug-in specs for the unique functions of the device that are not integrated in the operating systems (Windows Visual Studio 2013, Android ADT).

### HOW SECURE ARE THE TOUGHPAD FZ-E1 AND TOUGHPAD FZ-X1?

Both devices are FIPS 140-2 Level 1 compliant, meeting the needs of government customers.

### DO THE TOUGHPAD FZ-E1 OR TOUGHPAD FZ-X1 ALLOW FOR MOBILE DEVICE MANAGEMENT?

The devices support standard MDM API on the Toughpad FZ-X1 and the Microsoft MDM client on the Toughpad FZ-E1. We are working with our current MDM partners to deliver a solution to our customers.

## RUGGEDNESS

### HOW RUGGED ARE THE TOUGHPAD® FZ-E1 AND TOUGHPAD FZ-X1?

The Toughpad FZ-E1 and Toughpad FZ-X1 go beyond MIL-STD-810G specifications to ensure in-field reliability. They are tested for resistance to drops of up to 10' to concrete, are fully-sealed against dust and are submersible in up to 5' of water for up to 30 minutes, and are tested for resistance to impact, shock, vibration, altitude and extreme humidity.

### WHAT IS THE OPERATING TEMPERATURE RANGE FOR THE TOUGHPAD FZ-E1 AND TOUGHPAD FZ-X1?

The devices carry an operating temperature range of -4° F to 140° F thanks to a built-in heater. Many of our users—such as delivery professionals, first responders and those in the armed services—regularly work in extreme cold or heat, which can affect the performance of lesser devices.

### ARE THE TOUGHPAD FZ-E1 AND TOUGHPAD FZ-X1 RESISTANT TO WATER AND DUST?

Yes, both devices are fully sealed, making them resistant to dust (>75µm) and water submersion (up to 5' of water for up to 30 minutes.)

### HOW HAS THE GLASS ON THE DEVICES BEEN TESTED FOR STRENGTH AGAINST DAMAGE?

The glass has been tested to withstand a 400g (14.1oz) steel ball dropped from a height of 80cm (31.5") onto the surface of the glass. The shock-absorbing structure helps to protect the device against impacts and accidental drops by the user in the field.

## BATTERY

### WHAT IS THE BATTERY LIFE OF THE TOUGHPAD FZ-E1 AND TOUGHPAD FZ-X1?

As with our Toughbook® and Toughpad devices, we have engineered these devices to deliver strong battery performance to enable workforce productivity. The devices feature a 6200mAh battery providing up to 14 hours of continuous use based on Panasonic test conditions (wireless LAN connection enabled; continuous access to the server while browsing; swipe every 1 second; page change every 30 seconds, communication every 30 seconds). Of course, the battery is user-removable as we see this as an important feature for our customers to minimize downtime in the field.

### IS THE BATTERY HOT-SWAPPABLE?

Yes, both devices feature hot-swap functionality, allowing the main battery to be swapped without powering down the device. A capacitor will keep the device running for between 30 seconds and 2 minutes (depending on usage conditions) while the user swaps out the battery.

### HOW FAST DOES THE BATTERY CHARGE?

The Toughpad FZ-E1 and Toughpad FZ-X1 are engineered for quick charging and allow for a 50% charge in just 1 hour.

### CAN YOU CHARGE THE DEVICES FROM A CAR OR OTHER VEHICLE?

Yes, a range of approved rugged vehicle charging solutions are available that support the Toughpad FZ-E1 and Toughpad FZ-X1.

## CONNECTIVITY

### WHAT CONNECTIVITY OPTIONS ARE AVAILABLE FOR THE TOUGHPAD FZ-E1 AND TOUGHPAD FZ-X1? CAN THEY BE USED TO MAKE PHONE CALLS?

Yes, the Toughpad FZ-E1 and Toughpad FZ-X1 are the first devices in the Toughpad line to offer optional voice connectivity. Both models will be available with options for 4G LTE, HSPA+, UMTS, EDGE, GPRS, CDMA 1x and EVDO Rev.A mobile broadband voice and data connectivity certified on leading mobile carrier networks. Push-to-talk service also will be available for the Toughpad FZ-X1 on specific networks and depending on service contracts.

