FaxFinder® Fax Server

FF-240, FF-440, FF-840, FF240-IP Hardware and Installation Guide
FaxFinder Fax Server Hardware and Installation Guide

Models: FF240-IP, FF240, FF440, FF840

Part Number: S000664, Version 1

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Support Portal

To create an account and submit a support case directly to our technical support team, visit: https://support.multitech.com.

Support

Business Hours: M-F, 8am to 5pm CT

<table>
<thead>
<tr>
<th>Country</th>
<th>By Email</th>
<th>By Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe, Middle East, Africa:</td>
<td><a href="mailto:support@multitech.co.uk">support@multitech.co.uk</a></td>
<td>+(44) 118 959 7774</td>
</tr>
<tr>
<td>U.S., Canada, all others:</td>
<td><a href="mailto:support@multitech.com">support@multitech.com</a></td>
<td>(800) 972-2439 or (763) 717-5863</td>
</tr>
</tbody>
</table>

Warranty

To read the warranty statement for your product, visit www.multitech.com/warranty.go. For other warranty options, visit www.multitech.com/es.go.

World Headquarters

Multi-Tech Systems, Inc.
2205 Woodale Drive, Mounds View, MN 55112
Phone: (800) 328-9717 or (763) 785-3500
Fax (763) 785-9874
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Chapter 1 – Product Overview

Product Overview

FaxFinder is an all-in-one fax server that provides faxing capabilities over a WAN from a corporate office to remote offices as well as to field sales people.

FaxFinder IP provides distributed faxing capabilities through an IP telephone system, allowing companies to provide fax services to remote offices and field sales people.

FaxFinder devices convert inbound faxes to PDF or TIFF files and delivers them to a recipient's inbox, a network folder, or a network printer. Users can send outbound faxes through a fax client, web browser, or the print function of other applications.

The FaxFinder includes the following models:

- FF240-IP
- FF240 2-modems
- FF440 4-modems
- FF840 8-modems

Multi-Tech provides the following manuals for use with FaxFinder:

- **Administrator Guide** provides details on installing, configuring, and managing FaxFinder.
- **Specifications and Regulatory Information** provides product specifications, installation instructions, and regulatory information.
- **User Guide** provides details on sending faxes and using the client software.
- **Developer Guide** provides information and examples for the FaxFinder Web Services API.

Package Contents

The package contents include:

- FaxFinder with factory installed software
- Universal power supply with power cord
- One serial cable
- Adhesive plastic feet
- Safety notice card
- Two mounting brackets and screws; the same bracket is used for wall and rack mounting
- Mounting Kit (Optional, purchased separately)

FaxFinder x40 devices only:

- One phone cable for each port with RJ-11 at both ends
- One serial debug cable
FaxFinder Expansion Module

FaxFinder Expansion Modules are optional hardware that allow you to add eight or sixteen additional modems to your FaxFinder.

- FFEX8 8-modems
- FFEX16 16-modems

Safety Warnings

Analog Telecom Safety Warnings

Before servicing, disconnect this product from its power source and telephone network. Also:

- Never install telephone wiring during a lightning storm.
- Never install a telephone jack in wet locations unless the jack is specifically designed for wet locations.
- Use this product with UL and cUL listed computers only.
- Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
- Use caution when installing or modifying telephone lines.
- Avoid using a telephone during an electrical storm. There is a remote risk of electrical shock from lightning.
- Do not use a telephone in the vicinity of a gas leak.

**CAUTION:** To reduce the risk of fire, use only 26 AWG or larger UL Listed or CSA Certified telecommunication Line cord.

Lithium Battery

- A lithium battery (3V, coin cell, CR1632) located within the product provides backup power for the timekeeping. This battery has an estimated life expectancy of ten years.
- When this battery starts to weaken, the date and time may be incorrect.
- Battery is not user replaceable. If the battery fails, the device must be sent back to MultiTech Systems for battery replacement.
- Lithium cells and batteries are subject to the Provisions for International Transportation. Multi-Tech Systems, Inc. confirms that the Lithium batteries used in the MultiTech product(s) referenced in this manual comply with Special Provision 188 of the UN Model Regulations, Special Provision A45 of the ICAO-TI/IATA-DGR (Air), Special Provision 310 of the IMDG Code, and Special Provision 188 of the ADR and RID (Road and Rail Europe).

**CAUTION:** Risk of explosion if this battery is replaced by an incorrect type. Dispose of batteries according to instructions.

**Attention:** Risque d'explosion si vous remplacez la batterie par un modèle incompatible. Jetez les piles usagées selon les instructions.

Ethernet Ports

**CAUTION:** Ethernet ports and command ports are not designed to be connected to a public telecommunication network.
Ports Ethernet

**CAUTION:** Les ports Ethernet et de commande ne sont pas conçus pour être raccordés à un réseau de télécommunications public.

