

2nd GENERATION MIU INDUSTRIAL HARDENED MODEM INTERFACE UNITS AC/DC POWERED Communication Interface Units



KEY FEATURES

- 2.4, 9.6, 14.4 & 28.8 kps Modems
- Fast Poll Digital 9.6kps (MIU9.6FPD only)
- 48 to 240VAC/DC Power Supply
- IEC801-4 Surge Protection
- -40°C to +85°C Operating Temp
- For Meters, Relays, SCADA, etc

DESIGNED FOR HARSH ENVIRONMENTS

To service the growing need for efficient, reliable data communications in the harsh environments of utility substations and industrial facilities, **Raymar-Telenetics** has developed a family of data communications products that can operate from various AC/DC power supplies and survive high surge levels and extreme temperatures. All this without compromising the performance expected from state-of-the-art communications devices.

With the rapid move toward "intelligent" substations, where meters, relays, RTU's, SCADA systems, etc. are able to "talk" to a remote operator, communications devices such as modems are moving off the desktop and into the field, where the conveniences of 115VAC power outlets and climate control are usually hard to find.

Raymar-Telenetics has addressed this problem by developing a range of Communication Interface Units (CIU's) Designed specifically for harsh environments.

OPERATION & INTERFACE

The MIU is a highly sophisticated full duplex data modem that is designed to interface with RD232, RS485 (external device), 5v logic (TTL) or simple send and receive signals. They operate at full or half duplex on dial-up or 2 wire and 4-wire leased line systems.

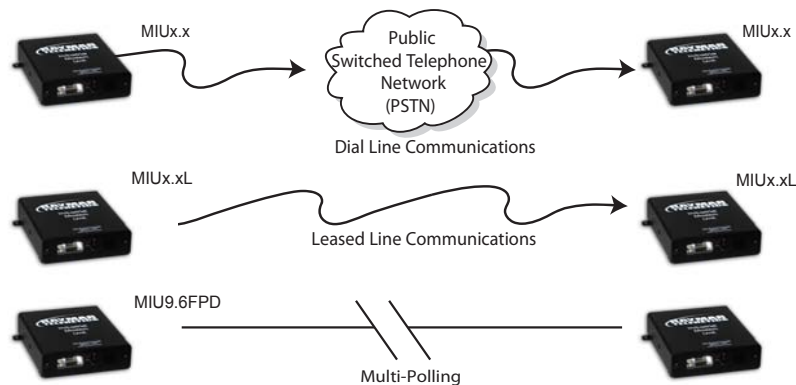
All of these devices are powered from a unique power supply that enables them to operate on any AC or DC voltage ranging from 48V to 240V. A low voltage version (-9 to -36VDC) is also available. The CIU's are designed to work in temperatures from -40°C to +85°C, and are surge protected on both the power and analog lines.

All of this is bundled in a 5" x 4-1/4" x 1-1/4" Aluminum enclosure, suitable for desktop or wallmounting.

Multipoint Configuration...

For point-to-multipoint (multi-drop) communications, ask for information on our Bell 202T modems.

Also see our data sheets on the MIU/Powerport low voltage modems, the Myriad™ Rack Mount Modem Banks and the MIU202T (Bell 202T) modems.



Industrial Hardened Modem Interface Unit (MIU) upgrade.

The Newly released 2nd Generation MIU features several improvements based on feedback from a variety of installations. The MIU first released over a decade ago has been an integral part of thousands of networks. Our engineers took advantage of the experience and feedback from customers to improve and extend the functionality of this highly respected product line. This upgraded product will replace the historical models of the MIU modems for all future orders.

The baseboard (Interface card) has been migrated to SMD technology along with several design improvements to circuit isolation reducing the susceptibility of the product to externally generated damages, i.e. power fluctuations, surges on the power interface. The new aluminum enclosure features wall mounting flanges and the ability to add a DIN Rail clip to simplify installations.