### DO THE TOUGHPAD FZ-E1 AND TOUGHPAD FZ-X1 HAVE DUAL SIM CAPABILITIES?

Yes. The dual SIM slot is located in each device in the battery compartment underneath the battery along with a Micro SD interface.

### DO THE DEVICES SUPPORT WI-FI CONNECTIVITY?

Yes, Wi-Fi 802.11 a/b/g/n/ac is standard on both models.

### DO THE DEVICES SUPPORT BLUETOOTH®?

Yes, Bluetooth® v4.0 (Class 1) is standard.

### DO THE DEVICES SUPPORT GPS?

Yes, both devices support stand-alone GPS systems.

### DO THE DEVICES SUPPORT NFC/FELICA AND RFID?

The devices support Type A/B NFC but not for payment usage. For Felica the devices can read SmartCards. There is not currently any support for RFID.

### DO THE TOUGHPAD FZ-E1 AND TOUGHPAD FZ-X1 OFFER FEATURES FOR CLEAR VOICE COMMUNICATIONS?

The devices are equipped with intelligent noise canceling and dual front speakers reaching an astounding maximum volume of 100 decibels—about as loud as the average home stereo system. This helps to ensure clear voice communication above engine or construction noise.



## DISPLAY

### WHAT KIND OF DISPLAY DO THE TOUGHPAD® FZ-E1 AND TOUGHPAD FZ-X1 USE?

The devices feature a 5" sunlight-readable, anti-reflective HD (1280x720) LCD with high-sensitivity 10-point capacitive multi touch input.

### DO THE DEVICES HAVE AN IPS ALPHA PANEL?

No, the devices utilize a VA panel that features an LED backlighting system providing 500 cd/m<sup>2</sup> levels of brightness. On top of this the device will give users excellent visibility when using the device outdoors in bright and sunny environments.

### CAN THE DEVICES BE USED WITH GLOVES?

Yes, they feature a capacitive touchscreen with glove-enabled technology. This allows medical professionals, as well as those in industrial environments or those working in cold climates, to utilize the capacitive touchscreen even with their gloves on.

### WHAT IS THE RAIN SENSING FEATURE?

Both devices offer a rain-sensing feature, which prevents raindrops from activating the touchscreen (a common problem with consumer-grade touchscreen devices).

## OTHER FEATURES

### WHAT OPTIONS CAN BE INTEGRATED INTO THE DEVICE?

Both the Toughpad FZ-E1 and the Toughpad FZ-X1 offer an optional integrated 1D/2D barcode reader; optional magnetic stripe card reader; and Certified ANSI 12.12.01 for Hazardous Locations.

### IS THERE A CAMERA ON THE TOUGHPAD FZ-E1 AND THE TOUGHPAD FZ-X1?

Yes, both devices feature an 8MP rear camera with auto focus and LED light, as well as an 1.3MP front camera.

### HOW MANY BARCODE PATTERNS CAN BE READ WITH THE TOUGHPAD FZ-E1 AND THE TOUGHPAD FZ-X1?

The devices' optional integrated barcode reader can read both 1D and 2D barcodes up to 42 different patterns on the Toughpad FZ-E1 and 36 patterns on the Toughpad FZ-X1.

### HOW FAST CAN THIS BARCODE READER SCAN?

The devices feature an approximate 200 millisecond read scanning time, with 5 scans per second.

### WHAT KINDS OF SENSORS ARE ON THE DEVICES?

Both devices feature an ambient light sensor, proximity sensor (screen auto off and brightness), acceleration sensor (6 axis), gyro sensor (direction), and digital compass. In addition, the Toughpad FZ-X1 has an atmospheric pressure sensor.

### DO THE DEVICES HAVE INFRARED (IRDA)?

No, they do not.

### DO THE DEVICES CONFORM TO ANY SAFETY STANDARDS?

Yes, the Toughpad FZ-E1 and Toughpad FZ-X1 will conform to all required safety standards for the markets in which they are introduced. Further additional testing and certification will be performed as needed.

