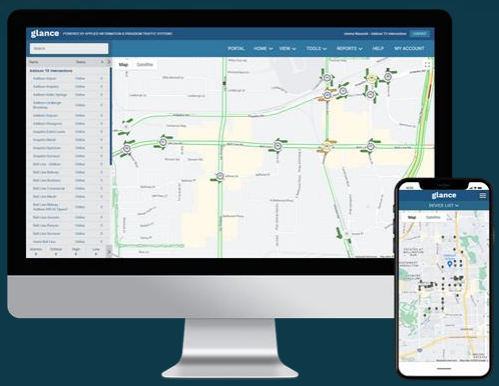




AI-500-085-02

Field Monitoring Unit (FMU) for Remote Communications

OVERVIEW

AI-500-085-02 FMU delivers a cost-effective, easy-to-integrate Remote Communication Solution (RCS) that provides secure, low-cost cellular communications for traffic signal cabinets and cabinet-resident ITS devices. As a proven, high-volume platform, the FMU modernizes roadside infrastructure by eliminating the need for fiber connectivity while enabling scalable, cloud-enabled remote access. Cellular communications reduce installation costs, speed deployment, and simplify long-term maintenance.

The FMU RCS supports on-demand and live video streaming via cellular networks, delivering real-time visibility from cabinet-connected cameras and devices without reliance on fixed infrastructure. As a camera-agnostic solution, the FMU integrates seamlessly with existing video equipment while maintaining secure, reliable field performance.

The FMU serves as a secure communications gateway within the cabinet. Secure passthrough communication enables remote connectivity to third-party, IP-addressable ITS devices, reducing network complexity and eliminating additional hardware. The FMU RCS supports web services that provide secure access to installed thick-client traffic management applications through a cloud-hosted remote desktop environment. It can also support cloud-hosted traffic management and signal control software with secure integration to central management platforms. Engineered for continuous roadside operation, the AI-500-085-02 FMU delivers a reliable, fiber-free remote communications foundation for modern traffic systems.

FEATURES & BENEFITS

- ✔ Secure low-cost cellular communication
- ✔ Remote power cycle
- ✔ Cellular passthrough communication
- ✔ Secure VPN support for passthrough
- ✔ Passthrough communication (connect 3rd party devices in the cabinet)
- ✔ Remote access to traffic cabinet devices
- ✔ Hyperlinks for IP addressable devices
- ✔ Cloud-hosted traffic management / signal control support (Centracs/Mobility)
- ✔ IPSEC tunnels
- ✔ Video streaming capabilities
- ✔ Camera-agnostic compatibility
- ✔ Compatibility with central traffic signal systems
- ✔ Glance Web services for hosted thick client applications
- ✔ Secure connectivity for cloud-hosted central systems
- ✔ Remote front panel display
- ✔ Browser-based access to hosted applications
- ✔ Integration with battery backup systems (BBS)
- ✔ Remote power cycle

HARDWARE SPECIFICATION

AI-500-085-02	
Connectivity	
Cell Modem (4G LTE)	Yes
Connected Vehicles (Cellular and C-V2X ready)	Yes
4 Ethernet Port	Yes
GPS	Yes

Industrial I/O	
Digital Outputs	10 (2 as NO/NC Relay, 8 as 24 V DC ground true)
Digital Inputs	8 (4 as 120 V AC/12–28 V DC selectable, 4 as 12–28 V DC
Analog Inputs	8 (4 as 120 V AC/12–28 V DC selectable, 4 as 12–28 V DC

Power	
Outlets	NEMA 5–15 (2 x 120 V, remotely switchable rated 15 Amp total)
Power Consumption	12.5 W

Miscellaneous	
Operating Systems	µC/OS-II and Linux
Manual Preempt Selector	Yes
Operating Temperature	-40°C to 80°C
Humidity	5–95% non-condensing
Dimensions	17.5” W x 1.75” H x 7.5” D
Input Voltage	120 V AC
Real-Time Clock	Yes
Flash Disk	Yes
Battery Backed Memory	Yes

Features and Applications Supported	
Compatibility with central traffic signal systems	Real-time traffic information (RTTI) support
On-demand wireless video streaming	Remote front panel functionality and other cabinet devices with web pages
Connects to TravelSafely smartphone alerts	NTCIP 1202 (controller data) and NTCIP 1211 (TSP) support
Secure VPN-based remote communications	Traffic controller integration
NTCIP time sync for traffic controllers	

WORKS WITH glance™



3000 Summit Pl, Suite 150, Alpharetta, GA 30009 • 678-830-2170 • appinfoinc.com • sales@appinfoinc.com
Glance® is a registered trademark of Applied Information, Inc.