**FF-240IP Specifications**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Description</strong></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>W 9.1 in x H 1.9 in x D 6.1 in (W 23.2 cm x H 4.7 cm x D 15.5 cm)</td>
</tr>
<tr>
<td><strong>Note:</strong> Adding the plastic feet increases the height to 1.877 in. See Mounting FaxFinder for dimensions with mounting brackets attached.</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>2.6 lbs (1.2 kg)</td>
</tr>
<tr>
<td><strong>Connectors</strong></td>
<td></td>
</tr>
<tr>
<td>Connectors</td>
<td>1 RJ-45 console serial port</td>
</tr>
<tr>
<td></td>
<td>1 RJ-45 Ethernet port</td>
</tr>
<tr>
<td></td>
<td>2 USB ports (inactive)</td>
</tr>
<tr>
<td><strong>Power Requirements</strong></td>
<td></td>
</tr>
<tr>
<td>Input Voltage</td>
<td>12 Volt @ 5A</td>
</tr>
<tr>
<td></td>
<td>For additional power information, see Power Draw.</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td></td>
</tr>
<tr>
<td>Operating Environment</td>
<td>-22° to 185° F (-30° to +60° C)</td>
</tr>
<tr>
<td>Storage Environment</td>
<td>-40° to 185° F (-40° to +85° C)</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>20 to 90% noncondensing</td>
</tr>
<tr>
<td><strong>Fax Specifications</strong></td>
<td></td>
</tr>
<tr>
<td>Maximum T.38 Ports</td>
<td>8</td>
</tr>
<tr>
<td>Web Connections</td>
<td>50</td>
</tr>
<tr>
<td>File Upload Size²</td>
<td>48MB max for the Send Fax Web page; 36MB max for T.37, Client software and API</td>
</tr>
<tr>
<td><strong>Certifications</strong></td>
<td></td>
</tr>
<tr>
<td>EMC Approvals</td>
<td>FCC Part 15 Class A, EN 55022 Class A, EN 55024</td>
</tr>
<tr>
<td>Safety Approvals</td>
<td>UL\cUL 60950-1 ed.2, IEC 60950-1 ed.2 &amp; EN (2006 +am.11)</td>
</tr>
</tbody>
</table>

¹UL Listed @ 40°C. Limited by power supply. UL Certification does not apply or extend to an ambient above 40°C and has not been evaluated by UL for ambient greater than 40°C. This product is intended to be supplied by a Listed Power Unit marked L.P.S. or Class 2 and rated 12 VDC 5A.

²The difference in maximum size allowed is due to the data encoding for T.37, the client software, and API attachments.
### FF240, FF440, and FF840 Specifications

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Description</td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>W 15.335 in x H 1.717 in x D 6.033 in</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Adding the plastic feet increases the height to 1.877 in. For dimensions with mounting brackets, refer to the Mounting FaxFinder topic.</td>
</tr>
<tr>
<td>Weight</td>
<td><strong>FF240</strong>  4.1 lbs (1.9 kg)  <strong>FF440</strong>  4.2 lbs (2.0 kg)  <strong>FF840</strong>  4.5 lbs (2.1 kg)</td>
</tr>
<tr>
<td>Connectors</td>
<td>1 RJ-45 console serial port  1 RJ-45 Ethernet port  2 USB ports  RJ-11 line jacks</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>12 Volts</td>
</tr>
<tr>
<td></td>
<td>See FaxFinder Power Draw for additional power information.</td>
</tr>
<tr>
<td>Environment</td>
<td></td>
</tr>
<tr>
<td>Operating Environment</td>
<td>-40° to 167° F (-40° to +75° C)</td>
</tr>
<tr>
<td>Storage Environment</td>
<td>-40° to 185° F (-40° to +85° C)</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>20 to 90% noncondensing</td>
</tr>
<tr>
<td>Fax Specifications</td>
<td>(MT5634SMI modem) Group 3 Fax (T.30 and T.4) Modulations: ITU V.34, ITU V.17, V.29, V.27 and V.21</td>
</tr>
<tr>
<td>Web Connections</td>
<td>50</td>
</tr>
<tr>
<td>File Upload Size</td>
<td>48MB max for the Send Fax Web page 36MB max for T.37, Client software and API</td>
</tr>
<tr>
<td>Certifications</td>
<td></td>
</tr>
<tr>
<td>EMC Approvals</td>
<td>FCC Part 15 Class A, EN 55022 Class A, EN 55024</td>
</tr>
<tr>
<td>Safety Approvals</td>
<td>UL\cUL 60950-1 ed.2, IEC 60950-1 ed.2 &amp; EN (2006 +am.11)</td>
</tr>
<tr>
<td>Telecom Approvals</td>
<td>47CFR Part 68, CS03, TBR21; Other countries also included</td>
</tr>
</tbody>
</table>

1UL Listed @ 40°C. Limited by power supply. UL Certification does not apply or extend to an ambient above 40°C and has not been evaluated by UL for ambient greater than 40°C.
Listé UL à 40° C, limité par l'alimentation. La certification UL ne s'applique pas ou ne s'étend pas à des températures dépassant 40° C, et le produit n'a pas été évalué par UL pour une température ambiante dépassant 40° C.

