DATASHEET

mFi®

Machine-to-Machine Management System

Models: mPort, mPort-S, mPower, mPower mini, mPower PRO, mFi-CS, mFi-DS, mFi-THS, mFi-MSC, mFi-MSW, mFi-LD, mFi-MPW

Automated Machine Control

Sensor Data Collection and Analytics

Plug and Play Installations

UBIQUITI® NETWORKS

Overview

mFi® is a Machine-to-Machine management system from Ubiquiti Networks®. mFi hardware is managed and monitored from the mFi Controller software. The mFi Controller allows you to create rules that trigger actions based on data from your mFi sensors. For example, motion detection can turn a light on, or a high temperature reading can trigger a fan. The mFi platform is compatible with third-party devices, making the options unlimited!

Features

Plug and Play Installation Use standard Ethernet cable to connect machines and sensors. Use Wi-Fi to seamlessly connect mFi nodes to your IP network. Unlimited device scalability allows you to add mFi devices as needed.

Powerful Functionality Create powerful relationships between sensors, machines, and powered devices.

Mobile Support The mFi iOS application is available for iPhone and iPad. Other mobile devices can connect to a customized mobile version of the mFi Controller interface using a web browser.

Sophisticated User Experience From auto-detection of machines through intuitive and powerful rule creation, the mFi Controller transforms a machine network into an automated symphony.

Hardware

In-Wall Devices There are two in-wall devices available for mFi management. The mFi Outlet is a standard in-wall dual electrical outlet with Wi-Fi that features energy monitoring and can be independently controlled by an mFi Controller. The mFi Switch is an in-wall manageable switch/dimmer. In switch mode, it can be used to turn lights on and off. In dimmer mode, it can control incandescent, halogen, dimmable CFL, or dimmable LED lamps. Energy monitoring and controls are available in the mFi Controller.

mPower The mPower™ products are mFi-controllable power outlets with Wi-Fi capability. There are three mPower models available. The mPower mini is a single-port outlet, the mPower is our standard 3-port power strip, and the mPower PRO is an 8-port power strip that also includes an Ethernet port. All feature independent, switchable AC ports and energy monitoring.

mPorts and Sensors There are two mPort™ models available for connecting devices to the mFi network. The mPort has two mFi RJ45 connectors and a terminal block connector. The mPort Serial features RS232/422/485 serial connectivity through a standard DB9 serial port or a terminal block connector. Both have built-in Wi-Fi and Ethernet to connect to the IP network. Ubiquiti offers a variety of motion, temperature, current, and door sensors to connect to the mPort and your mFi network. These sensors connect to the mPort using a standard RJ45 cable, except for the mFi-DS, which connects using a terminal block connector.

Software

The mFi Controller software is designed to work with the Ubiquiti Networks mFi product line and third-party devices. The software interface design is based on the popular and easy-to-use UniFi® software interface. The mFi Controller software allows you to manage your mPort, mPower, sensor, in-wall, and third-party devices from your web browser.

Features

Machine Auto Detection The mFi Controller software will auto-detect and provision mFi devices and connected machines on the machine network.

Advanced Analytics Powerful graphing with user-defined views provides in-depth analysis of the machine network.

Events and Alerts User-defined event recording and alerts provide feedback on machine network activity.

Remote Control Capability Remotely control the power and functionality of the machine network.

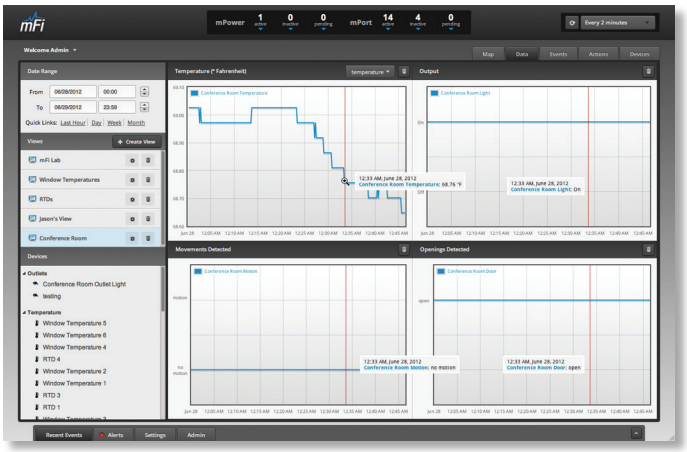
Remote Terminal Support Terminal command windows support unlimited machine network scalability through a single interface.

