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# 245U-E Wireless Ethernet Modem

802.11 wireless Ethernet for reliable high-speed connectivity



# Description

The ELPRO 245U-E Wireless Ethernet Modem is a robust, license-free wireless 802.11 standards-compliant transceiver capable of high-bandwidth communications. Operating at 2.4 GHz or 5 GHz and up to 400 mW, the ELPRO 245U-E is optimized for throughputs of up to 108 Mbps, providing robust and secure two-way wireless communications in challenging indoor and outdoor environments typical of industrial monitoring and control applications.

Capable of operating in access point/client configuration, functioning as a network bridge/router, or serving as a serial server (RS-232/RS-485), the ELPRO 245U-E offers node-to-node deterministic mesh network repeatability for greater range and multiple channel spacing options to increase network scalability. Integrated Modbus server capability allows seamless I/O expansion through the use of ELPRO 115S expansion modules.







#### **Features**

- 802.11b/g and 802.11a standard-compliant options
- 2.412–2.472 GHz frequency (802.11b/g) and 15–400 mW RF power
- 5.18-5.825 GHz frequency (802.11a) and 15-400 mW RF power
- Up to 108-Mbps data throughput
- 13-channel (802.11b/g) and 27-channel (802.11a) options
- 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
- Fast roaming for AP-to-AP handover
- 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
- VLAN tagging support for bridging and routing modes

## Applications

- Factory automation and safety interlocks
- · Networking wind turbines and solar collectors

DECODIDITION

- Video surveillance
- Automated vehicle control
- Tank farm monitoring

# **Specifications**

/er
2.412–2.472 GHz ① 5.150–5.825 GHz ②
15–400 mW (data rate and country-specific)
Direct sequence spread spectrum (DSSS) ① ②
Orthogonal frequency data modulation (OFDM) ① ②
–100 dBm @ 250 kbps, 74 dBm @ 108 Mbps (8% FER) ①
100 Bm @ 250 kbps, 74 dBm @ 108 Mbps (8% FER) @
5-MHz spacing (13 channels, 2.412–2.472 GHz) ①
20-MHz spacing (27 channels, 5.150–5.8 GHz)②
1-108 Mbps ①
6-108 Mbps @
"Auto Mode" selects fastest rate possible relative to RSSI
6 miles (10 km) @ 400 mW ① ③, 3 miles (5 km) @ 400 mW ② ③
2 x female SMA, standard polarity ④

