



DATASHEET

802.11abgn Weatherproof IP67 Fast Industrial Hotspot RLX2-IHNF-W

The ProSoft Technology Weatherproof IP67 Fast Industrial Hotspot (RLX2-IHNF-W) is designed for harsh environments and features an IP66/67 rating. It is water-tight for use in extreme weather applications such as offshore oil rigs, and dust-tight for use in mining applications. It operates in the 2.4 or 5 GHz bands, including DFS channels, and is good for applications up to 2 mi. / 3.2 km.

The Hotspot supports Access Point, Repeater, and Client modes. The 802.11n technology delivers fast data rates up to 300 Mbps. This provides excellent packet-per-second performance and robust communications in rugged industrial environments. The 802.11n MIMO & Channel bonding supports demanding wireless applications such as Ethernet I/O and high-resolution video.

The included IH Browser configuration and monitoring software allows the user to view network topology, assign IP addresses, monitor network diagnostics, and update radio firmware. The optional OPC Diagnostic Server is ideal for managing long-range wireless SCADA networks.



Features

- ◆ 802.11n MIMO & Channel bonding supports demanding wireless applications such as Ethernet I/O and high-resolution video
- ◆ EtherNet/IP™-or Modbus®-based PLCs/PACs can use message instructions to read diagnostic information from the radios, helping to reduce down time when troubleshooting wireless network problems
- ◆ 802.11i, WPA-2 Personal/Enterprise using 128-bit AES encryption ensures secure networking
- ◆ RADIUS security ensures secure networking with advanced authentication and encryption
- ◆ Virtual Local Area Networks (VLAN) allow for secure network segmentation
- ◆ Quality of Service (QoS) provides data prioritization for I/O control devices, video, data, etc.
- ◆ Ultra-Fast Roaming (under 10 ms) maintains seamless, high-speed connections to one or more devices on moving equipment and machines (such as cranes, AGVs, and carriers) as they travel between access points
- ◆ IGMP Snooping and Packet Filtering optimizes UDP multicast traffic for superior EtherNet/IP I/O communications
- ◆ Supports the ability to communicate with multiple Ethernet devices when used with existing third-party wireless infrastructures
- ◆ Supports AeroScout RTLS (real-time location services) tagging by passing signals from tags to the network
- ◆ Supports Power over Ethernet (PoE) to reduce cabling costs
- ◆ Connect serial networks (Modbus, DNP 3, etc.) over 802.11 wireless networks
- ◆ Supports SNMP
- ◆ Simple local and remote configuration, monitoring, and wireless network diagnostics