**Note:** This product is intended to be supplied by a Listed Power Unit marked L.P.S. or Class 2 and rated 12 VDC 5A.

The difference in maximum size allowed is due to the data encoding for T.37, the client software, and API attachments.

### FaxFinder Expansion Module Specifications

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensions</strong></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>W 15.335 in x H 1.717 in x D 6.033 in.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> For dimensions with mounting brackets, refer to the Mounting a FaxFinder Expansion Unit topics.</td>
</tr>
<tr>
<td>Weight</td>
<td>7.77 pounds</td>
</tr>
<tr>
<td><strong>Connectors</strong></td>
<td></td>
</tr>
<tr>
<td>Connectors</td>
<td>USB 2.0 High speed Mini B connector</td>
</tr>
<tr>
<td></td>
<td>8 or 16 RJ-11 line jacks</td>
</tr>
<tr>
<td><strong>Power Requirements</strong></td>
<td></td>
</tr>
<tr>
<td>Input Voltage</td>
<td>9 Volts</td>
</tr>
<tr>
<td></td>
<td>Refer to FaxFinder Expansion Modules Power Draw for additional power information.</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td></td>
</tr>
<tr>
<td>Operating Environment</td>
<td>-40° to 152° F (-40° to +67° C)</td>
</tr>
<tr>
<td>Storage Environment</td>
<td>-40° to 185° F (-40° to +85° C)</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>20 to 90% noncondensing</td>
</tr>
<tr>
<td><strong>Certifications</strong></td>
<td></td>
</tr>
<tr>
<td>EMC Approvals</td>
<td>FCC Part 15 Class A, EN 55022 Class A, EN 55024</td>
</tr>
<tr>
<td>Safety Approvals</td>
<td>UL\cUL 60950-1 ed.2, IEC 60950-1 ed.2 &amp; EN (2006 +am.11)</td>
</tr>
<tr>
<td>Telecom Approvals</td>
<td>47CFR Part 68, CS03, TBR21; Other countries also included</td>
</tr>
</tbody>
</table>

**Note:** This product is intended to be supplied a listed power Module marked L.P.S. or Class 2 and rates from 9Vdc 2A.

Multi-Tech Systems, Inc. recommends that the customer incorporate a 10% buffer into their power source when determining product load.

1Typical is the current while the unit is powered up, but not sending or receiving faxes.

2Maximum is the current while sending or receiving faxes.

3Peak is the current while sending or receiving faxes.
FaxFinder FF240-IP Power Draw

FaxFinder power draw at 12 volts.

<table>
<thead>
<tr>
<th>Sleep Mode</th>
<th>Typical</th>
<th>Maximum</th>
<th>Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current (AMPS)</td>
<td>0.636</td>
<td>0.680</td>
<td>0.845</td>
</tr>
</tbody>
</table>

Multi-Tech Systems, Inc. recommends incorporating a 10% buffer into the power source when determining product load.

1Typical is the current while the unit is powered up, but not sending or receiving faxes.
2Maximum is the current while sending or receiving faxes.
3Peak is the peak current while sending or receiving faxes.

FaxFinder x40 Power Draw

FaxFinder power draw at 12 volts.

**FF240**

<table>
<thead>
<tr>
<th>Sleep Mode</th>
<th>Typical</th>
<th>Maximum</th>
<th>Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current (AMPS)</td>
<td>0.665</td>
<td>0.711</td>
<td>0.837</td>
</tr>
</tbody>
</table>

**FF440**

<table>
<thead>
<tr>
<th>Sleep Mode</th>
<th>Typical</th>
<th>Maximum</th>
<th>Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current (AMPS)</td>
<td>0.801</td>
<td>0.890</td>
<td>0.930</td>
</tr>
</tbody>
</table>

**FF840**

<table>
<thead>
<tr>
<th>Sleep Mode</th>
<th>Typical</th>
<th>Maximum</th>
<th>Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current (AMPS)</td>
<td>0.965</td>
<td>1.100</td>
<td>1.210</td>
</tr>
</tbody>
</table>

Multi-Tech Systems, Inc. recommends that the customer incorporate a 10% buffer into their power source when determining product load.

