Itron Mobile Radio-Field Tool

Itron Mobile Radio-Field Tool provides the ability to perform meter and ERT® installation and validation with the added convenience of leaving the radio in the vehicle.

The Itron Mobile Radio-Field Tool (IMR-FT) is a vehicle mounted radio for use with Itron's industry leading smart meters and endpoints. This device utilizes Itron's proven SRead technology in a compact 900 MHz radio that provides two-way communication with electric, gas, water and telemetry endpoints. The IMR-FT is designed to handle the rigors of a field environment including the vibration and other rough conditions encountered in fi eld service vehicles.

INTRODUCTION

Field activities such as endpoint installation, programming, validation, unlocking and resetting devices are performed with the IMR-FT along with a laptop or tablet running Field Tools or Field Deployment Manager software. Field Service Representatives (FSR) can carry their tablet to the meter and leave the IMR-FT in the vehicle. Communications are quick and easy. The tablet connects to the IMR-FT over Bluetooth® and the IMR-FT communicates with the meter/ERT using Itron's 900 MHz protocols via the external antenna. The Bluetooth 4.0 standard supports up to 300 feet of separation with clear line-of-site. The extra freedom provided by the IMR-FT streamlines field activities to help make FSRs more productive and efficient in their daily tasks.

Additionally, while the vehicle is parked, the IMR-FT with Itron Mobile for FCS can be used to collect targeted meter reads and execute Advanced AMR two-way commands to collect datalogging intervals, other consumption data, and perform secure remote service disconnect and connect operations. Temetra Mobile can be used to collect basic targeted contingency meter reads with additional capabilities coming in the future. The IMR-FT is an ideal solution for utilities who already utilize mobile computing equipment in the field.

DESIGNED FOR DEPENDABILITY

The IMR-FT uses the vehicle's accessory power, providing full-time operation throughout the day. When external power is unavailable, such as when the vehicle is parked and turned off, the IMR-FT uses an internal lithium-ion battery that is kept charged whenever the vehicle is running. The IMR-FT features a power indicator LED to let the user know if the battery is low.

Advanced Metering and Telemetry for Gas, Water and Electricity*

The IMR-FT supports a variety of programming, validation and Advanced AMR commands that work with Itron ERTs, smart meters and sensors. Available capabilities vary based on the software application used with the radio.

- Program ERTs, smart meters and other endpoints
- Validate programming and operation using Check, Read and other commands

SPECIFICATIONS

- Change operation modes including switch to supported network modes
- Update the firmware of the endpoint
- Fulfill special read requests such as move-ins and move-outs
- Extract interval data
- Remote disconnect for gas, water and electricity services

What's in the Box: IMR-FT Kit

Each IMR-FT package contains the following items:

- Itron Mobile Radio FT (IMR-FT)
- DC power adapter for use with vehicle's accessory plug
- Micro USB cable
- Choice of roof mount magnetic antenna or permanent, through-the-roof mounted antenna
- Jacket with mounting plate for multi-purpose mounting. IMR-FT Quick Reference Guide
- An 8 inch rubber duck antenna with coax adapter, part numbers 155-1010-00 (8" antenna) and 145-1043-00 (coax adapter).

SPECIFICATIONS

Functional

- Power source: Both 12v DC power cable for vehicle and Internal 2270 mAh, 3.7V single-cell lithium-ion battery*
- Operating temperature: -15°C to +50°C
- Humidity limits: 0 to 95% relative humidity, non-condensing
- Bluetooth 4.0
- USB 2.0

Lithium-ion batteries will not charge below 0°C or above 45°C

Applications and Hardware Compatibility

NOTE: IMR-FT does not support drive-by reading but will support "park" and read operations.

- Field Tools (All platforms)
- FDM (Windows 7/10 only)
- Itron Mobile 2.3 and greater (All platforms)
- Temetra Mobile (All platforms)
- Android and iOS are Bluetooth Low Energy only (use app to pair)
- Windows 7/10 are USB or Bluetooth Classic (download Itron Pairing Tool)

Physical

- Dimensions: 2.1 in x 2.9 in x 7.5 in (53mm x 74mm x 143mm)
- Weight: 0.69lb (.313kg) without jacket and mounting plate, 1.07lb (.485kg) with jacket and mounting plate

Antenna Specifications (transmit/receive)

- 5 dBi omni-directional whip
- 3 dBi omnidirectional rubber duck antenna

Transmitter/Receiver Characteristics

- Legacy wake-up transmitter: 952 or 956 MHz Licensed Frequency (MAS Band)
- Legacy wake-up transmitter peak power: 0.631 Watts Conducted
- Receiver: 908–924 MHz (ISM Band)
- Two-way command transmitter: 908–924 MHz (ISM Band)
- Two-way command transmitter peak power: 0.934 Watts Conducted
- Output impedance: 50 ohms
- Data integrity: verified in every message

Regulatory

- **Legacy wake-up transmitter, MAS band:** FCC Part 101 compliance ISED RSS-119 compliance
- **Two-way transmitter/receiver, ISM band:** FCC Part 15.247 compliance ISED RSS-247 compliance
- **USA, FCC spectrum compliance:** This device complies with Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Operation is subject to the following two conditions:
  - This device may not cause harmful interference.
  - This device must accept any interference that may cause undesirable operation.
- **Canada, ISED spectrum compliance:** This device complies with Innovation, Science and Economic Development Canada (ISED) license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, (2) this device must accept any interference, including interference that may cause undesired operation of the device.
- **RF Exposure for FCC and ISED for IMR-FT:** This device has been evaluated and found to be compliant for RF Safety with regards to Specific Absorption Rate (SAR) for portable device equipment set forth in the United States and Canada. The SAR limit for wireless mobile and/or portable devices used by the public is 1.6W per kilogram averaged over 1g of tissue. The standard incorporates a substantial margin of safety to get additional protection for the public and to account for any variations in measurements.

Approved Endpoints*

- All legacy Itron ERT® modules
- 40G / 40GB gas ERT modules
- 100G gas ERT modules
- Intelis Gas Meter
- Gen™5 500G ERT® Module
- OpenWay Riva 500G ERT® Module
- 40W / 50W water ERT Modules
- 60W water ERT modules
- 100W water ERT modules
- OpenWay Riva 500W ERT® Module
- Itron OpenWay CENTRON Bridge electricity meters in mobile mode
- Itron CENTRON electricity meters equipped with R300 or R400 modules
- Itron SENTINEL® electricity meters equipped with R300 modules

* Supported endpoints can vary across applications. Please consult the capabilities of the software app.

Itron

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