Radio Specifications

Specification	Description																				
Frequency band (Varies by country)	2.412 GHz to 2.462 GHz (FCC) 1 to 11																				
	2.412 GHz to 2.472 GHz (ETSI/NTRA) 1 to 13																				
	5.150 GHz to 5.250 GHz (FCC/ETSI/NTRA) 36 to 48																				
	5.260 GHz to 5.350 GHz (NTRA)* 52 to 64*																				
	5.660 GHz to 5.700 GHz (FCC/ETSI)* 132 to 140*																				
	5.725 GHz to 5.850 GHz (FCC) 149 to 165																				
	*DFS channels with RADAR detection																				
Wireless standards	802.11n, 802.11a, 802.11g 802.11h (DFS), 802.11i (Security), 802.11e (QoS) 802.1Q (VLAN), 802.3af (PoE), IGMPv2																				
Transmit power (Programmable) *Subject to regional regulatory limits	22 dBm @ MCS0, MCS8 (802.11an/gn) 17 dBm @ MCS7, MCS15 (802.11an/gn) 22 dBm @ 6 Mbps (802.11a/g) 17 dBm @ 54 Mbps (802.11a/g) *Max power in NTRA model is 20 dBm in both 2.4 GHz and 5 GHz Antenna Impact: 3 Antennas/MIMO: Use values above 2 Antennas: Subtract 3 dB from values above 1 Antenna: Subtract 5 dB from values above																				
Channel data rates 802.11n	MCS0 through MCS15, 1 Channel or 2 Channels with 1 Stream or 2 Streams <table><tr><th>1 Channel</th><th>2 Channels</th><th>Rate</th><th>Streams</th></tr><tr><td>6.5 Mbps</td><td>13.5 Mbps</td><td>MCS0</td><td>1 Stream</td></tr><tr><td>65 Mbps</td><td>150 Mbps</td><td>MCS7</td><td></td></tr><tr><td>13 Mbps</td><td>27 Mbps</td><td>MCS8</td><td>2 Streams</td></tr><tr><td>130 Mbps</td><td>300 Mbps</td><td>MCS15</td><td></td></tr></table>	1 Channel	2 Channels	Rate	Streams	6.5 Mbps	13.5 Mbps	MCS0	1 Stream	65 Mbps	150 Mbps	MCS7		13 Mbps	27 Mbps	MCS8	2 Streams	130 Mbps	300 Mbps	MCS15	
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802.11b	11, 5.5, 2, 1 Mbps																				
802.11a/g	54, 48, 36, 24, 18, 12, 11, 9, 6, 5.5, 2, 1 Mbps																				
Receiver sensitivity (Typical)	-92 dBm @ MCS0, MCS8 (802.11an/gn) -70 dBm @ MCS7, MCS15 (802.11an) -74 dBm @ MCS7, MCS15 (802.11gn) -92 dBm @ 6 Mbps (802.11an/gn) -74 dBm @ 54 Mbps (802.11a) -78 dBm @ 54 Mbps (802.11g)																				
Security	WPA2 Enterprise – 802.11i AES w/RADIUS [PEAP, TTLS, TLS, EAP] WPA2 Personal – 802.11i AES w/ Passphrase Legacy WPA TKIP, WEP support MAC ID filter																				

Hardware Specifications

Physical

Specification	Description
Enclosure	Die-cast aluminum with pole mount
Dimensions (H x W x D)	11.5 x 7.0 x 2.75 in 29.2 x 17.8 x 7.0 cm
Shock	IEC 60068 2-27 (20g, 3-Axis)
Vibration	IEC 60068 2-6 (5g, 10Hz to 150Hz)
Ethernet Port	(1) water/dust tight 10/100/1000 Base-T connector, shielded RJ45 IEEE 802.3, 802.3u, 802.3x, 802.3af, Passive PoE Not 802.3at/PoE+ compatible
Antenna Port	(3) N connectors
Weight	3.9 lbs (1.6 kg) less cables and pole mounting bracket



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Environmental

Operating Temperature	-40°F to 167°F (-40°C to 75°C) -40°F to 158°F (-40°C to 70°C), RLX2-IHNF-W Series B, C, and D only
Humidity	Up to 100% RH
External Power	10 to 24 VDC
Power over Ethernet	802.3af compliant
Peak Power Consumption	< 9W (Series B), < 10W (Series C), < 6W (Series D)

Agency Approvals & Certifications

Please visit our website: www.prosoft-technology.com

What's included in the box:

- (1) RLX2-IHNF-W (802.11abgn Weatherproof IP67 Fast Industrial Hotspot Radio)
- (2) U bolts for mounting
- (1) IP67 M12 cap

Water-tight cables (sold separately):

Part # CULRJ45-M12-007, 7 foot (2 m), M12 to RJ45, Network Cable/ PoE
Part # CULRJ45-M12-033, 33 foot (10 m), M12 to RJ45, Network Cable/PoE



Additional Products

ProSoft Technology® offers a full complement of hardware and software solutions for a wide variety of industrial communication platforms. For a complete list of products, visit our website at: www.prosoft-technology.com

Ordering Information

To order this product, please use the following:

802.11abgn Weatherproof IP67 Fast Industrial Hotspot

RLX2-IHNF-W-A (FCC model)
RLX2-IHNF-W-E (ETSI model)
RLX2-IHNF-W-EG (NTRA model)
RLX2-IHNF-W-RU (Russia Model)

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft Technology distributors near you, go to: www.prosoft-technology.com and select *Where to Buy* from the menu.

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