## **Specifications (continued)**

Imput and Output     Input voltage-free contact (\$), output FET 30 Vdc 500 mA (\$)       Ethernet Port     Ethernet Port       Ethernet Port     100baseT, RJ-45 connector-IEEE 802.3       Link activity     Link, 100baseT via LED       Serial Port     RS-232       RS-485     2-pin terminal block, non-isolated (\$)       Data rate (bps)     1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600, 76800, 115200, 230400 bps       Serial settings     7/8 data bits, story/start/parity (configurable)       Protocols and Configuration     System address       System address     ESSID: 1-31 character text string       Protocols supported     TCP/IP_UDP_ARP_SNMP_RADIUS/802.1x_DHCP_DNS, PPP       User configuration     User configurable parameters valitTPS embedded Web server       Configuration     User configurable parameters valitTPS embedded Web server       Configuration     User configurable parameters valitTPS embedded Web server       Configuration     User configurable parameters valiton system (AP-AP repeater)       Modbus TCP/IRTU gateway     Serial encryption, 802.111 with CCMP 128-bit AES       Support for 802.1x Radius server     Security       Data encryption, 802.111 with CCMP 128-bit AES       Support for 802.1x Radius server	SPECIFICATION	DESCRIPTION	
Ethernet Port     100baseT, RJ-45 connector-IEEE 802.3       Link activity     Link, 100baseT via LED       Serial Port     RS-232       BS-485     2-pin terminal block, non-isolated @       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 and Configuration     System address       System address     ESSID; 1–31 character text string       Protocols supported     TCP/IP. UDP, ARP, SNMP, RADIUS/802.1x, DHCP, DNS, PPP, ICMP, HTTP, FTP, TETP, TELNET, MODBUS and MODBUS-TCP       User configuration     User configurable parameters via HTTPS embedded Web server       Configurable     Access point/client/bridge/router/VLAN       parameters     Point to point, point to multipoint       Wireless distribution system (AP-AP repeater)     Modbus TCP/IFUT gateway       Serial client/server/multicast     Simultaneous RS-232/RS-485 connection       Embedded Modbus master/slave for I/O transfer     Security       Data encryption, 802.111 with CCMP 128-bit AES     Support for 802.1x Radius server       Security     Data encryption, 802.111 with CCMP 128-bit AES       Support for fullering: whitelist/blacklist     APP/GAPP filtering: whitel	Input and Output		
Ethemet port     100baseT, RJ-45 connector-IEEE 802.3       Link activity     Link, 100baseT via LED       Serial Port     RS-232       BS-322     DB-9 female DCE, RTS/CTS/DTR/DCD       RS-485     2-pin terminal block, non-isolated @       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 and Configuration     System address       System address     ESSID; 1–31 character text string       Protocols supported     TCP/IP, UDP, ARP, SNMP, RADIUS/802.1x, DHCP, DNS, PPP, ICMP, HTTP, FTP, TETP, TELNET, MODBUS and MODBUS-TCP       User configuration     User configurable parameters via HTTPs embedded Web server       Configurable     Access point/client/bridge/router/VLAN       parameters     Point to point, point to multipoint       Wireless distribution system (AP–AP repeater)     Modbus TCP/RTU gateway       Secial client/server/multicast     Simulaneous RS-232/RS-485 connection       Embedded Modbus master/slave for I/O transfer     Support for 802.1 x Radius server       Security     Data encryption, 802.111 with CCMP 128-bit AES       Support for 802.1 x Radius server     Secure HTTP protocol	Discrete I/O	Input voltage-free contact ⑤, output FET 30 Vdc 500 mA ⑤	
Link activity   Link, 100baseT via LED     Serial Port     RS-232   DB-9 female DCE, RTS/CTS/DTR/DCD     RS-485   2-pin terminal block, non-isolated @     Data rate (bps)   1200, 2400, 4900, 9600, 14400, 19200, 38400, 57600, 76800, 115200, 230400 bps     Serial settings   7/8 data bits, stop/start/parity (configurable)     Protocols and Configuration   System address     System address   ESSID; 1–31 character text string     Protocols supported   TCP/IP, UDP, ARP, SNMP, RADIUS/802, 1x, DHCP, DNS, PPP, ICMP, HTP, FTP, TFTP, TELNET, MODBUS and MODBUS-TCP     User configuration   User configurable parameters via HTTPS embedded Web server     Configurable   Access point/client/bridgerouter/VLAN     parameters   Point to point, point to multipoint     Wireless distribution system (AP–AP repeater)   Modbus TCP/RTU gateway     Security   Data encryption, 802, 111 with CCMP 128-bit AES     Support for 802, 12 x Radius server   Secure HTTP protocol     Bandwidth Protection   MAC address; whitelist/blacklist     Power/OK, RX, TX/link, RS-232, LAN, RS-485, digital/O status Refer to product manual for further information     Reported diagnostics   RSI measurements, connectivity information/statistics, log file     Network management   Optional ne	Ethernet Port		
