



MOTOROLA SOLUTIONS



CONNECT TO MORE DATA TO OPERATE MORE INTELLIGENTLY OVER ASTRO® 25

IRM1500 INTELLIGENT RADIO MODEM

As economic and technical barriers hinder your ability to leverage data across your operation, your organization is looking for the most cost effective ways to manage performance. The easy to deploy IRM1500, transmits data from operational technologies in the field, across your ASTRO® 25 Integrated Voice and Data (IV&D) radio system, to enterprise applications and provides you with encompassing process control and monitoring capabilities. With secure and reliable data communication you can detect faults and abnormalities quicker and respond more precisely to minimize risk and stay productive.

The IRM1500 can connect to both IP and non-IP, serial devices and transmit data through a variety of protocols to enhance your ability to monitor and communicate with assets over your ASTRO 25 system. Immediately realize the benefits of the IRM1500 on your mission critical network not only for voice but also data applications - increasing your overall ROI.

KEY BENEFITS:

- Increases the value of ASTRO 25 systems by facilitating M2M data communication
- Small, compact form factor meets IEEE 1613 specifications
- Supports Serial, Ethernet & USB interfaces for IP & non-IP products

SMALL, RUGGED DEVICE RELAYS YOUR OPERATIONAL DATA INSTANTLY

A budget-friendly solution for M2M data communications, the IRM1500 is a compact and durable smart modem to make the most of planned or new ASTRO 25 digital systems. The IRM1500 enables valuable data communications via IV&D from operational technology in the field. The IRM1500 is certified and tested to meet IEEE 1613 class 1 specifications for high EMI and ESD levels. For markets such as electric utilities, as well other markets that utilize critical communication networks, the IRM1500 leverages the same communications security and reliability you rely on for voice.

AN EASY VALUE-ADD TO YOUR ASTRO 25 SYSTEM

The IRM1500 gives you an opportunity to increase the value of your ASTRO 25 system by enabling data communication over your mission critical network rather than relying on carriers or expensive hardwiring. A simple graphical user interface and web-based application enables easy configuration, management and troubleshooting to quickly expand your operational view and connect your operations.

VERSATILE CONNECTIVITY FOR TODAY, TOMORROW AND THE FUTURE

With technology expanding and evolving every day, you need a device that is reliable and ready to provide data communications to where you need it the most. The IRM1500 comes with the latest hardware and ergonomics to ensure that you can connect to your existing operational technology while also preparing for the future.

Currently, the IRM1500 has analog and digital ports to connect to IP and non-IP, serial devices. The future of the IRM1500 includes hardware, such as a WLAN connector, a 4G MIMO SMA connector, and a Micro SD card slot, as well as planned software updates to continually take advantage of newly released features to improve data performance - saving you time and money.

STANDARD FEATURES

- One (1) On-board user configurable RS-232/RS-485 port
 - Supports TX, RX, DCD, DTR, RTS, CTS, GND
- On-the-Go USB 2.0
- On-board Ethernet Port
- Data & Time, Time Synchronization
- LED Display
- Failsafe Operation
- On-board Temperature Sensor

OPTIONAL FEATURES

- RS-232 Port Plug-In Board: Contains one (1) on-board bay for a plug-in serial expansion board containing two (2) isolated user configurable RS-232 ports.
 - Supports TX, RX, DCD, DTR, RTS, CTS, GND
 - Supports TX, RX, GND
- AC Power Supply Units 12V/60W or 24V/120W



GENERAL SPECIFICATIONS

Operating Temperature	-30 °C to +60 °C
Storage Temperature	-40 °C to +85 °C
Operating Humidity	5% to 95% RH @ 50 °C
Operating Altitude	-400 meters to +4000 meters
Dimensions	132.48mm (w) x 198.9mm (h) x 123.8mm (d)
Weight	2.1 Kg
Input Power	9-30VDC
Power Consumption: Normal Mode	~250mA at 12V (while radio is in standby mode)
Real Time Clock Back-up Battery: Type	Coin Rechargeable Battery (30 days)
Temperature	-40 °C to +70 °C
CPU Reset	Yes
SDIO Card	Up to 32 GB
UART	Yes
USB OTG	Yes
USB Device	Shared with USB OTG
LAN Port (10/100Mbps)	Yes
SOFTWARE	
SW Tool	Configuration/Monitoring - Web Interface HW Test - Yes
Failsafe Mechanism	Yes
Diagnostic (Local, Remote)	Via Web
HW Test	Local (via CLI)
Error Logger (Local, Remote)	Access (Local/Remote) - Yes Mechanism - Non-Cyclic
Security	MDLC Password, Authentication Login, Firewall, HTTPS, SFTP, SSH
Time Synchronization	Yes
Set Date/Time	Yes (with Time Zone and Daylight-Savings)
Services	DNS - Yes DHCP - Yes - Slave

CPU

Processor	Sitara CPU (Cortex-A8)
Clock	300 MHz
OS	Linux
Memory:	
Flash	256 MB, 32 MB for User
RAM	256 MB, 16 MB for User
Real Time Clock	YES
Ports:	
RS232	Up to 1 port on main board (shared with RS485) (<115.2Kbps) Non-Isolated Up to 2 ports on piggyback (<115.2Kbps) Isolated
RS485	Up to 1 port on main board (shared with RS232) (<460.8Kbps) Non-Isolated
Ethernet	Up to one port, 10/100 Mbps (auto-negotiation) (+ interface for plug-in board)
Radio Internal Data Modem	800MHz or 900MHz
Plug in port	1


LED INDICATIONS

LEDs:	
Capacity Main	4 General Purpose LEDs
CPU	Power (physical indication) ERR (physical indication, detailed error can be seen in error logger) RST Process (Indication on the PWR LED)
Ports	Tx/Rx on main RS-232 (dedicated physical LED) Tx/Rx on Piggyback RS-232 (UI Indication)

INFRASTRUCTURES

Port Forwarding (Site Level)	Yes IP to ASTRO 25
Port Mapping and Emulating	Yes

ASTRO 25

 IRM 1500	Requires External Radio	WATT	VHF	UHF	700	800	900
	Radio Included	5W	✗	✗	✓	✓	✓

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Motorola Solutions, Inc. 500 West Monroe Street, Chicago, IL 60661 U.S.A. motorolasolutions.com

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