

RControl App credentials:**About this document**

This document was prepared and wholly owned by M2M Services. It is intended to provide trained personnel with the installation of the MQ03-LTE-M-FIRE-AV. M2M Services reserve the right to edit and revise this manual without notice.

Agency Listings and Approvals

These listings and approvals apply only to the module specified in this document. In some cases, listing may be in progress.

FCC Statement

This equipment complies with FCC rules Part 15, FCC registration No. RI7ME310G1WW and operation is subject to the following conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received.

ETL No. 5013005, conforms to following UL standards:

UL 864 – Control Units and Accessories for Fire Alarm Systems

UL 1610 – Central-Station Burglar Alarm Units

Limited Liability

The user agrees that although the Device could reduce the risk of fire, theft, burglary, or other dangers, it does not guarantee against such events. M2M Services will not take any responsibility regarding personal, property or revenue loss while using the Device. M2M Services responsibility according to local laws does not exceed the value of the purchased system. M2M Services is not affiliated with GSM operators providing cellular services; therefore it is not responsible for network services, coverage, or its operation.

Manufacturer Warranty

The Device carries a non-transferable hardware limited warranty by the manufacturer M2M Services. This warranty does not cover any postal or labor costs for the removal and reinstallation of the Device. This warranty does not cover any subscriber agreements or failure of services provided

under the terms of such subscriber agreements, or failure of cellular, GPRS, LAN or other related networks functions and services. The warranty is not valid if the device has been modified or used in a manner contrary to its intended purpose and does not cover damage to the Device caused by installation or removal of the Device or any of its components. This warranty is void if the Device has been damaged by improper maintenance, SIM card removal, accident or unreasonable use, negligence, acts of God, neglect, improper service, or other causes not arising out of defect in materials or build. This warranty does not cover the elimination of externally generated electrostatic fields or noise, or the correction of problems with the antenna or weak signal reception, damage to software, accessories or alarm system external components, cosmetic damage or damage due to negligence, misuse, abuse, failure to follow operating instructions, accidental spills or cleaners applied by the customer, damage due to environmental causes such as floods, airborne fallout, chemicals, salt, hail, windstorms, moisture, lightning or extreme temperatures, damage due to fire, theft, loss or vandalism, damage due to improper storage and connection to equipment of another manufacturer, modification of existing equipment, faulty installation or short circuit.

M2M Services will not be liable in any event of incidental, special or consequential damages (including loss of profits), and the Client shall have no claim against M2M Services for termination of contracts, indemnification, compensation for loss of customers, loss of profits, prospective profits, distribution rights, market share, goodwill, investments made or any similar losses that may result from any faults in the operation of the Device and the services provided by M2M Services.

MQ03-LTE-M-FIRE-AV-V2
Cellular Communicator with Dial Capture interface**Installation and Operation Manual**

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© M2M Services
1 Kukush Str, building M8
Sofia 1309, Bulgaria

www.m2mservices.com

Safety Instructions

- This unit must be checked by a qualified technician once a year.
- The MQ03-LTE-M-FIRE-AV-V2 device contains a radio transceiver operating over LTE CAT-M1 band.
- Do not use the Device with medical devices, in places or where it could interfere with other devices and cause any potential danger.
- Do not expose the Device to high humidity, chemical environment, or mechanical impacts.
- Do not use the Device in hazardous environment. Do not store or install the Device in overheated, dusty, wet or overcooled places.
- The Device should be mounted in areas with restricted access. Any system repairs must be done only by qualified, safety aware personnel. Do not disassemble or refit the Device. Do not attempt to personally repair it.
- Mains power must be disconnected before any installation starts. The device installation or maintenance must not be done during stormy conditions.
- The device must be powered by DC 12-29V power supply.
- Blown fuses or any other components of the Device must not be replaced by the user.
- Keep the Device dry. Any liquid, i.e., rain, moisture, may destroy or damage the internal circuitry.
- Handle carefully. Do not shake it violently.
- Do not clean it with chemicals or detergent.
- Please read the user manual carefully before installing or operating on the Device. Otherwise, it may not work properly or be damaged.

