ACE1000-IRM
INTELLIGENT RADIO MODEM

CONNECT TO MORE DATA AND OPERATE MORE INTELLIGENTLY
OVER YOUR LAND MOBILE RADIO NETWORK

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Leverage your digital radio network for machine-to-machine (M2M) data services with the same high reliability and expansive coverage you count on for your voice communications. The easy to deploy ACE1000 Intelligent Radio Modem (ACE1000-IRM), transmits data from operational technologies in the field, across your land mobile radio (LMR) system to your enterprise applications. This provides you with encompassing process control and monitoring capabilities. Ensure greater communication reliability of your most valuable data, and further enhance the return on your LMR investment, as you avoid the vulnerability and airtime subscription fees typically associated with carrier networks. With reliable data communication you can detect faults and abnormalities quicker and respond more precisely to minimize risk and stay productive.

The ACE1000-IRM is a Machine-to-Machine (M2M) modem that transmits all of your operational technology data from the edge, across your communications networks (ASTRO 25® and MOTOTRBO™), to enterprise applications. The versatile ACE1000-IRM will deliver the reliable and secured data communication and process control capabilities you need, without having to completely replace any of your current operational technologies. With the ACE1000-IRM you can shift your M2M communication backhaul to your trusted and secured LMR radio system. Transmit all of your process automation and control data through a variety of protocols to enhance your ability to monitor and communicate with all of your deployed assets. Immediately realize the benefits of the ACE1000-IRM on your network not only for voice but also for data applications further increasing your overall return on investment.

AN EASY VALUE-ADD
TO YOUR TWO-WAY RADIO SYSTEM

The ACE1000-IRM enables simple, intelligent connectivity – and data transmission – over your ASTRO 25 or MOTOTRBO two-way radio network. Ensure greater communication reliability of valuable data, and further enhance your return on your LMR investment, as you avoid the vulnerability and airtime subscription fees of carrier networks. The ACE1000-IRM can be installed across your operations and leverage your MOTOTRBO (Conventional Digital, Capacity Max, and Connect Plus) and ASTRO 25 radio systems for the resilient and secured connectivity that you relay on for your voice communications.
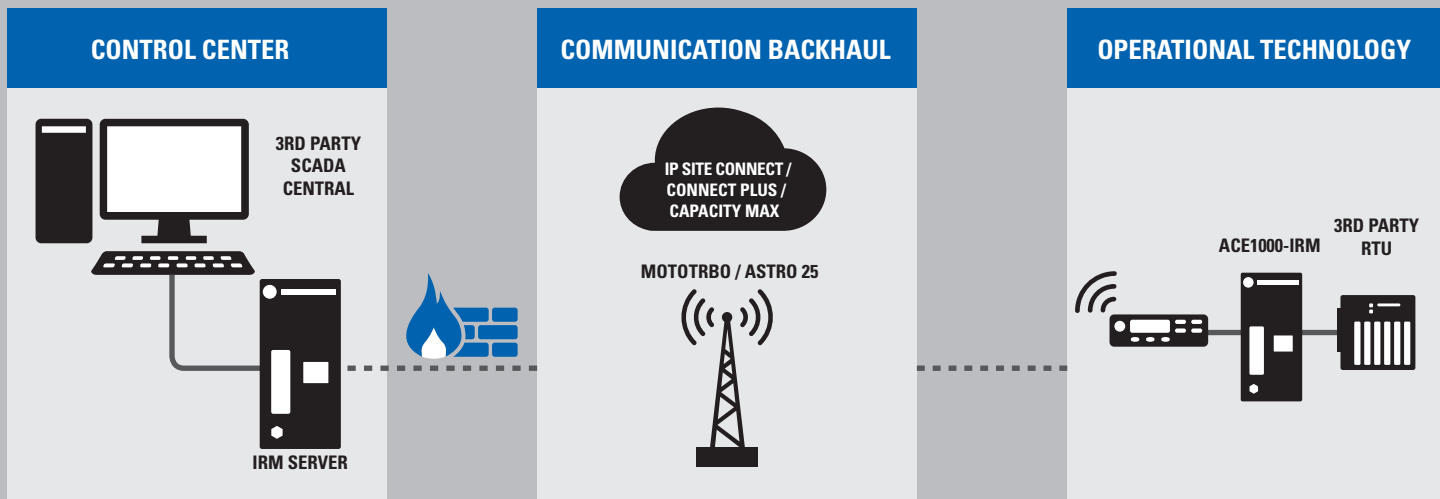
INTALLATION AND MANAGEMENT
MADE EASY

