



# EMTRAC

## Field Monitor Unit (FMU) ST-9826

System readiness starts at the intersection controller cabinet—and cabinets in remote locations are no exception. The ST-9826 Field Monitor Unit (FMU) includes cellular communication to provide access to detailed information about the status of the traffic cabinet. It also enables connectivity to multiple separate Ethernet-equipped systems within the traffic cabinet.



The Field Monitor Unit provides all the capabilities of EMTRAC Priority Detectors, with added support for traffic-controller monitoring capabilities. It offers multipurpose options for cities that seek to add Transit Signal Priority (TSP) and Emergency Vehicle Preemption (EVP) while also adding smart-city features to their wayside. These features include intersection and traffic-cabinet asset management, along with integration of the EMTRAC apps, such as our *Bicycle Detection App*.

The EMTRAC Field Monitor Unit leverages EMTRAC's proven history of high performance GNSS, 900 MHz FHSS radio, and infrared optical-priority products with new, cutting-edge cellular-data endpoints and expanded traffic-controller communications capability thanks to integration with NTCIP protocols.

Additionally, utilizing the FMU along with the *EMTRAC Traffic Center* software gives customers the ability to survey the status of their TSP and EVP implementations as well as their entire traffic controller network—all from one convenient interface.

### FMU Features Overview

- Signal Preemption/Priority (Optical, RF, and Cellular)
- Cellular LTE-modem equipped
- Two remotely-switched NEMA 5-15 power outlets
- GNSS capable for location and timing updates
- Battery back-up for power-outage coverage (5-hr typ.)
- Compatible with EMTRAC Traffic Center software



Compatible with All Major Cabinet Models

## FMU Capabilities

### Cabinet Monitoring

- Environmental Parameters (Cabinet Temperature and Humidity)
- Power Monitoring (Voltage Presence and Levels)
- UPS Monitoring (Battery Status, Levels, and Mode)
- Traffic Controller Status Information (Inputs, Phases, Faults, and Flashes)
- Maintenance Information (Door status, Fan status, and Fan speed)
- Communications Status

### Communications

- Cellular Link to ITS cabinet
- GNSS Location Data for Inventory
- GNSS Time for Controller Timing Updates
- Log Relay to EMTRAC Traffic Center software
- Full web UI access to the controller, video streams, or any other third-party devices
- No Static IP Addresses Required
- Communications using HTTP/HTTPS
- Open Data-Format Structure

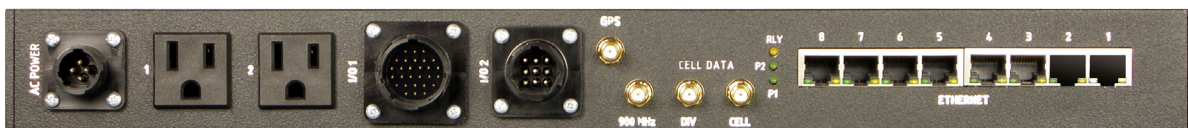
### Multi-Origin/Multi-Directional Priority Requests

- Requests to FMU via:
  - » Cellular Requests
  - » 900MHz Radio
  - » Optical Strobe
- Controller Activation via:
  - » NEMA inputs
  - » NTCIP
  - » SDLC (optional)
- Configurable Priority Levels
- Granular Access Control
- Zone Based Priority Requests

### Software Support

- Configuration via web UI (cloud or local) or with the EMTRAC autoconfiguration service
- Configuration via Web GUI
- Local Log Storage (up to 5000 Events)
- Automatic Log Transfers (for logs not already relayed via Cell)
- Status of Remote Control AC Switches can be indicated in software OR on front panel

## Field Monitor Unit - Rear Panel



Interfaces and Power	
<b>Inputs:</b>	8 Discreet 24-volt/120 V Inputs
<b>Outputs:</b>	8 Discreet 24-volt/120 VAC Outputs
<b>Comm.:</b>	4G LTE Cellular (150 Mbps), upgradable to 5G 900 MHz Radio, GNSS
<b>Power:</b>	120 VAC (89 to 135 V) / 60Hz
<b>Outlets:</b>	2 NEMA 5-15, 15-amp combined max.
<b>Connections:</b>	RJ-45 Ethernet (6 available), SMA (900 MHz radio), 2x SMA (cellular), SMA (GNSS)

Hardware	
<b>Dimensions:</b>	1U 19-Inch Rack-Mount Cabinet 19" (W) x 1.75" (H) x 8.125" (D) 48.26 cm (W) x 4.45 cm (H) x 20.64 cm (D)
<b>Material:</b>	Powder-Coated Aluminum
<b>CPU:</b>	1 GHz, 32-bit
<b>Operating System:</b>	Linux
<b>Backup:</b>	Battery, 5-hour duration (typical)
<b>Operating Temp.:</b>	-34° to +74° C (-31° to 165° F)
<b>Antenna Rating:</b>	IP67

Specifications and appearance subject to change.