Serial Port       RS-232     DB-9 female DCE, RTS/CTS/DTR/DCD       RS-485     2-pin terminal block, non-isolated ©       Data rate (bps)     1200, 2400, 9600, 14400, 19200, 38400, 57600, 76800, 115200, 230400 bps       Serial settings     7/8 data bits, stoy/start/parity (configurable)       Protocols and Configuration     System address       System address     ESSID; 1–31 character text string       Protocols supported     TCP//P, UDP, ARP, SNMP, RADIUS/802, 1x, DHCP, DNS, PPP, ICMP, HTTP, FTP, TETP, TELNET, MODBUS and MODBUS-TCP       User configuration     User configurable parameters via HTTPS embedded Web server       Configurable     Access point/client/bridge/router/VLAN       parameters     Point to point, point to multipoint       Wireless distribution system (AP-AP repeater)     Modbus TCP/RTU gateway       Serial client/server/multicast     Simultaneous RS-232/RS-485 connection       Embedded Mobus master/slave for I/O transfer     Security       Data encryption, 802,111 with CCMP 128-bit AES       Support for 802,1x Radius server     Secure HTTP protocol       Bandwidth Protection     MAC address; whitelist/blacklist       LED Indication and Diagnostics     RSSI measurements, connectivity information/statistics, log file       Network manage	Ethernet port	100baseT, RJ-45 connector–IEEE 802.3	
RS-232   DB-9 female DCE, RTS/CTS/DTR/DCD     RS-485   2-pin terminal block, non-isolated @     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 and Configuration   System address     System address   ESSID; 1–31 character text string     Protocols supported   TCP/IP, UDP, ARP, SNMP, RADIUS/802.1x, DHCP, DNS, PPP, ICMP, HTTP, FTP, TETP, TELNET, MOBBUS and MODBUS-TCP     User configuration   User configurable parameters via HTTPS embedded Web server     Configurable   Access point/client/bridge/router/VLAN     parameters   Point to point, point to multipoint     Wireless distribution system (APAP repeater)   Modbus TCP/RTU gateway     Seruity   Data encryption, 802.11 i with CCMP 128-bit AES     Support for 802.1x Radius server   Support for 802.1x Radius server     Security   Data encryption, 802.11 i with CCMP 128-bit AES     Support for 802.1x Radius server   Security     Bandwidth Protection   MAC address', whitelist/blacklist     LED Indication and Diagnostics   RSSI measurements, connectivity information/statistics, log file     Network management   Optional network management system <t< td=""><td>Link activity</td><td>Link, 100baseT via LED</td></t<>	Link activity	Link, 100baseT via LED	
RS-485   2-pin terminal block, non-isolated ⊕     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 and Configuration   System address     System address   ESSID; 1–31 character text string     Protocols supported   TCP/IP, UDP, ARP, SNMP, RADIUS/802.1x, DHCP, DNS, PPP, ICMP, HTTP, TTP, TETNET, TELNET, MODBUS and MODBUS-TCP     User configuration   User configurable parameters via HTTPS embedded Web server     Configurable   Access point/client/bridge/router/VLAN     parameters   Point to point, point to multipoint     Wireless distribution system (AP-AP repeater)   Modbus TCP/ITU gateway     Security   Data encryption, 802.11i with CCMP 128-bit AES     Support for 802.1x Radius server   Secure HTTP protocol     Bandwidth Protection   MAC address: whitelist/blacklist     LED Indication and Diagnostics   RSI measurements, connectivity information/statistics, 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 0; EN 301 893 0; FCC Part 15; RSS 210     Hazardous area   CSA Class I, Division 2; ATEX; IECE	Serial Port		
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 and Configuration   System address     Protocols supported   CP/IP, UDP, ARP, SNMP, RADIUS/802.1x, DHCP, DNS, PPP, ICMP, HTTP, FTP, TETP, TELNET, MODBUS and MODBUS-TCP     User configuration   User configurable parameters via HTTPS embedded Web server     Configurable   Access point/Client/bridge/router/VLAN     parameters   Point to point, point to mittipoint     Wireless distribution system (AP-AP repeater)   Modbus TCP/RTU gateway     Serial client/server/multicast   Simultaneous RS-232/RS-485 connection     Embedded Modbus master/slave for I/O transfer   Secure HTTP protocol     Bandwidth Protection   McA cadress: whitelist/blacklist     IP filtering: whitelist/blacklist   ARP/GARP filtering; whitelist/blacklist     LED Indication and Diagnostics   RSSI measurements, connectivity information/statistics, 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 0; EN 301 489–17; AS/NZS CISPR22   RF (radio)     Hazardous area   CSA Class 1, Division 2; ATEX; IECEx nA IIC	RS-232	DB-9 female DCE, RTS/CTS/DTR/DCD	