System Requirements

- Microsoft Windows 7/8, Windows Vista, Mac OS X, or Ubuntu Linux 12.04 or later 64-Bit Operating System
- Web Browser: Mozilla Firefox, Google Chrome, or Microsoft Internet Explorer 8 (or higher)
- Java Runtime Environment 1.6 (1.6.0_26 or higher recommended)
- Flash Player 10
- Minimum 2 GB RAM is highly recommended

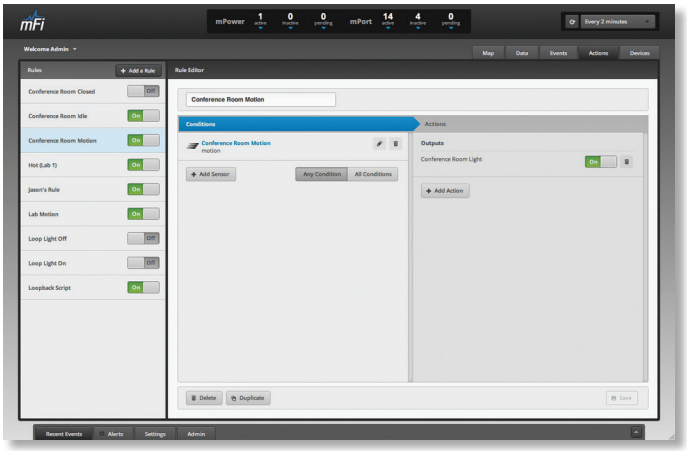
Maps

Upload map images of your location(s) for a visual representation of your machine network.



Customizable Data Views

Display information on your machines and sensors in a customizable view with selected times and date ranges.



Advanced Rule Creation

Create powerful relationships and automation in your machine network with complete freedom.

In-Wall Device Specifications

In-Wall Manageable Outlet

mFi-MPW, mFi-MPW-W	
Dimensions	110.8 x 71 x 67.7 mm (4.32 x 2.8 x 2.67")
Weight (without Wall Plate)	160 g (5.6 oz)
Electrical Rating	110 - 125VAC, 50 - 60 Hz, 15A
Maximum Power Load	15A per Socket (Not Simultaneous) 15A Total Combined
Wires	Line, Neutral, and Ground
Wall Plate	Removable
Interface	Status LED Reset Button Initialize Button
LED	Yellow/Blue
Wi-Fi	802.11b/g/n
Functions	Dual Relays for Power Control Energy Monitoring
ESD/EMP Protection	Air: ± 8KV, Contact: ± 4KV
Operating Temperature	0 to 40° C (32 to 104° F)
Operating Humidity	10 to 95% Noncondensing
Shock and Vibration	-40° C, 2 Hrs / +85° C, 2 Hrs, 5 Cycles
Safety	UL Listed

mFi-MPW

mFi-MPW-W

Back View

In-Wall Device Specifications

In-Wall Manageable Switch/Dimmer

mFi-LD, mFi-LDW	
Dimensions	110.8 x 71 x 67.7 mm (4.32 x 2.8 x 2.67")
Weight (without Wall Plate)	150 g (5.3 oz)
Electrical Rating	110 - 125VAC, 60 Hz
Maximum Power Load	15A in Switch Mode 5A in Dimmer Mode
Wires	Line, Neutral, Load, and Ground
Wall Plate	Removable
Interface	Status LED Initialize Button Air Gap Switch
LED	Yellow/Blue
Wi-Fi	802.11b/g/n
Functions	Switch or Dimmer Mode Energy Monitoring
ESD/EMP Protection	Air: ± 8KV, Contact: ± 4KV
Operating Temperature	0 to 40° C (32 to 104° F)
Operating Humidity	10 to 95% Noncondensing
Shock and Vibration	-40° C, 2 Hrs / +85° C, 2 Hrs, 5 Cycles
Safety	UL Listed