1Typical is the current while the unit is powered up, but not sending or receiving faxes.
2Maximum is the current while sending or receiving faxes.
3Peak is the peak current while sending or receiving faxes.

FaxFinder Expansion Modules Power Draw

FaxFinder Expansion Module power draw at 9 volts.
**FFEX8**

<table>
<thead>
<tr>
<th></th>
<th>Typical&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Maximum&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Peak&lt;sup&gt;3&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current (AMPS)</td>
<td>0.837</td>
<td>0.895</td>
<td>0.940</td>
</tr>
<tr>
<td>Watts</td>
<td>7.59</td>
<td>8.11</td>
<td>--</td>
</tr>
</tbody>
</table>

**FFEX16**

<table>
<thead>
<tr>
<th></th>
<th>Typical&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Maximum&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Peak&lt;sup&gt;3&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current (AMPS)</td>
<td>1.430</td>
<td>1.560</td>
<td>1.630</td>
</tr>
<tr>
<td>Watts</td>
<td>12.81</td>
<td>13.95</td>
<td>--</td>
</tr>
</tbody>
</table>

Multi-Tech Systems, Inc. recommends that the customer incorporate a 10% buffer into their power source when determining product load.

<sup>1</sup>Typical is the current while the module is powered up, but not sending or receiving faxes.

<sup>2</sup>Maximum is the current while sending or receiving faxes.

<sup>3</sup>Peak is the current while sending or receiving faxes.

**Fax File Types**

Users can fax the following document types through the web management interface. Additional options are available through the FaxFinder Client.

- PDF
- PS
- TIF or TIFF
- TXT

**Note:** When printing from another application, FaxFinder sends the file as TIF images.

**Requirements**

The FaxFinder Fax Server is an IP enabled fax server that works with other devices and services on your communication network to send and receive faxes and to perform administrative functions. FaxFinder requires:

- SMTP server access
  - Used to distribute FaxFinder emails that contain faxes, administrative notices, and log files.
  - Multi-Tech recommends that you create a DNS A record for FaxFinder.
  - Depending on the location of email recipients and IP resources, FaxFinder may also require WAN access through your network’s Internet gateway.

  **Analog phone lines that provide dial tone and ring voltage at traditional levels and cadence**
  - To fully use FaxFinder’s inbound fax routing, communication lines (PBX ports) need to pass direct inward dial (DID) information in DTMF format to FaxFinder when the FaxFinder port goes off hook to answer a call.
**A workstation for initial FaxFinder configuration**
Depending on your network, you may need to connect FaxFinder directly to the workstation to complete initial network setup. You will need to identify and possibly change the workstation’s current IP. If using a laptop, note that an active WiFi connection may interfere with the Ethernet connection to FaxFinder.

**Internet Browser**
Use a current version of your Internet browser. Some FaxFinder Web Management pages do not render correctly on outdated browsers.

**Static IP address**
FaxFinder does not support automatically assigned IP addresses via DHCP. FaxFinder is set from the factory with an IP address of 192.168.2.1 (netmask 255.255.255.000).

**Ethernet and RJ-45 Cable**
You need to know if your Ethernet equipment has a simple traditional switch or hub, a managed V-LAN switch that is IP address aware (and will block traffic that is not from its configured subnet), or a port on a network enabled device (such as a PBX or router) with controls that are similar to a managed switch.
- FaxFinder’s Ethernet interface is full duplex, auto negotiating 10/100/1000 Mb and auto polarity sensing. Auto polarity allows you to use a traditional straight through or cross-over, Ethernet RJ-45 cable.
- FaxFinder does not support POE (Power over Ethernet). You may need to disable POE features on the Ethernet port that you connect to the FaxFinder.

**SIP and T.38 Network Requirements**
You need to know what parameters your network requires to communicate with the FaxFinder.

**Fax Routing Overview**

**Inbound Routing**
Depending on your network configuration, FaxFinder can route incoming faxes to a network printer, network share, and through your mail server to any individual user. FaxFinder can deliver incoming faxes as email attachments to any user on your mail system, whether local, remote, or mobile.
**Outbound Routing**

You can configure FaxFinder so that users can send faxes through a T.37 email, the FaxFinder Fax Client, a web browser, or a Web API. Fax Client Software, installed on a user’s Windows computer, also allows the user to send faxes through the print function of any software.

**Static or Dynamic Delivery**

The source and type of communication lines that connect to FaxFinder dictate if the inbound fax routing method is set for dynamic or static delivery. Dynamic delivery is based on the number dialed by the party sending the fax. Static delivery is based on which communication line/FaxFinder port the inbound fax uses.