115200, 230400 bps     Serial settings   7/8 data bits, stop/start/parity (configurable)     Protocols and 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, TELNET, MODBUS and MODBUS-TCP     User configuration   User configurable parameters via HTTPS embedded Web server     Configurable   Access point/client/bridge/router/VLAN     parameters   Point to point, point to multipoint     Wireless distribution system (AP–AP repeater)   Modbus TCP/RTU gateway     Serial client/server/multicast   Simultaneous RS-232/RS-485 connection     Embedded Modbus master/slave for I/10 transfer   Security     Data encryption, 802.11i with CCMP 128-bit AES   Support for 802.1x Radius server     Security   Data encryption, 802.11i with CCMP 128-bit 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 and Diagnostics   RSSI measurements, connectivity information/statistics, log file     Network management   Optional network management system     Compliance   EMC   <	RS-485	2-pin terminal block, non-isolated	
Protocols and 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     Access point/client/bridge/router/VLAN       parameters     Point to point, point to multipoint       Wireless distribution system (AP–AP repeater)     Modbus TCP/RIU gateway       Serial client/server/multicast     Simultaneous RS-232/RS-485 connection       Embedded Modbus master/slave for I/O transfer     Secure HTTP protocol       Bandwidth Protection     MAC address; whitelist/blacklist       IP filtering; whitelist/blacklist     Pflitering; whitelist/blacklist       LED Indication and Diagnostics     RSSI measurements, connectivity information/statistics, 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 0; EN 301 893 0; FCC Part 15; RSS 210       Hazardous area     CSA Class 1, Division 2; ATEX; IECEx nA IIC       Safety     IEC 60950 (RoHS compliant)       UL     UL     UL </td <td>Data rate (bps)</td> <td></td>	Data rate (bps)		
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     Access point/client/bridg/router/VLAN parameters       Point to point, point to multipoint Wireless distribution system (AP–AP repeater) Modbus TCP/RTU gateway Serial client/server/multicast       Security     Data encryption, 802.11 with CCMP 128-bit AES Support for 802.1x Radius server Secure HTTP protocol       Bandwidth Protection     MAC address; whitelist/blacklist ARP/GARP filtering; whitelist/blacklist       LED Indication and Diagnostics     RSSI measurements, connectivity information/statistics, log file       Network management     Optional network management system       Compliance     EMC       EMC     FCC Part 15; EN 301 489–17; AS/NZS CISPR22       RF (radio)     EN 300 328 ©; EN 301 893 @; FCC Part 15; RSS 210       Hazardous area     CSA Class I, Division 2; ATEX; IECEx nA IIC       Safety     IEC 60950 (RoHS compliant)       UL     UL isted       General     Size       Size     4.5* x 5.5* x 1.2* (114 x 140 x 30 mm)       Housing     Powder-coated aluminum </td <td>Serial settings</td> <td>7/8 data bits, stop/start/parity (configurable)</td>	Serial settings	7/8 data bits, stop/start/parity (configurable)	
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/VLAN     parameters   Point to point, point to multipoint     Wireless distribution system (AP–AP repeater)   Modbus TCP/RTU gateway     Serial client/server/multicast   Simultaneous RS-232/RS-485 connection     Embedded Modbus master/slave for I/O transfer     Security   Data encryption, 802.11 with CCMP 128-bit AES     Support for 802.1x Radius server     Security   Data encryption, 802.11 with CCMP 128-bit AES     Support for 802.1x Radius server     Security   Data encryption, 802.11 with CCMP 128-bit AES     Support for 802.1x Radius server     Security   Data encryption, 802.11 with CCMP 128-bit AES     Support for 802.1x Radius server     Security   Data encryption, 802.11 with CCMP 128-bit AES     Support for 802.1x Radius server     Security   Data encryption, 802.11 with CCMP 128-bit AES     Support for 802.1x Radius server     Security   Data encryption, 802.11 with CCMP 128-bit AES     Bandwidth Protection   MAC address: whitelis	Protocols and Configu	iration	
ICMP, HTTP, FTP, TETP, TELNET, MODBUS and MODBUS-TCP       User configuration     User configurable parameters via HTTPS embedded Web server       Configurable     Access point/client/bridge/router/VLAN       parameters     Point to point, point to multipoint       Wireless distribution system (AP-AP repeater)     Modbus TCP/RTU gateway       Serial client/server/multicast     Simultaneous RS-232/RS-485 connection       Embedded Modbus master/slave for I/O transfer       Security     Data encryption, 802.11 i with CCMP 128-bit AES       Support for 802.1x Radius server       Security     Data encryption, 802.11 with CCMP 128-bit AES       Support for 802.1x Radius server       Secure HTTP protocol       Bandwidth Protection     MAC address; whitelist/blacklist       IP filtering; whitelist/blacklist       IP filtering; whitelist/blacklist       Reported diagnostics       RED Indication     Power/OK, RX, TX/link, RS-232, LAN, RS-485, digital/O status       Refer to product manual for further information/statistics, log file       Network management     Optional network management system       Compliance     EMC       EMC     FCC Part 15; EN 301 489–17; AS/NZS CISPR22       RF (radio)     EN 300 328 0; EN 3	System address	ESSID; 1–31 character text string	
