Trio J-Series

License-free Ethernet data radio

JR240

Omnicon™
...controls whatever you wish

Schneider Electric brings Wireless Ethernet connectivity to the SCADA engineer's toolkit with the Trio J-Series, an innovative pairing of license-free spread spectrum radio with Ethernet capability.

The Trio J-Series frequency-hopping Ethernet radio sets the standard for industrial Ethernet communications in the license free 900MHz and 2.4GHz ISM bands. With maximum range and virtually unlimited system coverage due to its unique LinkXtend™ network bridging and KwikStream™ high speed repeater capabilities, the industrial strength J-Series is ideally suited for the most demanding Point-to-Multipoint and Point-to-Point wireless SCADA and Telemetry applications. The highly versatile J-Series also offers dual Ethernet ports and remote diagnostics compatibility, as well as SmartPath™, a feature that identifies then rectifes a problem within the network with minimal interruption to the SCADA data flow.

Product Data Sheet Trio JR900 | JR240
Specifications

>	Trio JR900 | JR240
Radio	
Frequency Range	902-928MHz or 2.4-2.48335GHz, (region-specific versions available)
Frequency Accuracy	±2.5ppm (900MHz) ±3.0ppm (2.4GHz)
Radio Modes	Half Duplex, Pseudo Full Duplex
Configuration	All configuration via embedded HTML interface & Telnet console interface
Selectivity	Better than 50dB
Spurious Response	Better than 70dB
Tx Power	• 900MHz : 0.01 - 1W (+30dBm) 0.5dB steps configurable with over-temperature and high VSWR protection • 2.4GHz : 0.01 - 500mW (+27dBm) 0.5dB steps configurable with over-temperature protection.
Modulation	2 Level GFSK
Connections	
Ethernet Port	2 x RJ45: 10/100 Mbps (auto-MDIX sensing) compliant with IEEE 802.3
Serial Data Ports	1 x RS232 DB9 female connector providing 2 x RS-232 3-wire serial ports (shared connector). 600-115,200 bps asynchronous
Serial Data Port Flow Control	CTS-RTS [Serial Port A only] or 3-wire interface
Antenna	2 x TNC female bulkhead connectors for LinkXtend or separate TX/RX antennas
Power	2-pin locking, mating connector supplied
LED Display	Multimode Indicators for Pwr, Tx, Rx, Sync, TxD and RxD data LEDs and LAN LEDs
Ethernet	
Ethernet Protocols	Ethernet/IP (including UDP, TCP, DHCP, ARP, ICMP, STP, IGMP, SNTP & TFPT)
Ethernet Repeating	Automatic and Self Learning Peer to Peer repeating
Compression	Automatic Ethernet data compression
Terminal Server	Legacy RS-232 serial support via embedded terminal server (UDP/TCP)
DHCP Modes	Auto and Manual
SNMP	SNMP V1/V2 RFC 1213-compliant & radio diagnostics parameters

Specifications continue on the next page

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Modem	
RF Channel Data Rate	900MHz version - 512kbps or 256kbps, 2.4GHz version - 256kbps
Bit Error Rate	256kbps: < $1x10^{-6}$ @ -102dBm and 512kbps: < $1x10^{-6}$ @ -92dBm
Operating Modes	Access Point, remote, repeater or network-bridge
Network Types	Point-to-Point, Point-to-Multipoint, Point-to-Multipoint with Repeaters / Store n' Forward, Mesh
Channelshare™	Trio's unique supervisory collision avoidance system
SmartPath™	Technology for enhanced redundancy in network configuration (Mesh)
Firmware	Local and over-the-air flash-based firmware
Security	
Encryption*	256-bit AES
HTML Interface	Password Protected
Trusted Unit	Optional Trusted Access point-Trusted Remote operation
Diagnostics	

Diagnostics Overview	• Network Management & Remote Diagnostics with no software installation required
	• Network-wide operation from any remote terminal
	• Non intrusive protocol – runs simultaneously with the application
	• SNMP Access to Radio Diagnostics
	• Spectrum Analyser and Channel Lockout facilities (Telnet/Text Interface)
	• Fully compatible with TView+ Network Management Software
	• Diagnostics parameters available
	  • Transmitter Power
	  • Received Signal Strength
	  • DC Supply Voltage
	  • Received Frequency Error
	  • Radio Temperature

General	
Operating Temperature Range	-40 to + 70°C (-40 to +158°F)
Power Supply	13.8Vdc nominal (10-30Vdc)
Transmit Current	• 900MHz : 800mA nominal @ 1W • 2.4GHz : 800mA nominal @ 0.5W
Receive Current	<150mA nominal @ 13.8Vdc
Housing & Dimensions	Rugged die-cast, 100 x 34 x 165mm, (4.0 x 1.4 x 6.5in.)
Mounting	Integrated Mounting Holes or DIN Rail mounting (optional)
Weight	0.5kg (1.1lbs.)
Warranty	3 years on parts and labor
Approvals and Certifications	
Europe (ETSI)	ETSI EN60950, EN50392 EN300328 EN301489 (2.4GHz only)
FCC	FCC PART 15
Industry Canada	IC RSS210
Australia	ACMA AS/NZS 4268
Hazardous Locations	• 900MHz : CSA Class I, Division II, G roups (A,B,C,D) for Hazardous Locations ANSI/UL equivalent) • 2.4GHz : ATEX II 3G Ex nA IIC T4

* Export restrictions may apply. Contact your local representative for more details.

Note: Not all product features are available in every mode of operation.

Disclaimer: Schneider Electric reserves the right to change product specifications. For more information visit www.controlmicrosystems.com.