Although FaxFinder ports can be connected to an ordinary phone line (POTS line), they are often connected to a PBX extension/station port. FaxFinder can deliver incoming faxes as email messages to any user on your network. Use this feature when your PBX can route multiple receiving numbers to a single station port. A PBX may determine which number was dialed by the originator, for example, through an IP enabled PBX communicating directly with an IP based PSTN service or other IP enabled communication equipment.

**PBX Call Routing**

1. PBX sends a call to the FaxFinder by ringing the extension connected to the FaxFinder port.
2. FaxFinder picks up (goes off hook).
3. The PBX transmits a string of DTMF digits to the extension. Usually this is the last x number of digits dialed by the calling side.
4. FaxFinder port answers as a fax machine and receives the incoming fax.
5. When the fax transmission completes, FaxFinder uses the DID information to determine delivery options. FaxFinder does this by reading the recipient inbound routing table in the FaxFinder.

When the PBX provides call routing information, it does not matter which FaxFinder port (line) receives the call. The fax will be routed to all the delivery options associated with the DID number (recipient extension) defined in the Recipient routing table.
If the PBX/analog line cannot provide DID call routing, incoming faxes will be routed solely on the delivery options associated with specific FaxFinder port (line) that the call was received on. You can define multiple delivery options for each physical line/port.
Chapter 2 – Hardware and Installation

Connectors and LEDs by Model

FaxFinder FF240

FaxFinder FF240 Connectors

FaxFinder FF240 LEDs

FaxFinder FF440

FaxFinder 440 Connectors

FaxFinder FF440 LEDs

FaxFinder FF840

FaxFinder FF840 Connectors

FaxFinder FF840 LEDs
FaxFinder FF240-IP Connectors

**Connector Descriptions**

<table>
<thead>
<tr>
<th>Label</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-8</td>
<td>PSTN/POTS RJ 11 phone line ports. The FaxFinder 240 has ports 1-2, the FaxFinder 440 has ports 1-4, and the FaxFinder 840 has ports 1-8. Ports on the back line up with the modem LEDs on the front.</td>
</tr>
<tr>
<td>+12V</td>
<td>Power receptacle for provided power cord.</td>
</tr>
<tr>
<td>CONSOLE</td>
<td>DE-9 connection for serial access and control of the FaxFinder.</td>
</tr>
<tr>
<td>USB</td>
<td>Not used at this time. Used to connect a FaxFinder Expansion Unit.</td>
</tr>
<tr>
<td>RESET</td>
<td>Use to reboot the FaxFinder.</td>
</tr>
<tr>
<td>LAN 1</td>
<td>RJ-45 receptacle for network connection.</td>
</tr>
</tbody>
</table>

FaxFinder FF240-IP LEDs

**LED Descriptions**

<table>
<thead>
<tr>
<th>Label</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| Speed | Speed | When lit, if the color is:  
  - **Green**: Ethernet rate is 1000 Mbps  
  - **Yellow**: Ethernet rate is 100 Mbps  
  - **Unlit**: Ethernet rate is 10 Mbps |
| Link/Act | Link / Activity | Lit when a physical link has been established with the Ethernet network. Blinks when there is activity. |
| HDD | High Density Drive | When the internal hard drive is accessed, this LED is yellow. When unlit, HDD is not being accessed. |
| Power | Power | Solid (constant) green if unit is on. |

One set of the following for each modem/port:

<table>
<thead>
<tr>
<th>Label</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD</td>
<td>Transmit Data</td>
<td>TD LED flashes when the modem transmits data to another modem.</td>
</tr>
<tr>
<td>RD</td>
<td>Receive Data</td>
<td>RD LED flashes when the modem receives data from another modem.</td>
</tr>
<tr>
<td>CD</td>
<td>Carrier Detect</td>
<td>Carrier of remote modem is detected.</td>
</tr>
</tbody>
</table>
FaxFinder Expansion Module Connectors and LEDs

This topic applies to optional FaxFinder Expansion Modules.

**FaxFinder FFEX8**

![FaxFinder FFEX8 Connectors](image1)

FaxFinder FFEX8 Connectors

![FaxFinder FFEX8 LEDs](image2)

FaxFinder FFEX8 LEDs

**FaxFinder FFEX16**

![FaxFinder FFEX16 Connectors](image3)

FaxFinder FFEX16 Connectors

![FaxFinder FFEX16 LEDs](image4)

FaxFinder FFEX16 LEDs

**Connector Descriptions**

<table>
<thead>
<tr>
<th>Label</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-8 or 1-16</td>
<td>PSTN/POTS RJ 11 phone line ports. The FaxFinder Expansion Module comes with either 8 ports or 16 ports. Ports on the back line up with the modem LEDs on the front.</td>
</tr>
<tr>
<td>9V</td>
<td>Power receptacle for provided power cord.</td>
</tr>
<tr>
<td>USB</td>
<td>Used to connect to FaxFinder.</td>
</tr>
</tbody>
</table>