Configurable parameters   Access point/client/bridge/router/VLAN Point to point, point to multipoint Wireless distribution system (AP–AP repeater) Modbus TCP/RTU gateway Serial client/server/multicast Simultaneous RS-232/RS-485 connection Embedded Modbus master/slave for 1/0 transfer     Security   Data encryption, 802.11i with CCMP 128-bit 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 and Diagnostics   Power/OK, RX, TX/link, RS-232, LAN, RS-485, digital/0 status Refer to product manual for further information     Reported diagnostics   RSSI measurements, connectivity information/statistics, log file     Network management   Optional network management System     Compliance   EMC     FMC   FCC Part 15; EN 301 489–17; AS/NZS CISPR22     RF (radio)   EN 300 328 ©; EN 301 893 @; FCC Part 15; RSS 210     Hazardous area   CSA Class I, Division 2; ATEX; IECEx nA IIC     Safety   IEC 60950 (RoHS compliant)     UL   UL listed     General   Size     Size   4.5" x 5.5" x 1.2" (114 x 140 x 30 mm)     Housing   Powder-coated aluminum     Mounting   DIN rail     Terminal blocks   Removable, max conductor 14 AWG 0.1 in.² (2.5 mm²)	Protocols supported		
parametersPoint to point, point to multipoint Wireless distribution system (AP–AP repeater) Modbus TCP/RTU gateway Serial client/server/multicast Simultaneous RS-232/RS-486 connection Embedded Modbus master/slave for I/O transferSecurityData encryption, 802.11 with CCMP 128-bit AES Support for 802.1x Radius server Secure HTTP protocolBandwidth ProtectionMAC address; whitelist/blacklist ARP/GARP filtering; whitelist/blacklistLED Indication and DiagnosticsLED IndicationPower/OK, RX, TX/link, RS-232, LAN, RS-485, digital/O status Refer to product manual for further informationReported diagnosticsLED IndicationPower/OK, RX, TX/link, RS-232, LAN, RS-485, digital/O status Refer to product manual for further information/statistics, log file Network managementOptional network management systemComplianceEMCFCC Part 15; EN 301 489–17; AS/NZS CISPR22RF (radio)EN 300 328 ©; EN 301 893 @; FCC Part 15; RSS 210Hazardous areaCSA Class 1, Division 2; ATEX; IECEx nA IICSafetyIEC 60950 (RoHS compliant)ULUL listedGeneralSize4.5" x 5.5" x 1.2" (114 x 140 x 30 mm)HousingPowder-coated aluminumMountingDIN railTerminal blocksRemovable, max conductor 14 AWG 0.1 in.² (2.5 mm²)Temperature rating-40 to +140°F (-40 to +60°C)Humidity rating0–99% RH noncondensingWeight1.0 lb (0.45 kg)Power Supply9 to 30 Vdc, under/over voltage protectionAverage current draw270 mA @ 12V (idle); 140 mA @ 24V (idle) <td>User configuration</td> <td>User configurable parameters via HTTPS embedded Web server</td>	User configuration	User configurable parameters via HTTPS embedded Web server	
Support for 802.1x Radius server Secure HTTP protocolBandwidth ProtectionMAC address; whitelist/blacklist IP filtering; whitelist/blacklist ARP/GARP filtering; whitelist/blacklistLED Indication and DiagnosticsLED indicationPower/OK, RX, TX/link, RS-232, LAN, RS-485, digital/O status Refer to product manual for further informationReported diagnosticsRSSI measurements, connectivity information/statistics, log fileNetwork managementOptional network management systemComplianceEMCFCC Part 15; EN 301 489–17; AS/NZS CISPR22RF (radio)EN 300 328 ©; EN 301 893 @; FCC Part 15; RSS 210Hazardous areaCSA Class I, Division 2; ATEX; IECEx nA IICSafetyIEC 60950 (RoHS compliant)ULUL listedGeneralSize4.5" x 5.5" x 1.2" (114 x 140 x 30 mm)HousingPowder-coated aluminumMountingDIN railTerminal blocksRemovable, max conductor 14 AWG 0.1 in.² (2.5 mm²)Temperature rating-40 to +140°F (-40 to +60°C)Humidity rating0–99% RH noncondensingWeight1.0 lb (0.45 kg)Power SupplyNominal supply9 to 30 Vdc, under/over voltage protectionAverage current draw270 mA @ 12V (idle); 140 mA @ 24V (idle)		Point to point, point to multipoint Wireless distribution system (AP–AP repeater) Modbus TCP/RTU gateway Serial client/server/multicast Simultaneous RS-232/RS-485 connection	
IP filtering; whitelist/blacklistLED Indication and DiagnosticsLED indicationPower/OK, RX, TX/link, RS-232, LAN, RS-485, digital/0 status Refer to product manual for further informationReported diagnosticsRSSI measurements, connectivity information/statistics, log fileNetwork managementOptional network management systemComplianceEMCFCC Part 15; EN 301 489–17; AS/NZS CISPR22RF (radio)EN 300 328 ©; EN 301 893 ©; FCC Part 15; RSS 210Hazardous areaCSA Class I, Division 2; ATEX; IECEx nA IICSafetyIEC 60950 (RoHS compliant)ULUL listedGeneralSizeSize4.5" x 5.5" x 1.2" (114 x 140 x 30 mm)HousingPowder-coated aluminumMountingDIN railTerminal blocksRemovable, max conductor 14 AWG 0.1 in.² (2.5 mm²)Temperature rating-40 to +140°F (-40 to +60°C)Humidity rating0–99% RH noncondensingWeight1.0 lb (0.45 kg)Power SupplyNorninal supply9 to 30 Vdc, under/over voltage protectionAverage current draw270 mA @ 12V (idle); 140 mA @ 24V (idle)	Security	Support for 802.1x Radius server	