Technical Support

For support in the USA and Canada, contact M2M Services Technical Support at:

Phone: 1-800-403-7029

Email: support@m2mservices.com Website: support.m2mservices.com

Product Description

The MQ03-LTE-M-FIRE-AV-V2 is a digital cellular communicator with dial capture interface. It represents the latest communication technology for the security industry. The communicator is equipped with dual-SIM. In the US one of the SIM cards supports AT&T and the other supports Verizon. The device allows bi-directional data transmission using LTE CAT-M1 network and LAN.

Main Features

- Universal Panel Compatibility – Dial capture interface supporting Contact ID, SIA, and Pulse 4/2
- Exceptional Redundancy – Dual-SIM device
- Default connection polling interval - 5 min via cellular and 1min via LAN.
- High reliability due to multiple transmission channels (LTE CAT-M1/LAN) and redundant servers.
- Web-based software and a smartphone app for device configuration and diagnostics.
- End-user smartphone app – supports push and email notifications.

Specifications

Supply Voltage	+12 to +29 VDC
Consumption	Standby 60 mA; Peak 200mA
Frequency	LTE CAT-M1 700/850/1700/1900/2100 MHz
GSM Providers	AT&T, Verizon, or other available networks in the area
Dimensions	2.48"x3.54"x1.26"
Weight	2.56 oz without antenna
Environmental	Operating temperature: -4F to 130F (-20°C to 55°C) Humidity: 0 to 85% relative humidity, non-condensing

Mounting and Wiring

- Recommended location and wiring methods must be in accordance with the National Electrical code, ANSI/NFPA 72.
- Installation must be in accordance with the National Fire Alarm and Signaling Code, NFPA 72.
- The communicator must be connected to a UL Listed compatible panel with power limited circuits.
- The communicator must be powered by a regulated UL Listed UOJZ, UTOU, NBSX control panel or power supply.
- The wiring should be done only when the panel is powered down.
- For Dry/Indoor use only.

Wiring the Communicator

The terminal strips can accommodate solid or stranded wire sizes from 14 to 22 AWG.

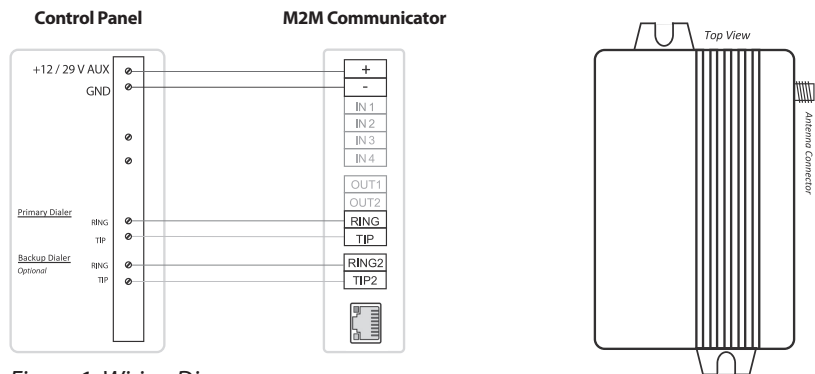


Figure 1: Wiring Diagram

- (+) Connect to AUX + of the panel.
- (-) Connect to AUX – (GND) of the panel.
- RING Connect to RING of the primary dialer of the panel.
- TIP Connect to TIP of the primary dialer of the panel.
- RING2 Connect to RING of the backup dialer of the panel.
- TIP2 Connect to TIP of the backup dialer of the panel.

Note: IN1, IN2, IN3, IN4, OUT1, OUT2 – Not required for reporting via the PSTN dialers

Wiring for FACP Relay Trigger Input Reporting (supervised inputs with 10kΩ resistor)

