

intelleflex[®]

XC3 Technology[™]

Intelleflex FMR-6000 Starter Kit Quick Start Guide Reader Software Version 3.2.x



Part Number: 05-00087-001 Rev. A

Published September 2012

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Caution

This device should be operated with a minimum distance of at least 32 cm between its antennas and a person's body in keeping with RF exposure limits in Council Recommendation 1999/519/EU

TS-09-1210

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1. Introduction

This quick start guide describes the installation and operation of the Intellex FMR-6000 Starter Kit. Please refer to the Intellex FMR-6000 User Manual for detailed information.

The Intellex FMR-6000 RFID reader is capable of interacting with both ISO/IEC 18000-6:2010 Battery Assisted Passive (BAP) Manchester mode tags and EPC Global Class 1 Gen 2 standards compliant passive tags. The Intellex XC3 powered tags are also capable of interacting at long range using the ISO BAP or at short range with standard C1G2 readers, even after the battery is no longer able to power the tag.

2. Parts List

Each Starter Kit includes:

- 1 x Intellex FMR-6000 fixed multiprotocol reader
- 1 x Power over Ethernet injector with AC power cable
- 2 x single port antennas - one for transmit and one for receive **or** 1 x dual-patch Antennae
- 2 x antenna mounting bracket kits
- 2 x Coax cables
- 1 x Cat 5 Ethernet cable
- 1 x USB Type A to Type B cable
- 1 x FMR-6000 Starter Kit Quick Start Guide

- 20 x Intellex XC3 Technology™ RFID tags
 - 5 x STT-8000 General purpose tags
 - 5 x SMT-8100 Standard on metal tags
 - 5 x BAT-8300 Badge tags
 - 5 x FBT-8400 FOB tags
 - 5 x TMT-8500 Temperature Monitor tags

- 1 x CD containing documentation (please see readme.txt included with the Starter Kit documentation for the complete list of documents)