mFi-LD

mFi-LD-W

Back View

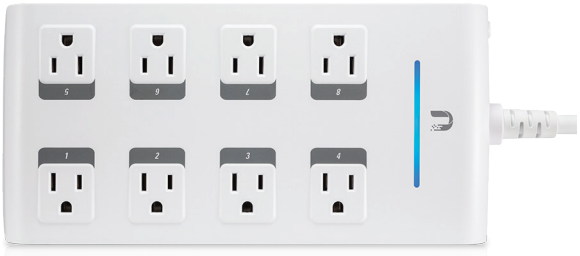
mPower Specifications

mPower™ PRO

mPower PRO	
Dimensions	250.37 x 116.7 x 42 mm (9.86 x 4.59 x 1.65")
Weight	754.4 g (26.61 oz)
Mounting	Wall (Kit Included)
Power	110 - 125VAC, 50 - 60 Hz,15A Per Outlet, 15A Total
Outlets	8
Networking Interface	(1) 10/100 Ethernet Port
Memory	16 MB RAM, 8 MB Flash
Wi-Fi Standards	802.11b/g/n
LEDs	1 LED (Status)
Operating Temperature	0 to 40° C (32 to 104° F)
Humidity	95% RH Max.

mPower PRO (EU)	
Dimensions	250,37 x 116,7 x 49 mm (9.86 x 4.59 x 1.93")
Weight	754,4 g (26.61 oz)
Mounting	Wall (Kit Included)
Power	220 - 250VAC, 50 Hz, 16A Per Outlet, 16A Total
Outlets	6
Networking Interface	(1) 10/100 Ethernet Port
Memory	16 MB RAM, 8 MB Flash
Wi-Fi Standards	802.11b/g/n
LEDs	1 LED (Status)
Operating Temperature	0 to 40° C (32 to 104° F)
Operating Humidity	10 to 90% Noncondensing

mPower PRO



mPower PRO (EU)

mPower Specifications

mPower™

mPower	
Dimensions	241.3 x 116.9 x 41.27 mm (9.5 x 4.60 x 1.62")
Weight	790 g (27.87 oz)
Mounting	Wall (Kit Included)
Power	110 - 125VAC, 50 - 60 Hz, 15A Per Outlet, 15A Total
Outlets	3
Memory	16 MB RAM, 8 MB Flash
Wi-Fi Standards	802.11b/g/n
LEDs	1 LED (Status)
Operating Temperature	-10 to 45° C (14 to 113° F)
Humidity	95% RH Max.

mPower (EU)	
Dimensions	240 x 82,8 x 41,5 mm (9.45 x 3.26 x 1.63")
Weight	545 g (19.22 oz)
Mounting	Wall (Kit Included)
Power	220 - 250VAC, 50 Hz, 16A Per Outlet, 16A Total
Outlets	3
Memory	16 MB RAM, 8 MB Flash
Wi-Fi Standards	802.11b/g/n
LEDs	1 LED (Status)
Operating Temperature	-10 to 45° C (14 to 113° F)
Humidity	95% RH Max.

mPower

mPower (EU)

mPower Specifications

mPower™ mini

mPower mini	
Dimensions	110.8 x 71 x 67.7 mm (4.36 x 2.79 x 2.67")
Weight	150 g (5.29 oz)
Power	110 - 125VAC, 50 - 60 Hz, 15A
Outlets	1
Memory	16 MB RAM, 8 MB Flash
Wi-Fi Standards	802.11b/g/n
LEDs	1 LED (Status)
Operating Temperature	0 to 45° C (32 to 113° F)
Humidity	10-95%, Noncondensing

mPower mini (EU)	
Dimensions	110,8 x 71 x 67,7 mm (4.36 x 2.79 x 2.67")
Weight	170 g (6 oz)
Power	220 - 250VAC, 50 Hz, 10A
Outlets	1
Memory	16 MB RAM, 8 MB Flash
Wi-Fi Standards	802.11b/g/n
LEDs	1 LED (Status)
Operating Temperature	0 to 45° C (32 to 113° F)
Humidity	10-95%, Noncondensing