**LED Descriptions**

<table>
<thead>
<tr>
<th>Label</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>Power</td>
<td>Solid (constant) green if module is on.</td>
</tr>
<tr>
<td>One set of the following for each modem/port:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TD</td>
<td>Transmit Data</td>
<td>TD LED flashes when the modem transmits data to another modem.</td>
</tr>
<tr>
<td>RD</td>
<td>Receive Data</td>
<td>RD LED flashes when the modem receives data from another modem.</td>
</tr>
<tr>
<td>CD</td>
<td>Carrier Detect</td>
<td>Remote modem carrier is detected.</td>
</tr>
</tbody>
</table>
Before Installing FaxFinder

Disable Call Waiting on lines or PBX ports to be used with FaxFinder. FaxFinder does not support Call Waiting. The Call Waiting beep causes fax communication errors.

Mounting FaxFinder (Optional)

The FaxFinder 240-IP is a table-top unit that can be wall- or rack-mounted. Mounting kits can be purchased separately.

When installing the unit in a closed or multi-unit enclosure, follow the recommended installation defined by the enclosure manufacturer.

Note: The images in this section show a different FaxFinder model. The dimensions and mounting instructions are the same.

Rack Safety

When installing the unit in a closed or multi-unit enclosure, follow the recommended installation defined by the enclosure manufacturer.

Note: The ambient temperature of the rack interior must not exceed 40° Celsius.

- Do not place the unit directly on top of other equipment or place other equipment directly on top of the unit.
- If installing the unit in a closed or multi-unit enclosure, ensure adequate airflow within the rack so that the maximum recommended ambient temperature (40° C) is not exceeded.
- Ensure that the unit is properly connected to earth ground by verifying that it is reliably grounded when mounted within a rack.
- If a power strip is used, ensure that the power strip provides adequate grounding of the attached apparatus.
- When mounting the equipment in the rack, make sure mechanical loading is even to avoid a hazardous condition. The rack should safely support the combined weight of all the equipment it supports.
- Ensure that the main supply circuit is capable of handling the load of the equipment. See the power label on the equipment for load requirements.
- Only properly qualified service personnel should install this equipment. Only connect like circuits - connect SELV (Secondary Extra Low Voltage) circuits to SELV circuits and TN (Telecommunications Network) circuits to TN circuits.

Mounting FaxFinder in a 19-inch Rack

Use these steps to mount FaxFinder in a 19-inch rack enclosure.
Note:

Attaching the device to the rail of an EIA 19-inch rack enclosure may require two people.

1. Position a mounting bracket on the right side as shown.

2. Secure the bracket to right side using three provided screws as shown.

3. Position a mounting bracket on the left side.
4. Secure the bracket to left side using three provided screws.
5. Remove feet (4) from the unit.
6. Secure the unit to rack rails by the brackets and mount the FaxFinder in the rack enclosure per the rack manufacturer’s mounting procedure. Because equipment racks vary, screws for rack-rail mounting are not provided. Follow the instructions of the rack manufacturer and use screws that fit.

Mounting FaxFinder on a Wall

Use these steps to mount FaxFinder on a wall.

1. Position a mounting bracket on the right side using two mounting screw holes.
2. Secure the bracket to the device using two provided screws.
3. Position a mounting bracket on the left side using two mounting screw holes.
4. Secure the bracket to the device using two provided screws.
Cabling FaxFinder

To cable FaxFinder:

1. Connect the power cord to an outlet or power strip and to the power adapter.
2. Connect the power adaptor to the 12V connector on the FaxFinder.
   
   Use only the power supply provided with the FaxFinder. Using any other power supply voids the warranty and can damage the FaxFinder.
3. Verify power.
   
   - The Power LED comes on immediately after power is applied.
   - FaxFinder takes a short time to boot up when you apply power.
4. Connect FaxFinder to Ethernet Network. Plug one end of your RJ-45 Ethernet cable into the FaxFinder's Ethernet port (labeled LAN1) and the other end into your network Ethernet hub. This Ethernet cable is not included with your FaxFinder unit.

   **Warning:**

   Before connecting to the Ethernet Network, determine if the network is a 192.168.2.x subnet. FaxFinder's factory default IP address is 192.168.2.1. Connecting the FaxFinder to a network that has a different device at the same IP address will cause data interference.

   If your existing Ethernet network uses a 192.168.2.x subnet, connect from the Administrative PC to the FaxFinder using an RJ-45 Ethernet cable and configure the FaxFinder's IP address to an IP address currently available on the Ethernet network. (Refer to Configuring FaxFinder's IP address and Network Settings.) When the FaxFinder's IP address has been configured, you can connect the FaxFinder into the network.