**RAYMAR INFORMATION
TECHNOLOGY, INC.**
7325 Roseville Road
Sacramento, CA 95842
USA

+1-916-783-1951
FAX +1-916-783-1952

sales@raymarinc.com

1-800-695-1951

Tech Support Hotline
1-800-747-1522

www.raymarinc.com

2nd GENERATION MIU • MODEM INTERFACE UNITS • AC/DC POWERED

TECHNICAL SPECIFICATIONS

	MIU9.6FPD	MIU14.4	MIU28.8
Modem Line Speeds: Asynchronous	4800, 9600, 14400bps	14400, 9600, 4800, 2400, 1200, 300bps	28800, 19200, 14400, 9600, 4800, 2400, 1200, 300bps
DTE Rates: above modem line speeds (ie; with data compression)	4800, 9600, 14400bps	57600, 38400, 19200kbps	115200, 57600, 38400, 19200kbps
Standards:	V.27 & V.29	V.32bis, V.32 V.22Bis, V.22 Bell 212A, Bell 103	V.34, V.32Bis, V.32, V.22Bis, V.22, Bell 212A, Bell 103
Dial Up		MIU14.4	MIU28.8
2 & 4-Wire Leased Line	MIU9.6FPD ¹	MIU14.4L ¹	
Compatibility	None	Hayes™ Extended AT Command Set	Hayes™ Extended AT Command Set
Error Correction/ Data Compression	None	MNP 2, 4, 5 & 10 V.42, V.42bis	MNP 2, 4, 5 & 10 V.42, V.42bis
Power Supply	48VAC/DC to 240VAC/DC (Optional -9 to -36VDC)		
Power Connector	4-ft AC Cord with 3-Pin Screw Terminal connector included		
Case Size and Weight	Size: 5" x 4-1/4" x 1-1/4" Weight: 1lb		
Digital Port	RS232 with DB9 Connector		
Analog Port	RJ-11 Modular Jack		
Surge Protection (Power Line)	8kV [Exceeds IEC801-4] (20kV [IE801-5] available if required)		
Surge Protection (Analog Line)	3.75kVAC	3.75kVAC	3.75kVAC
Environment	-40°C to +85°C, 0 to 95% humidity (non-condensing)		
Certifications	FCC Part 68, Industry Canada		

¹ The standard 9.6FPD and the 14.4L models are 4-wire full or half duplex, point-to-point only. 2-wire, full duplex, point-to-point available on special order.

STANDARD FEATURES

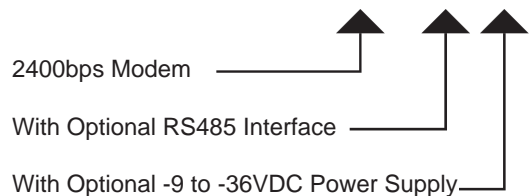
Model	MIU9.6FPD	MIU14.4	MIU28.8
Serial Interface	RS232	RS232	RS232
Power Supply	48 to 240V AC or DC	48 to 240V AC or DC	48 to 240V AC or DC
Power Connection	3-pin connector	3-pin connector	3-pin connector
Options Available (see table below)	1, 2, 3, 5	1, 2, 3, 5	1, 2, 3, 5

Raymar-Telenetics now offers Bell202T and V.23 modems for multi-drop / polling applications. All Telenetics modems are available in Myriad™ Rack Mount Modem Banks. see separate datasheets

AVAILABLE OPTIONS

ITEM	DESCRIPTION	ORDER SUFFIX
1	-9 to -36VDC Power Supply	-LV
2	4 Foot Power Cable (Standard)	Included
3	4 Foot Power Cable (High Surge)	-HC
5	RS485 Serial Interface	-485

ORDER CODE EXAMPLE: MIU2.4-485-LV



WARRANTY

Raymar-Telenetics manufactured products are warranted against defects in hardware material and workmanship under normal use for one (1) year from date of original retail purchase. Defective product will be repaired or replaced, determination to be made by Raymar-Telenetics, at no charge. Repaired or replaced products are warranted for 90 days or for original warranty period, whichever is longer. Warranty extends to original end-user only.



Manufactured in the USA by RAYMAR-TELENETICS

Raymar Information Technology, Inc., 7325 Roseville Road, Sacramento, CA 95842
 1-800-695-1951 fax +1-916-783-1952 sales@raymarinc.com www.raymarinc.com
 Service Support Hotline 1-800-747-1522