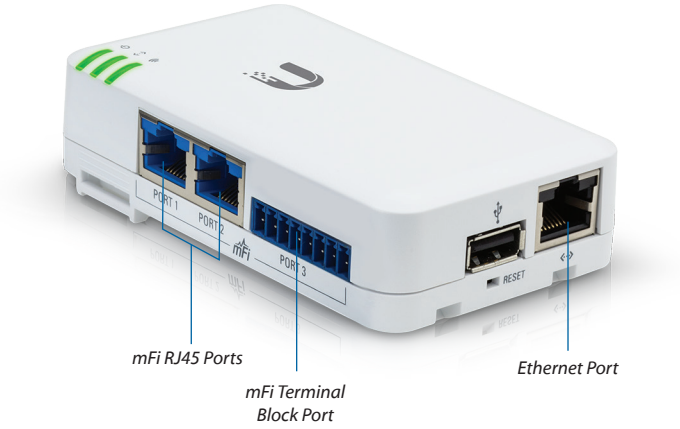
mPower mini

mPower mini (EU)

mPort Specifications

mPort™

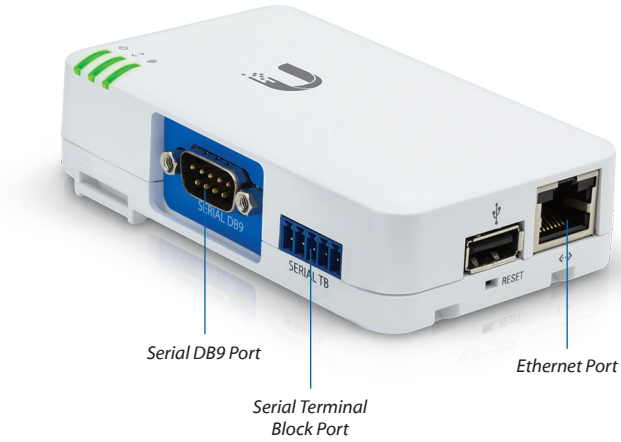
mPort	
Dimensions (without Bracket) (with Bracket)	100 x 60 x 27.5 mm (3.94 x 2.36 x 1.08") 100 x 60 x 36.5 mm (3.94 x 2.36 x 1.44")
Weight (with Bracket)	119 g (4.2 oz)
Power Supply	24V, 0.5A Surge Protection Integrated PoE Adapter (Included)
Max. Power Consumption	3W
Networking Interface	(1) 10/100 Ethernet Port
Ports	(2) mFi RJ45 Ports (1) mFi Terminal Block Port
Antenna	Internal
Output Power	18 dBm
Wi-Fi Standards	802.11b/g/n
Memory	16 MB RAM, 8 MB Flash
LEDs	3 LEDs (Power, Ethernet, Status)
Mounting	Wall-Mount Bracket (Included)
Operating Temperature	-10 to 70° C (14 to 158° F)
Operating Humidity	5 to 80% Noncondensing



mPort Specifications

mPort™ Serial

mPort-S	
Dimensions (without Bracket) (with Bracket)	100 x 60 x 27.5 mm (3.94 x 2.36 x 1.08") 100 x 60 x 36.5 mm (3.94 x 2.36 x 1.44")
Weight (with Bracket)	119 g (4.2 oz)
Power Supply	24V, 0.5A Surge Protection Integrated PoE Adapter (Included)
Max. Power Consumption	3W
Networking Interface	(1) 10/100 Ethernet Port
Ports	(1) DB9 Serial Port (1) Terminal Block Serial Port
Antenna	Internal and External, Antenna included
Output Power	18 dBm
Wi-Fi Standards	802.11b/g/n
Serial Protocols	RS232, RS422, RS485
Memory	16 MB RAM, 8 MB Flash
LEDs	3 LEDs (Power, Ethernet, Status)
Mounting	Wall-Mount Bracket (Included)
Operating Temperature	-10 to 70° C (14 to 158° F)
Operating Humidity	5 to 80% Noncondensing



mPort Sensor Specifications

These sensors are designed to be used with the mFi mPort.