3. Installation Summary

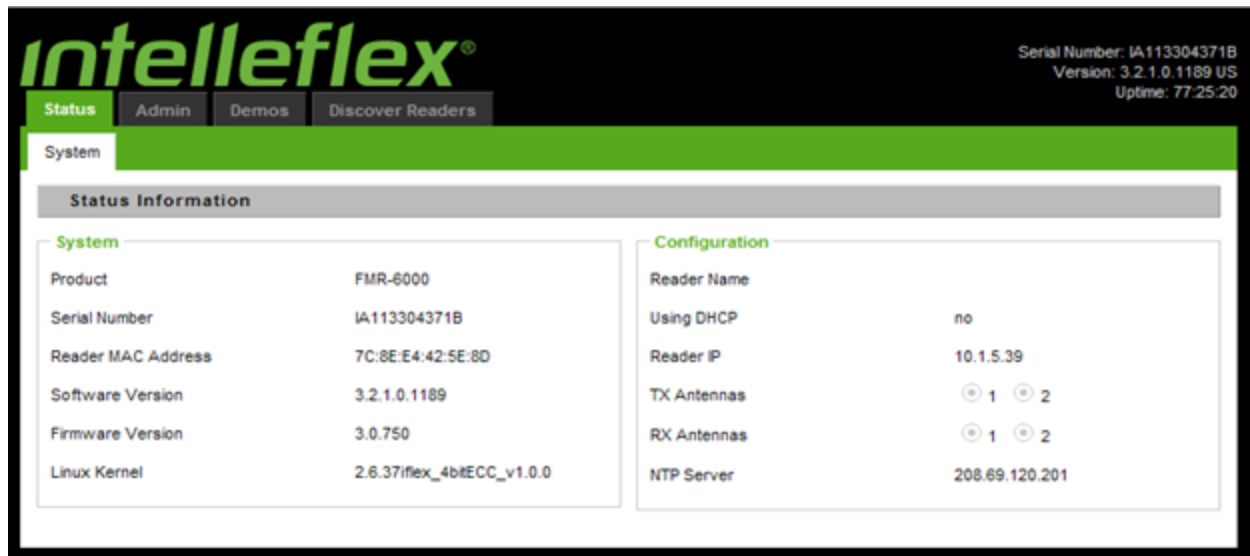
Physical Setup

1. Unpack the hardware and verify that all items listed in the FMR-6000 Starter Kit parts list are present.
2. Mount the two antennas using the attached mounting bracket to a pole or tripod. Place the antennas with a minimum of one foot spacing and pointing in the same direction. Do not face the two antennas at each other as this could significantly degrade performance. Place the antennas in the proper spatial orientation (there are directional arrows on the back of the panels). Connect one antenna with the included coax cable to the reader TX1 port, and the second antenna to the reader RX1 port. Be careful not to kink the coax cable as this can permanently damage the cable. If you are using the dual-patch antenna, use one mounting bracket. You may plug the transmit and receive cables into either of the ports on the dual-patch antenna.
3. If using a network connection with standard 802.3af Power over Ethernet (PoE) enabled, connect a cat 5 Ethernet cable directly from your local area connection's port to the RJ-45 Ethernet port on the reader.

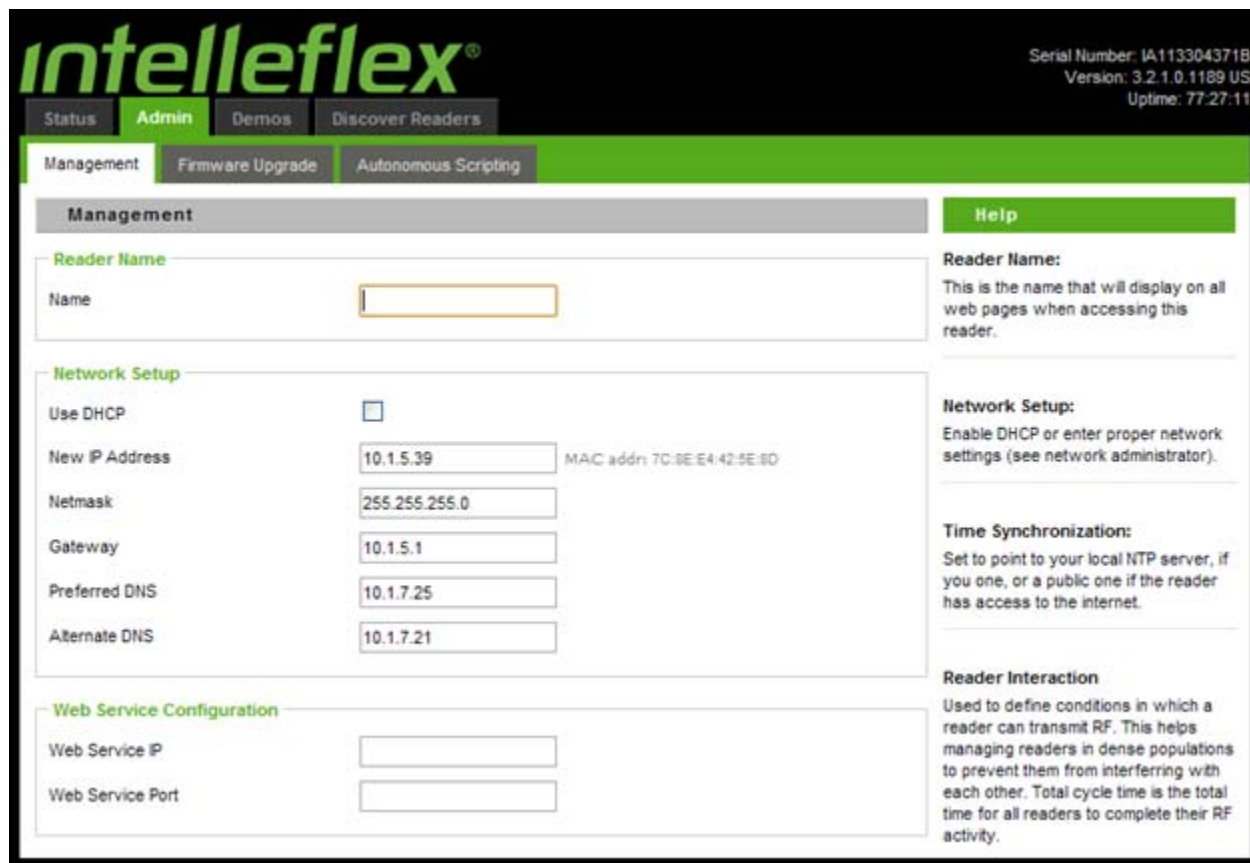
If using a network connection without PoE, you will need to utilize the **Power over Ethernet Injector** in order to supply power to the reader.