Product Data Sheet Trio J-Series
Model Code

	JRxxx-aabbb-cde represents the part number matrix
Model	**Model Type**
J	J-Series
Code	**Select: Unit Type**
R	Base/Remote/Repeater Station with full enclosure
Code	**Select: Generic Frequency Band**
900	900MHz
240	2.4GHz
Code	**Select: Frequency**
	900MHz Frequency Band
00	License-free band 902 to 928MHz (FCC/IC - Requires Encryption for Canada and USA)
01	License-free band 915 to 928MHz (Requires Encryption for Australia)
05	License-free band 921 to 928MHz (New Zealand)
	2.4GHz Frequency Band
00	License-free band 2.4GHz, 500mW (Requires Encryption for North America & Australia)
01	License-free band 2.4GHz, ETSI/100mW, ATEX (Europe)
Note: Other frequency bands available upon request.	
Code	**Select: RF Channel Data Rate & Bandwidth (Internal Modem)**
002	900MHz : 256Kbps to 512Kbps , 2.4GHz : 256Kbps
Code	**Select: Encryption**
D	No Encryption
E	Encryption*
Code	**Select: Approvals**
H	Hazardous Environment CSA Class 1 Div 2
A	ATEX
Code	**Future Option**
0	None

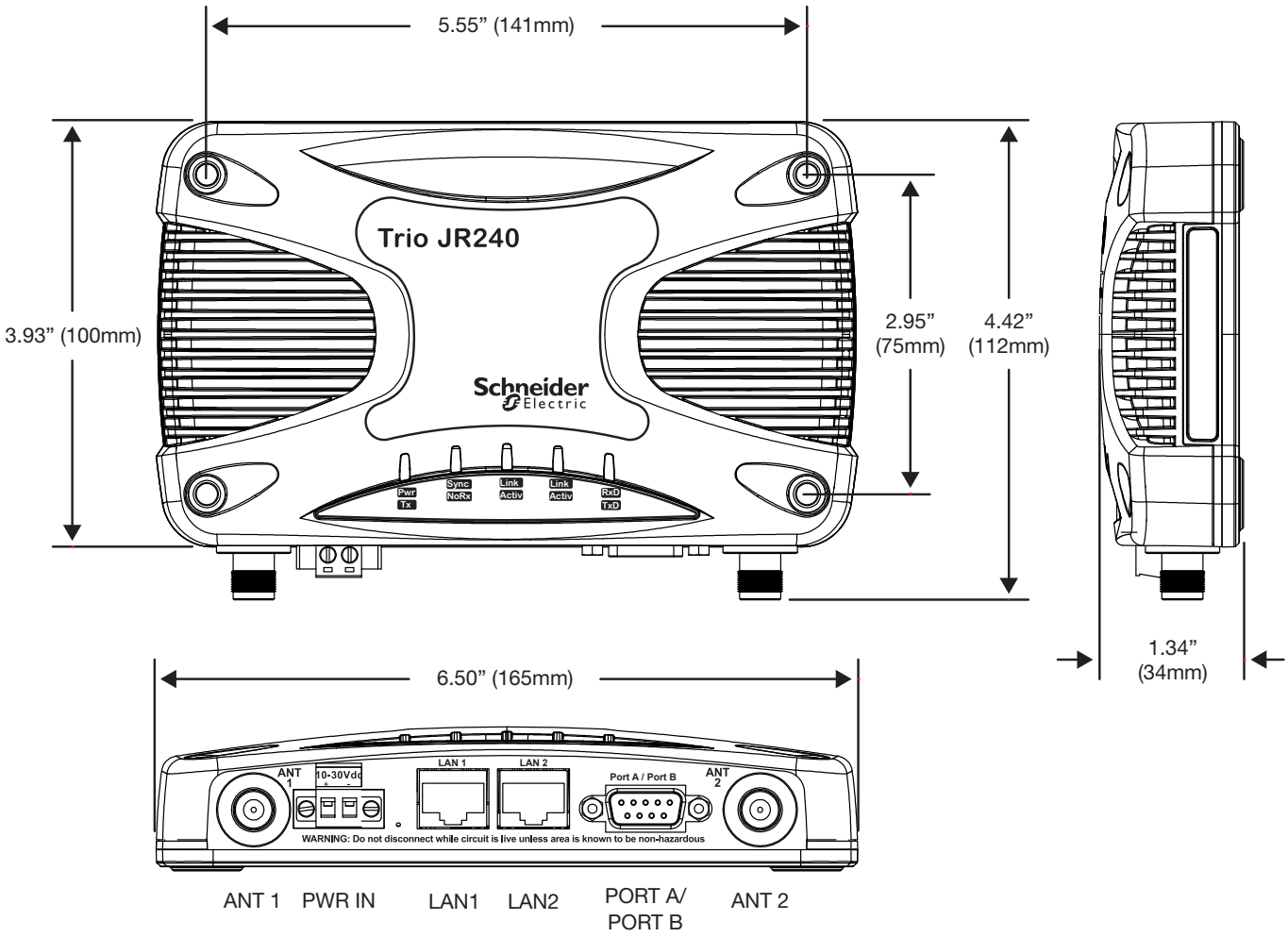
Example: JR900-00002-EH0 specifies: Trio JR900 Remote Ethernet Station, 900MHz band with a specific frequency range of 902 to 928MHz, a 256kbps modem, Encryption and Class1 Div2 rating.

Communications Standards:
FCC – Federal Communications Commission (USA)
IC – Industry Canada
ETSI – European Telecommunication Standards Institute
ACMA – Australian Communications & Media Authority

Contact your local sales office for accessories

* Export restrictions may apply. Contact factory for details.

Product Data Sheet Trio JR900 | JR240
Dimensions



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