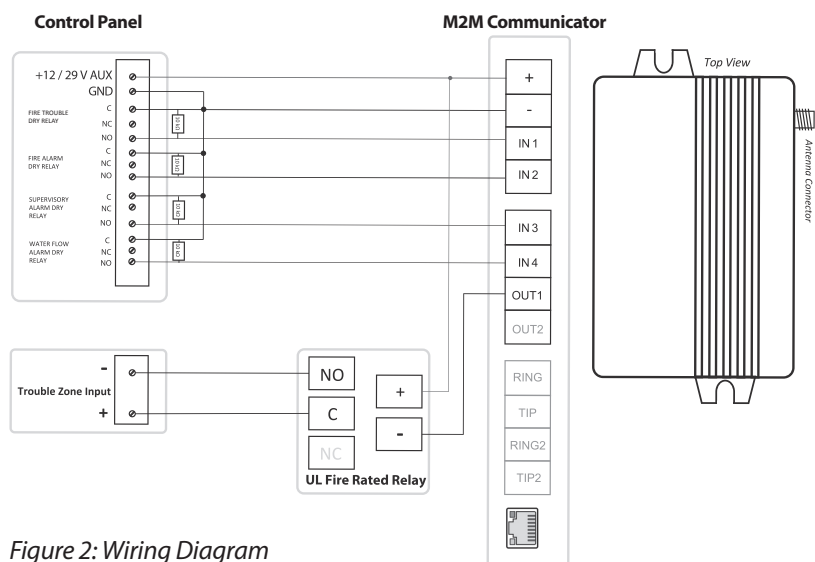


Figure 2: Wiring Diagram

- (+) Connect to AUX + of the panel.
- (-) Connect to the AUX – (GND) of the panel.
- IN1 Connect to a Trouble Relay Output.
- IN2 Connect to a Fire Alarm Relay Output.
- IN3 Connect to a Supervision Alarm Relay Output.
- IN4 Connect to a Waterflow Alarm Relay Output.
- OUT1* Connect to a Trouble Zone Input

Note: OUT1 indicates loss of both cellular and LAN connections. OUT1 is an open collector output, maximum load 50 mA. A relay may not be required, refer to your FACP panel installation manual.

To remove the supervision of the inputs, refer to the extended manual located at <https://www.m2mservices.com/support/>

RING, TIP, RING2, TIP2, OUT2 – not required when using the FACP relays

Mounting the Communicator

This communicator comes fully assembled, except for the antenna. The communicator must be installed within M2M FC08 Enclosure for Cellular Alarm Communicators, Altronix BC300R, or any other UL Listed (UOXX, NITW or CYIV) metal enclosure. All the wiring must be routed through a conduit. For UL installations, the communicator must be mechanically secured to a UL Listed enclosure such as a UL Listed junction box. For detailed mounting and installation instructions refer to the extended manual located at <https://www.m2mservices.com/support/>

Connecting the device via LAN

If the device is connected to a local area network with DHCP enabled, it will automatically get a dynamic IP address. External IP address or router port redirections are NOT needed. If required, static IP can be configured from M2M portal >> Device Dashboard >> LAN Settings.

Programming

Out of the box the communicator is ready to use and does not require additional programming. You need to program the control panel to work with the MQ03-LTE-M-FIRE-AV-V2.

Programming the Control Panel

For information about how to program the control panel, please refer to the corresponding control panel guide. Ensure that the following programming is done:

- Enable the PSTN dialer of the FACP.
- Select DTMF mode.
- Select Contact ID, SIA or Pulse* 4/2 communication format.
- Enter a telephone number for dialing (you can use any number, e.g., 999999)
- Enter a 4-digit account number

*Pulse 4/2 reporting requires additional configuration in the M2M portal >> Device Dashboard >> Dial Capture

Troubleshooting

If you have issues receiving the events:

1. Verify the RING/TIP connection
 - Make sure the RING and TIP terminals are connected to a TELCO ring and tip, not R-1/T-1 terminals.

Connection LED indicator

LED Status	Indication	Action
The LED is Off	1.The unit is not connected to the panel. 2.The power from the panel is out. 3.The unit is damaged	1.Verify the wiring, refer to the wiring diagram. 2.Measure the AUX output of the panel. 3.Replace the unit
Slow flashing	Establishing connection or no signal available	Reposition the antenna
Constantly On, blinking every 5 secs	Connection established at low signal level	Reposition the antenna
Constantly On	Connection established at good signal level	
Fast flashing	Transferring data	

RJ45 LED Indicators

Yellow LED RJ45 Indicator	Indication	Action
The LED is Off	The LAN cable is not plugged	1. Verify the wiring 2. Measure the AUX output of the panel 3. Replace the unit
The LED is Constantly On	Connection established	
Green LED RJ45 Indicator	Indication	Action
The LED is Off	1. The router is not providing an IP via DHCP. 2. The device is configured with wrong/used static IP 3. There is no internet access.	1. Check your DHCP server settings. 2. Make sure that the IP is not in use. 3. Check the access to the internet using another device in the same network or check your router settings.
The LED is Blinking	Transferring data	
The LED is Constantly On	Communication is OK	