mFi-MSC	
Dimensions	134.5 x 134.5 x 30.5 mm (5.30 x 5.30 x 1.20")
Weight	136 g (4.80 oz)
RF Immunity	10V/m at 80 MHz to 2 GHz
Warm Time	2 Minutes
Angle of View	360°
Cone of Detection	110° Wide Angle
Ports	(1) mFi RJ45 Port
Mounting	Ceiling-Mount Bracket (Included)
Mounting Height	Up to 4.5 m (15 ft.)
Operating Temperature	0 to 50° C (32 to 122° F)
Operating Humidity	5 to 95% Noncondensing

Ceiling Mount Motion Sensor

mFi-MSW	
Dimensions	146 x 66 x 52 mm (5.75 x 2.60 x 2.05")
Weight	127 g (4.48 oz)
RFI Immunity	Avg. 10 V/m (80 to 2,000 MHz)
Detection Range	10 x 10 m, 110° @ 25° C
Ports	(1) mFi RJ45 Port
Mounting	Wall/Ceiling-Mount Bracket (Kits included)
Mounting Height	2.3 m Typical
Operating Temperature	-10° to 45° C (14 to 113° F)
Operating Humidity	95% RH Max.

Wall Mount Motion Sensor

mFi-DS	
Dimensions	50 x 9.5 x 7.7 mm (1.97 x 0.37 x 0.30")
Weight (Magnet and Switch)	350 g (12.35 oz)
Contact Form	Form A (SPST)
Maximum Rating	1.0A @ 28VDC
Initial Contact Resistance	0.3 Ω Maximum
Operating Range	20 mm (Typical)
Wiring	Screw Terminal
Mounting	Adhesive or Screws (Included)
Operating Temperature	-10 to 60° C (14 to 140° F)
Operating Humidity	≤80% Noncondensing

Door Sensor

mPort Sensor Specifications

These sensors are designed to be used with the mFi mPort.

Temperature Sensor

mFi-THS	
Dimensions	100 x 85 x 27.8 mm (3.94 x 3.35 x 1.09")
Weight	80 g (2.82 oz)
Temperature Range	-10 to 50° C (14 to 122° F)
Accuracy at +25° C, 50% RH	±0.5° C
Temperature Accuracy from -10 to +50° C	Max. ±1.3° C
Response Time	<15 Seconds
Ports	(1) mFi RJ45 Port
Operating Temperature	-25 to 60° C (-13 to 140° F)
Operating Humidity	0 to 95% Noncondensing

Current Sensor

mFi-CS	
Dimensions	32 x 57 x 22 mm (1.26 x 2.24 x 0.87")
Size of Opening	13 x 13 mm (0.51 x 0.51")
Weight	50 g (1.76 oz)
Ports	(1) mFi RJ45 Port
Input Current	0 to 100A
Load	Linear*
Core Material	Ferrite
Bobbin	Nylon
Mechanical Strength	Number of Switching Operations ≥ 1000 Times (Tested at 20° C)
Dielectric Strength (Between Shell and Output)	6000VAC/1 min.
Fire Resistance Rating	UL94-V0
Operating Temperature	-25 to 70° C (-13 to 158° F)
Operating Humidity	≤85% Noncondensing

* Non-linear loads are approximated as linear loads (sine wave).

Specifications are subject to change. Ubiquiti products are sold with a limited warranty described at: www.ubnt.com/support/warranty
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