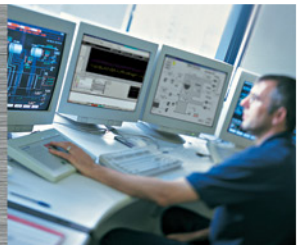
Product Information Note

Honeywell

XYR 401E Wireless Ethernet Modem



The XYR 401E Wireless Ethernet modem is part of Honeywell's OneWireless™ portfolio designed to improve plant safety, equipment reliability, regulatory compliance and process efficiency. The XYR 3000 family of products support a wide array of communication protocols to offer a greater choice of instrumentation for industrial wireless network applications. The XYR 401E modem provides robust and secure two way wireless communications between Ethernet enabled devices.

Honeywell's XYR401E Wireless Ethernet Modem product provides reliable and secure high speed wireless Ethernet connectivity across a broad range of applications in process and automation plants – PLCs, HMI, DCS, data acquisition, video devices and industrial PCs. The XYR401E provides an Ethernet port (10/100 Base-T) as well as two serial ports (RS232 and RS485) – up to three independent data-bus connections simultaneously. The XYR401E is a license free 802.11 compliant transceiver operating at 2.4 GHz and up to 400mW of transmission power.

In addition, XYR401E has a flexible architecture that is ideal for both new and existing facilities. New plants can use the modems to avoid wiring costs and begin production faster. Older facilities can streamline maintenance with the XYR401E modem and other XYR 3000 devices.

The XYR401E is capable of operating in an Access Point/Client configuration, functioning as a network Bridge/Router or serving as a Serial Server (RS232/485). It also offers node to node deterministic mesh network repeatability for further range and multiple channel spacing options to increase network scalability. An integrated Modbus server capability allows seamless I/O expansion through the use of the XYR3000 extension units.

Benefits

XYR 401E offers significant installation cost savings and faster project implementation, making communications between PLCs, HMI, DCS, data acquisition, video devices and industrial PCs easy to set up. The high-powered radios do not require site survey and reduce installation time.

Features

- 2.412 – 2.472 Ghz 802.11b/g transceiver
- Up to 108Mbps data throughput
- Transmit and receive antenna diversity
- Access point/client and bridge/router configuration
- Serial Client/Server/Multicast Modbus TCP to RTU gateway
- 10/100baseT IEEE 802.3 Ethernet
- Spanning tree (Self healing) support
- Deterministic AP to AP mesh network repeatability
- IEEE 802.11i secure 128-bit AES encryption (WPA2)
- MAC and IP address filtering
- Digital I/O channel transfer
- Configurable settings for high noise environments
- Over the air network diagnostics and configuration

Specifications

Transmitter/Receiver

Frequency	2.412 – 2.472GHz
Transmit Power	15 - 400mW (Data rate and country specific)
Transmission Modulation	Direct Sequence Spread Spectrum (DSSS) Orthogonal Frequency Data Modulation (OFDM)
Receiver Sensitivity	-100dBm@250kbps - 74dBm@108Mbps (8%FER)
Channel Spacing	5MHz spacing (13 channels, 2.412 - 2.472GHz)
Data Rate	1 – 108Mbps,"Auto Mode" selects fastest rate possible relative to RSSI
Range (LoS)	10Km (6mi.) @ 400mW(1)
Antenna Connector	2 x Female SMA Standard Polarity(2)

Input/Output

Discrete I/O	Input Voltage-Free Contact(3) Output FET 30Vdc 500mA(3)

Ethernet Port

Ethernet Port	10/100baseT; RJ45 Connector – IEEE 802.3
Link Activity	Link, 100baseT via LED

Serial Port

RS232	DB9 Female DCE; RTS/CTS/DTR/DCD
RS485	2-Pin Terminal Block – Non-Isolated(4)
Data Rate (Bps)	1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600, 76800, 115200, 230400 Bps
Serial Settings	7/8 Data Bits; Stop/Start/Parity (Configurable)

Protocols/Configuration

System Address	ESSID; 1 – 31 Character Text String
Protocols Supported	TCP/IP, UDP, ARP, SNMP, RADIUS/802.1x, DHCP, DNS, PPP, ICMP, HTTP, FTP, TFTP, TELNET, MODBUS and MODBUS-TCP
User Configuration	User Configurable Parameters via HTTPS Embedded Web Server
Configurable Parameters	Access Point/Client/Bridge/Router Point-to-Point, Point-to-Multi-point Wireless Distribution System (AP - AP repeater) Modbus TCP/RTU Gateway Serial Client/Server/Multicast Simultaneous RS232/485 connection Embedded Modbus Master/Slave for I/O transfer
Security	Data Encryption – 802.11i With CCMP 128bit AES Support for 802.1x Radius Server Secure HTTP Protocol
Bandwidth Protection	MAC Address – Whitelist/Blacklist IP Filtering – Whitelist/Blacklist ARP/GARP Filtering – Whitelist/Blacklist

LED Indication/Diagnostics

LED Indication	Power/OK; RX; TX/Link; RS232; LAN; RS485; Digital I/O status (additional info in product manual)
Reported Diagnostics	RSSI Measurements (dBm); Connectivity Information/Statistics; System Log file
Network Management	Optional Network Management System

Compliance

EMC	FCC Part 15; EN 301 489 – 17; AS/NZS CISPR22
RF (Radio)	EN 300 328; FCC Part 15; RSS 210
Hazardous Area	CSA Class I, Division 2; ATEX Zone 2
Safety	IEC 60950 (RoHS Compliant)
UL	UL Listed

General

Size	114 x 140 x 30mm (4.5" x 5.5" x 1.2")
Housing	Powder-Coated Aluminum
Mounting	DIN Rail
Terminal Blocks	Removable; Max conductor 12AWG (2.5mm2)
Temperature Rating	-40 to +60°C; -40 to +140°F
Humidity Rating	0 – 99% RH Non-condensing
Weight	0.45kg (1.0lb).

Power Supply

Nominal Supply	9 to 30Vdc; Under/Over Voltage Protection
Average Current Draw	270mA @ 12V (Idle); 140mA @ 24V (Idle)
Transmit Current Draw	470mA @ 12V (400mW); 250mA @ 24V (400mW)

Note: Specifications subject to change.
1) Typical Maximum Line of Sight Range
2) Supports Signal Diversity or High Gain Antenna
3) Can be used to transfer I/O status or Communications Failure Output
4) Maximum Distance 1200 Meters

More Information

For more information on Honeywell's wireless solutions, visit www.honeywellprocess.com or contact your Honeywell account manager.

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PN-12-12-ENG
March 2012

Honeywell