5. Use the RJ-11 cables to connect individual ports to either a PBX or POTS lines.

Cabling a FaxFinder Expansion Module to FaxFinder

To cable FaxFinder Expansion Module to Faxfinder:

1. Connect the Expansion Module power cord to an outlet or power strip and to the power adapter.
2. Connect the power adaptor to the 12V connector on the Expansion Module.

   **Caution:** Use only the power supply provided with the Expansion Module. Using any other power supply voids the warranty and can damage the unit.
3. Verify power. The Power LED lights up immediately after power is applied.
4. Power down the FaxFinder.
5. Use the USB cable to connect the USB port on the Expansion Module to the USB port on the FaxFinder.
6. Power up the FaxFinder.
7. Use the RJ-11 cables to connect individual ports to either a PBX or POTS lines.
Chapter 3 – Regulatory Information

47 CFR Part 68 Telecom

1. This equipment complies with Part 68 of the 47 CFR rules and the requirements adopted by the ACTA. Located on this equipment is a label that contains, among other information, the registration number and Ringer Equivalence Number (REN) for this equipment or a product identifier in the format:

   For current products: US:AAAEQ##Txxxx.
   For legacy products: AU7USA-xxxxx-xx-x

   If requested, this number must be provided to the telephone company.

2. A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable 47 CFR Part 68 rules and requirements adopted by the ACTA. It’s designed to be connected to a compatible modular jack that is also compliant.

3. The Ringer Equivalence Number (REN) is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##Txxxx. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

4. If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

5. The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

6. If trouble is experienced with this equipment, please contact Multi-Tech Systems, Inc. at the address shown below for details of how to have the repairs made. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

7. Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

8. No repairs are to be made by you. Repairs are to be made only by Multi-Tech Systems or its licensees. Unauthorized repairs void registration and warranty.

9. If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this equipment does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

10. Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

11. This equipment is hearing aid compatible.

12. Manufacturing Information on telecommunications device (modem):

   (Modem embedded in FaxFinder)
REGULATORY INFORMATION

Manufacturer: Multi-Tech Systems
Trade Name: SocketModem
Model Number: MT5634SMI
Registration Number: AU7USA-25814-M5-E
Ringer Equivalence: 0.3B
Modular Jack (USOC): RJ11C or RJ11W (single line)
Service Center in USA: Multi-Tech Systems, Inc.
2205 Woodale Drive
Mounds View, MN 55112 USA
(763)785-3500
(763) 785-9874 (Fax)

47 CFR Part 15 Regulation Class A Devices

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. 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.
- Plug 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.

This device complies with Part 15 of the 47 CFR rules. Operation of this device is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.
Fax Branding Statement

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including fax machines, to send any message unless such message clearly contains the following information:

- Date and time the message is sent.
- Identification of the business, other entity, or other individual sending the message.
- Telephone number of the sending machine or such business, other entity, or individual.

This information is to appear in a margin at the top or bottom of each transmitted page or on the first page of the transmission. This information in the margin is referred to as fax branding.

Any number of fax software packages can be used with this product. Refer to the fax software manual for setup details. Typically, the fax branding information must be entered via the configuration menu of the software.

Canadian Limitations

Notice: This equipment meets the applicable Industry Canada Terminal Equipment Technical Specifications. This is confirmed by the registration number. The abbreviation, IC, before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment.

Notice: The REN assigned to each terminal equipment provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed five.

Industry Canada Class A Notice

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Reglement Canadien sur le materiel brouilleur.

EMC, Safety, and R&TTE Directive Compliance

The CE mark is affixed to this product to confirm compliance with the following European Community Directives:

- Council Directive 2014/35/EU on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits;

Restriction of the Use of Hazardous Substances (RoHS)

Multi-Tech Systems, Inc.
Certificate of Compliance
2011/65/EU

Multi-Tech Systems, Inc. confirms that its embedded products comply with the chemical concentration limitations set forth in the directive 2011/65/EU of the European Parliament (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment - RoHS).

These MultiTech products do not contain the following banned chemicals¹:

- Lead, [Pb] < 1000 PPM
- Mercury, [Hg] < 1000 PPM
- Hexavalent Chromium, [Cr+6] < 1000 PPM
- Cadmium, [Cd] < 100 PPM
- Polybrominated Biphenyl, [PBB] < 1000 PPM
- Polybrominated Diphenyl Ether, [PBDE] < 1000 PPM

Environmental considerations:

- Moisture Sensitivity Level (MSL) = 1
- Maximum Soldering temperature = 260°C (in SMT reflow oven)

¹Lead usage in some components is exempted by the following RoHS annex, therefore higher lead concentration would be found in some modules (>1000 PPM);

- Resistors containing lead in a glass or ceramic matrix compound.