LED indicationPower/OK, RX, TX/link, RS-232, LAN, RS-485, digital/0 status Refer to product manual for further informationReported diagnosticsRSSI measurements, connectivity information/statistics, log fileNetwork managementOptional network management systemComplianceEMCFCC Part 15; EN 301 489–17; AS/NZS CISPR22RF (radio)EN 300 328 ©; EN 301 893 ©; FCC Part 15; RSS 210Hazardous areaCSA Class I, Division 2; ATEX; IECEx nA IICSafetyIEC 60950 (RoHS compliant)ULUL listedGeneralSize4.5" x 5.5" x 1.2" (114 x 140 x 30 mm)HousingPowder-coated aluminumMountingDIN railTerminal blocksRemovable, max conductor 14 AWG 0.1 in.² (2.5 mm²)Temperature rating-40 to +140°F (-40 to +60°C)Humidity rating0–99% RH noncondensingWeight1.0 lb (0.45 kg)Power Supply9 to 30 Vdc, under/over voltage protectionAverage current draw270 mA @ 12V (idle); 140 mA @ 24V (idle)	Bandwidth Protection	IP filtering; whitelist/blacklist	
Refer to product manual for further informationReported diagnosticsRSSI measurements, connectivity information/statistics, log fileNetwork managementOptional network management systemComplianceEMCFCC Part 15; EN 301 489–17; AS/NZS CISPR22RF (radio)EN 300 328 ©; EN 301 893 ©; FCC Part 15; RSS 210Hazardous areaCSA Class I, Division 2; ATEX; IECEx nA IICSafetyIEC 60950 (RoHS compliant)ULUL listedGeneralSize4.5" x 5.5" x 1.2" (114 x 140 x 30 mm)HousingPowder-coated aluminumMountingDIN railTerminal blocksRemovable, max conductor 14 AWG 0.1 in.² (2.5 mm²)Temperature rating-40 to +140°F (-40 to +60°C)Humidity rating0–99% RH noncondensingWeight1.0 lb (0.45 kg)Power Supply9 to 30 Vdc, under/over voltage protectionAverage current draw270 mA @ 12V (idle); 140 mA @ 24V (idle)	LED Indication and Di	agnostics	
Network managementOptional network management systemComplianceEMCFCC Part 15; EN 301 489–17; AS/NZS CISPR22RF (radio)EN 300 328 ①; EN 301 893 ②; FCC Part 15; RSS 210Hazardous areaCSA Class I, Division 2; ATEX; IECEx nA IICSafetyIEC 60950 (RoHS compliant)ULUL listedGeneralSize4.5" x 5.5" x 1.2" (114 x 140 x 30 mm)HousingPowder-coated aluminumMountingDIN railTerminal blocksRemovable, max conductor 14 AWG 0.1 in.² (2.5 mm²)Temperature rating-40 to +140°F (-40 to +60°C)Humidity rating0–99% RH noncondensingWeight1.0 lb (0.45 kg)Power SupplyNominal supply9 to 30 Vdc, under/over voltage protectionAverage current draw270 mA @ 12V (idle); 140 mA @ 24V (idle)	LED indication		
Compliance     EMC   FCC Part 15; EN 301 489–17; AS/NZS CISPR22     RF (radio)   EN 300 328 ©; EN 301 893 ©; FCC Part 15; RSS 210     Hazardous area   CSA Class I, Division 2; ATEX; IECEx nA IIC     Safety   IEC 60950 (RoHS compliant)     UL   UL listed     General     Size   4.5" x 5.5" x 1.2" (114 x 140 x 30 mm)     Housing   Powder-coated aluminum     Mounting   DIN rail     Terminal blocks   Removable, max conductor 14 AWG 0.1 in.² (2.5 mm²)     Temperature rating   -40 to +140°F (-40 to +60°C)     Humidity rating   0–99% RH noncondensing     Weight   1.0 lb (0.45 kg)     Power Supply   9 to 30 Vdc, under/over voltage protection     Average current draw   270 mA @ 12V (idle); 140 mA @ 24V (idle)	Reported diagnostics	RSSI measurements, connectivity information/statistics, log file	
EMCFCC Part 15; EN 301 489–17; AS/NZS CISPR22RF (radio)EN 300 328 ©; EN 301 893 ©; FCC Part 15; RSS 210Hazardous areaCSA Class I, Division 2; ATEX; IECEx nA IICSafetyIEC 60950 (RoHS compliant)ULUL listedGeneralSize4.5" x 5.5" x 1.2" (114 x 140 x 30 mm)HousingPowder-coated aluminumMountingDIN railTerminal blocksRemovable, max conductor 14 AWG 0.1 in.² (2.5 mm²)Temperature rating-40 to +140°F (-40 to +60°C)Humidity rating0–99% RH noncondensingWeight1.0 lb (0.45 kg)Power Supply9 to 30 Vdc, under/over voltage protectionAverage current draw270 mA @ 12V (idle); 140 mA @ 24V (idle)	Network management	Optional network management system	
RF (radio)EN 300 328 (0); EN 301 893 (0); FCC Part 15; RSS 210Hazardous areaCSA Class I, Division 2; ATEX; IECEx nA IICSafetyIEC 60950 (RoHS compliant)ULUL listedGeneralSize4.5" x 5.5" x 1.2" (114 x 140 x 30 mm)HousingPowder-coated aluminumMountingDIN railTerminal blocksRemovable, max conductor 14 AWG 0.1 in.² (2.5 mm²)Temperature rating-40 to +140°F (-40 to +60°C)Humidity rating0–99% RH noncondensingWeight1.0 lb (0.45 kg)Power Supply9 to 30 Vdc, under/over voltage protectionAverage current draw270 mA @ 12V (idle); 140 mA @ 24V (idle)	Compliance		
Hazardous area   CSA Class I, Division 2; ATEX; IECEx nA IIC     Safety   IEC 60950 (RoHS compliant)     UL   UL listed     General   Size     Size   4.5" x 5.5" x 1.2" (114 x 140 x 30 mm)     Housing   Powder-coated aluminum     Mounting   DIN rail     Terminal blocks   Removable, max conductor 14 AWG 0.1 in.² (2.5 mm²)     Temperature rating   -40 to +140°F (-40 to +60°C)     Humidity rating   0–99% RH noncondensing     Weight   1.0 lb (0.45 kg)     Power Supply   9 to 30 Vdc, under/over voltage protection     Average current draw   270 mA @ 12V (idle); 140 mA @ 24V (idle)	EMC	FCC Part 15; EN 301 489–17; AS/NZS CISPR22	