The ACE1000-IRM comes with a simple and easy to use web-based graphical user interface enabling quick and easy configuration, management, and troubleshooting. Installing the ACE1000-IRM across your operations is fast and allows you to quickly expand your operational view and ensure seamless connections to your remote terminal units (RTUs) and assets in the field.

VERSATILE CONNECTIVITY
FOR TODAY, TOMORROW AND THE FUTURE

With technology expanding and evolving everyday, you need a device that is reliable and ready to provide data communications to where you need it most. The ACE1000-IRM comes with the latest hardware and ergonomics to ensure that you can connect to your existing operational technology while also preparing for the future.

The future of the ACE1000-IRM includes 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
- Supports TX, RX, DCD, DTR, RTS, CTS, GND
- Supports TX, RX, GND
- AC Power Supply Units 12V/60W or 24V/120W

CONTROL CENTER	COMMUNICATION BACKHAUL	OPERATIONAL TECHNOLOGY

3RD PARTY SCADA CENTRAL

IRM SERVER

IP SITE CONNECT / CONNECT PLUS / CAPACITY MAX

MOTOTRBO / ASTRO 25

ACE1000-IRM

3RD PARTY RTU

GENERAL SPECIFICATIONS

Operating Temperature	-40ºC to + 70ºC (excluding radios)
Storage Temperature	-55ºC to + 85ºC (excluding radios)
Operating Humidity	5% to 95% RH @ 50ºC
Operating Altitude	-400 meters to +4000 meters
Dimensions	2.95 in. (w) x 6.3 in. (h) x 4.4 in. (d)
Weight	450 grams (without expansions)
Wall Mount Option	Yes (using DIN rail)
Power Consumption	Typical Runtime ~170mA at 12v withouth radio
RTC Back-up Battery:	Coin Rechargeable Battery (30 days)
Type Temperature	- 40ºC to + 70ºC
UART	Yes
USB HOST	Yes
USB OTG	Yes
USB Device	Shared with USB OTG
LAN Port (10/100Mbps)	Yes

CPU

Processor	Sitara CPU (Cortex-A8)
Clock	300 MHz
OS	Linux
Memory Flash RAM	256 MB 256 MB
RTC	Yes
Ports: RS232/RS485 RS232 Only Ethernet	Up to 1 port on CPU board (shared with RS485) (<115.2Kbps) Non-Isolated 2 ports on plug-in board (<115.2Kbps) Isolated 1 port on CPU board 10/100MB

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)

SOFTWARE

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

LED INDICATIONS

LED INDICATIONS	
LEDs Tests	Yes
CPU Fail	Indication there is a fault on the fault LED

INFRASTRUCTURE

INFRASTRUCTURE	
Port Forwarding (Site Level)	Yes
Port Mapping and Emulating	Yes
Supports MOTOTRBO	
Supports external ASTRO 25 portable and mobile radio	

[2] Motorola Data Link Communication (MDLC)

	LMR Infrastructure	Requires External Radio	WATT	VHF	UHF	700	800	900
ACE1000-IRM	ASTRO 25	APX6500	25W	✓	✓	✓	✓	✗
	MOTOTRBO	XPR5350	25W	✓	✓	✗	✓	✓

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