REACH Statement

Registration of Substances

After careful review of the legislation and specifically the definition of an “article” as defined in EC Regulation 1907/2006, Title II, Chapter 1, Article 7.1(a)(b), it is our current view that Multi-Tech Systems, Inc. products would be considered as “articles.” In light of the definition in § 7.1(b) which requires registration of an article only if it contains a regulated substance that “is intended to be released under normal or reasonably foreseeable conditions of use,” our analysis is that Multi-Tech Systems, Inc. products constitute nonregisterable articles for their intended and anticipated use.

Substances of Very High Concern (SVHC)

Per the candidate list of Substances of Very High Concern (SVHC) published October 28, 2008 we have reviewed these substances and certify the Multi-Tech Systems, Inc. products are compliant per the EU “REACH”
requirements of less than 0.1% (w/w) for each substance. If new SVHC candidates are published by the European Chemicals Agency, and relevant substances have been confirmed to be greater than 0.1% (w/w), Multi-Tech Systems, Inc. will provide updated compliance status.

Multi-Tech Systems, Inc. also declares it has been duly diligent in ensuring that the products supplied are compliant through a formalized process which includes collection and validation of materials declarations and selective materials analysis where appropriate. This data is controlled as part of a formal quality system and will be made available upon request.

**Waste Electrical and Electronic Equipment Statement**

**WEEE Directive**

The WEEE Directive places an obligation on EU-based manufacturers, distributors, retailers, and importers to take-back electronics products at the end of their useful life. A sister directive, ROHS (Restriction of Hazardous Substances) complements the WEEE Directive by banning the presence of specific hazardous substances in the products at the design phase. The WEEE Directive covers all MultiTech products imported into the EU as of August 13, 2005. EU-based manufacturers, distributors, retailers and importers are obliged to finance the costs of recovery from municipal collection points, reuse, and recycling of specified percentages per the WEEE requirements.

**Instructions for Disposal of WEEE by Users in the European Union**

The symbol shown below is on the product or on its packaging, which indicates that this product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.

July, 2005
Information on HS/TS Substances According to Chinese Standards

In accordance with China’s Administrative Measures on the Control of Pollution Caused by Electronic Information Products (EIP) # 39, also known as China RoHS, the following information is provided regarding the names and concentration levels of Toxic Substances (TS) or Hazardous Substances (HS) which may be contained in Multi-Tech Systems Inc. products relative to the EIP standards set by China’s Ministry of Information Industry (MII).

Hazardous/Toxic Substance/Elements

<table>
<thead>
<tr>
<th>Name of the Component</th>
<th>Lead (PB)</th>
<th>Mercury (Hg)</th>
<th>Cadmium (CD)</th>
<th>Hexavalent Chromium (CR6+)</th>
<th>Polybrominated Biphenyl (PBB)</th>
<th>Polybrominated Diphenyl Ether (PBDE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printed Circuit Boards</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Resistors</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Capacitors</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Ferrite Beads</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Relays/Opticals</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>ICs</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Diodes/ Transistors</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Oscillators and Crystals</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Regulator</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Voltage Sensor</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Transformer</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Speaker</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Connectors</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>LEDs</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Screws, Nuts, and other Hardware</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>AC-DC Power Supplies</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Software /Documentation CDs</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Booklets and Paperwork</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Chassis</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

X Represents that the concentration of such hazardous/toxic substance in all the units of homogeneous material of such component is higher than the SJ/Txxx-2006 Requirements for Concentration Limits.

O Represents that no such substances are used or that the concentration is within the aforementioned limits.
### Information on HS/TS Substances According to Chinese Standards (in Chinese)

依照中国标准的有毒有害物质信息

根据中华人民共和国信息产业部 (MII) 制定的电子信息系统 (EIP) 标准—中华人民共和国《电子信息产品污染控制管理办法》（第 39 号），也称作中国 RoHS，下表列出了 Multi-Tech Systems, Inc. 产品中可能含有的有毒物质 (TS) 或有害物质 (HS) 的名称及含量水平方面的信息。

<table>
<thead>
<tr>
<th>成分名称</th>
<th>铅 (PB)</th>
<th>汞 (Hg)</th>
<th>镉 (CD)</th>
<th>六价铬 (CR6+)</th>
<th>多溴联苯 (PBB)</th>
<th>多溴二苯醚 (PBDE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>印刷电路板</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>电阻器</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>电容器</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>铁氧体磁环</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>继电器/光学部件</td>
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**X** 表示所有使用类似材料的设备中有害/有毒物质的含量水平高于 SJ/Txxx-2006 限量要求。

**O** 表示不含该物质或者该物质的含量水平在上述限量要求之内。
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