Safety   IEC 60950 (RoHS compliant)     UL   UL listed     General   Size     Size   4.5" x 5.5" x 1.2" (114 x 140 x 30 mm)     Housing   Powder-coated aluminum     Mounting   DIN rail     Terminal blocks   Removable, max conductor 14 AWG 0.1 in.² (2.5 mm²)     Temperature rating   -40 to +140°F (-40 to +60°C)     Humidity rating   0-99% RH noncondensing     Weight   1.0 lb (0.45 kg)     Power Supply   9 to 30 Vdc, under/over voltage protection     Average current draw   270 mA @ 12V (idle); 140 mA @ 24V (idle)	RF (radio)	EN 300 328 ①; EN 301 893 ②; FCC Part 15; RSS 210	
UL UL listed   General   Size 4.5" x 5.5" x 1.2" (114 x 140 x 30 mm)   Housing Powder-coated aluminum   Mounting DIN rail   Terminal blocks Removable, max conductor 14 AWG 0.1 in.² (2.5 mm²)   Temperature rating -40 to +140°F (-40 to +60°C)   Humidity rating 0-99% RH noncondensing   Weight 1.0 lb (0.45 kg)   Power Supply 9 to 30 Vdc, under/over voltage protection   Average current draw 270 mA @ 12V (idle); 140 mA @ 24V (idle)	Hazardous area	CSA Class I, Division 2; ATEX; IECEx nA IIC	
General     Size   4.5" x 5.5" x 1.2" (114 x 140 x 30 mm)     Housing   Powder-coated aluminum     Mounting   DIN rail     Terminal blocks   Removable, max conductor 14 AWG 0.1 in.² (2.5 mm²)     Temperature rating   -40 to +140°F (-40 to +60°C)     Humidity rating   0-99% RH noncondensing     Weight   1.0 lb (0.45 kg)     Power Supply   9 to 30 Vdc, under/over voltage protection     Average current draw   270 mA @ 12V (idle); 140 mA @ 24V (idle)	Safety	IEC 60950 (RoHS compliant)	
Size   4.5" x 5.5" x 1.2" (114 x 140 x 30 mm)     Housing   Powder-coated aluminum     Mounting   DIN rail     Terminal blocks   Removable, max conductor 14 AWG 0.1 in.² (2.5 mm²)     Temperature rating   -40 to +140°F (-40 to +60°C)     Humidity rating   0–99% RH noncondensing     Weight   1.0 lb (0.45 kg)     Power Supply   9 to 30 Vdc, under/over voltage protection     Average current draw   270 mA @ 12V (idle); 140 mA @ 24V (idle)	UL	UL listed	
Housing   Powder-coated aluminum     Mounting   DIN rail     Terminal blocks   Removable, max conductor 14 AWG 0.1 in.² (2.5 mm²)     Temperature rating   -40 to +140°F (-40 to +60°C)     Humidity rating   0–99% RH noncondensing     Weight   1.0 lb (0.45 kg)     Power Supply   9 to 30 Vdc, under/over voltage protection     Average current draw   270 mA @ 12V (idle); 140 mA @ 24V (idle)	General		
Housing   Powder-coated aluminum     Mounting   DIN rail     Terminal blocks   Removable, max conductor 14 AWG 0.1 in.² (2.5 mm²)     Temperature rating   -40 to +140°F (-40 to +60°C)     Humidity rating   0–99% RH noncondensing     Weight   1.0 lb (0.45 kg)     Power Supply   9 to 30 Vdc, under/over voltage protection     Average current draw   270 mA @ 12V (idle); 140 mA @ 24V (idle)	Size	4.5" x 5.5" x 1.2" (114 x 140 x 30 mm)	
Mounting     DIN rail       Terminal blocks     Removable, max conductor 14 AWG 0.1 in.² (2.5 mm²)       Temperature rating     -40 to +140°F (-40 to +60°C)       Humidity rating     0-99% RH noncondensing       Weight     1.0 lb (0.45 kg)       Power Supply     9 to 30 Vdc, under/over voltage protection       Average current draw     270 mA @ 12V (idle); 140 mA @ 24V (idle)	Housing		
Temperature rating   -40 to +140°F (-40 to +60°C)     Humidity rating   0-99% RH noncondensing     Weight   1.0 lb (0.45 kg)     Power Supply   9 to 30 Vdc, under/over voltage protection     Average current draw   270 mA @ 12V (idle); 140 mA @ 24V (idle)		DIN rail	
Temperature rating   -40 to +140°F (-40 to +60°C)     Humidity rating   0-99% RH noncondensing     Weight   1.0 lb (0.45 kg)     Power Supply   9 to 30 Vdc, under/over voltage protection     Average current draw   270 mA @ 12V (idle); 140 mA @ 24V (idle)	Terminal blocks	Removable, max conductor 14 AWG 0.1 in. <sup>2</sup> (2.5 mm <sup>2</sup> )	
Humidity rating   0–99% RH noncondensing     Weight   1.0 lb (0.45 kg)     Power Supply   9 to 30 Vdc, under/over voltage protection     Average current draw   270 mA @ 12V (idle); 140 mA @ 24V (idle)	Temperature rating		
Weight   1.0 lb (0.45 kg)     Power Supply     Nominal supply   9 to 30 Vdc, under/over voltage protection     Average current draw   270 mA @ 12V (idle); 140 mA @ 24V (idle)	Humidity rating		
Nominal supply9 to 30 Vdc, under/over voltage protectionAverage current draw270 mA @ 12V (idle); 140 mA @ 24V (idle)	Weight		
Nominal supply9 to 30 Vdc, under/over voltage protectionAverage current draw270 mA @ 12V (idle); 140 mA @ 24V (idle)	Power Supply		
		9 to 30 Vdc, under/over voltage protection	
Transmit current draw 470 mA @ 12V (400 mW), 250 mA @ 24V (400 mW)	Average current draw	270 mA @ 12V (idle); 140 mA @ 24V (idle)	
	Transmit current draw	470 mA @ 12V (400 mW), 250 mA @ 24V (400 mW)	