- a. Plug one end of a CAT 5 Ethernet cord into the port on the injector labeled as *LAN*. Plug the other end of this cord into your network area connection.
 - b. Plug one end of another CAT 5 Ethernet cord into the port on the injector labeled as *LAN + DC*. Take the remaining end of this cord and plug it directly into the RJ-45 port on your FMR 6000 Reader.
 - c. Plug the AC adapter into an electrical outlet, and plug the other end of the adapter into the Injector's AC port.
4. Place one or more Intellex tags within 5 to 50 feet in front of the antennas and with an unobstructed path for the initial test.
5. The reader default configuration is to use dynamic IP address from a DHCP server. If the reader needs to be set to static IP address, use the following procedure.
- a. Plug the Type A connector (rectangle) of the USB cable into your desktop or laptop computer USB slot and the Type B connector (house shape) into the reader.
 - b. Start-up pUTTy or another serial program using serial communication at 115200 bps (pUTTy can be found on the included CD). Use the following settings:
 - i. Speed (baud) = 115200
 - ii. Data bits = 8
 - iii. Stop bits = 1
 - iv. Parity = None
 - v. Flow control = XON/XOFF
- For detailed instructions, please refer to the FMR-6000 User Manual.
- c. Press the return key and select from the option menu. To use static IP addresses, select option 1 and enter an IT department approved unique IP address, net mask, and gateway, (example. *IP* = 10.0.1.15, *Net Mask* = 255.255.255.0, and *Gateway* = 10.0.1.1.)
 - d. Note: The default network setting is DHCP. Choose option 4 in the serial terminal menu to see the IP address in DHCP mode.
6. If the reader is to be used in DHCP mode, insert the included CD ROM into a Windows computer and startup the *Discovery.exe* program. The application will display all readers that are on the network. If there is more than one reader on the network, select the reader serial number that matches the label on the reader to test. Note the IP address assigned to the reader.
7. Download either Google Chrome or Mozilla Firefox 3.5 and later and start up the web browser. Enter in the IP address from either step 4 (static IP) or step 5 (dynamic IP), e.g. 10.0.1.15. Internet Explorer is not supported at this time.

- The home page of the reader web demo is the Status page shown below. It displays various information unique to this reader. Verify that the serial number corresponds to the number listed on the label on the bottom of the FMR-6000 reader.



- Clicking on the Admin tab will bring up Admin page. The reader's name can be changed by entering it in the Reader Name field and clicking on the Save Settings button.



- Clicking on the Demos tab will bring up the Demo page. In the Find Tags section, select the Loop check box and click on the Find Tags button. The tags that were placed in front of the antenna should be displayed in the Search Results lists. Each unique tag will be listed with the last observed received signal strength dBm value and frequency hopping channel. If you see the tags you placed in front of the antenna on the list, congratulations – you have successfully set up the reader and inventoried the tags.

Find Tags

Quick Settings

Find Tags Loop Max Attempt

Last Operation Result

Find Tags: Success

Search Configuration

Configuration

Add Config Line Delete Config Line Activate Criteria Activate Offset

Protocol	Power(dBm)	Q Value	TX Ant	RX Ant	Performance Profile
C3	30	4	1	1	High Speed / Low Sensitivity

Search Results

Clear Tags 4 Unique Tags Found / 4 Total Tags Found / 1 Attempts

Real Time

```
bbaa99887766554400086655
bbaa99887766554400086544
bbaa99887766554400086523
bbaa99887766554400086564
```

Unique

EPC	Count	Config	Type	dBm	Channel
bbaa99887766554400086654	1	1	C3	-72.19	49
bbaa99887766554400086523	1	1	C3	-74.63	49
bbaa99887766554400086544	1	1	C3	-72.0	49
bbaa99887766554400086655	1	1	C3	-74.0	49

Manage Tag Memory - Double click a tag above.

- Refer to the FMR-6000 User Guide for complete instructions and explanations of the display.

4. Technical Support

Limited technical support is provided for the Intellex HMR-9090 Starter Kit. For technical assistance and reader service and repair, please contact Technical Support:

E-mail: support@intelleflex.com

Phone: +1.408.200.6520

If the reader needs to be returned for service, please fill out the warranty card included with developer's kit and call in to receive a Return Materials Authorization (RMA) number and instructions on how to return the reader or visit Intellex.com for more detail.