Note: Specifications subject to change.

① Order option for 802.11b/g

② Order option for 802.11a

③ Typical maximum line of sight range

④ Supports signal diversity or high-gain antenna

 $\textcircled{\sc status}$  Can be used to transfer I/O status or communications failure output

⑥ Maximum distance: 3937' (1200m)

## Ordering

PRODUCT CODE	DESCRIPTION	FREQUENCY	RF POWER
245U-E-G	Ethernet 802.11b,g	2.4 GHz DSSS	100/400 mW
245U-E-A	Ethernet 802.11a	5.8 GHz DSSS	400 mW

 $\ensuremath{\textbf{Note:}}$  Available RF power and frequency may vary depending on country of application.

### Accessories

PRODUCT CODE	DESCRIPTION	DATA SHEET
Antennas 2.4 GHz		
MD2400-EL	Dipole antenna, 15' (4.6m) cellfoil/SMA, 0-dBi gain, mounting bracket	TD032053EN
SG2400-EL	Collinear antenna, N-type, 5-dBi gain, mounting bracket	TD032054EN
Z2400-EL	Collinear antenna, N-type, 10-dBi gain, mounting bracket	TD032054EN
Y2400-18EL	Yagi antenna, N-type, 18-dBi gain	TD032056EN
WH2400	Whip antenna: SMA male, 2-dBi gain, 2.1" (54 mm)	TD032052EN
Antennas 5.8 GHz		
COL5806	Collinear antenna, N-type female, 6-dBi gain, mounting bracket	TD032057EN
COL5810	Collinear antenna, N-type female, 10-dBi gain, mounting bracket	TD032058EN
Cables		
CC3/10/20-SMA	Coaxial cable kit, 9.8' (3m)/32' (10m)/65' (20m), N-type to SMA	TD032019EN TD032020EN TD032021EN
CCTAIL-SMA-F/M	Coaxial cable tail, 24" (600 mm), SMA to N-type female/male	TD032023EN
ETH-C5X	Ethernet cable, 6' (1.8m), crossover, RJ-45 to RJ-45	TD032025EN
ETH-C5A	Ethernet cable, 6' (1.8m), direct, RJ-45 to RJ-45	TD032024EN
Surge Diverters		
CSD-SMA-2500	SMA surge diverter for use with CC10/CC20-SMA	TD032030EN
CSD-N-6000	Coaxial surge diverter, bulkhead N-female to N-female	TD032031EN
MA15/D/1/S1	Power supply surge diverter, 110 Vac/15A	TD032029EN
Power Supplies		
PS-DINAC-12DC-OK	DIN rail power supply, 100-250 Vac, 12 Vdc/2.5A	TD032033EN
PSG60E	DIN rail power supply, 85–264 Vac, 24 Vdc/2.5A	TD032034EN
Mounting Brackets		
BR-COL-KIT	Mounting bracket kit for collinear antenna	TD032072EN



Wireless Solutions and Support Services.

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Wireless Solutions and Support Services.

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