802.11abgn
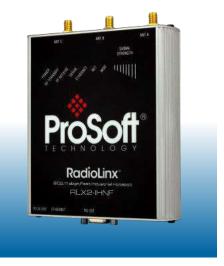## Fast Industrial Hotspot™
RLX2-IHNF

The ProSoft Technology Fast Industrial Hotspot (RLX2-IHNF) offers secure, high-performance wireless solutions for plant-floor environments, SCADA automation, process control systems, and mobile worker Wi-Fi infrastructure. Operating in both 2.4 GHz and 5 GHz bands, including DFS channels, the Hotspot is suitable for both indoor and outdoor applications.

Supporting Access Point, Repeater, and Client modes, the RLX2-IHNF utilizes 802.11n technology, delivering fast data rates of up to 300 Mbps. This ensures excellent packet-per-second performance and reliable communications in rugged industrial environments. The 802.11n MIMO (Multiple Input, Multiple Output) and Channel Bonding features support demanding wireless applications, including Ethernet I/O and high-resolution video.

For ease of configuration and management, the included IH Browser software allows users to view network topology, assign IP addresses, monitor diagnostics, and update radio firmware. Additionally, the optional OPC Diagnostic Server is ideal for managing long-range wireless SCADA networks, ensuring seamless connectivity and performance across industrial operations.

Features

- **EtherNet/IP™ and Modbus® Support:** PLCs/PACs using message instructions can read diagnostic information from the radios, minimiz ing downtime during wireless network troubleshooting.

- **Secure Networking:** 802.11i, WPA-2 Personal/Enterprise with 128-bit AES encryption ensures robust security for wireless communication.

- **RADIUS Security:** Advanced authentication and encryption protocols provide secure network access.

- **Virtual LAN (VLAN):** Securely segment networks, ensuring that different network traffic is isolated.

- **Network Address Translation (NAT):** Simplifies machine deployment without the need to change IP addresses frequently.

- **Quality of Service (QoS):** Prioritizes data for critical applications like I/O control devices and video data.

- **Ultra-Fast Roaming:** Maintains seamless connections with devices on moving equipment (e.g., cranes, AGVs, and carriers) while transitioning between Access Points, with a roaming speed under 10ms.

- **IGMP Snooping & Packet Filtering:** Optimizes UDP multicast traffic, enhancing EtherNet/IP I/O communication.

- **Third-Party Wireless Infrastructure Compatibility:** Enables communication with multiple Ethernet devices in conjunction with existing wireless infrastructures.

- **AeroScout RTLS Support:** Passes signals from RTLS tags to the network for real-time location tracking.

- **Power over Ethernet (PoE):** Reduces cabling costs by powering the device via the Ethernet cable.

- **Disaster Recovery Feature:** Stores radio configurations on a microSD card for quick, easy field replacements.

- **Serial Network Connectivity:** Enables the connection of serial networks (e.g., Modbus, DNP3) over 802.11 wireless networks.

- **Simple Configuration and Monitoring:** Allows for local and remote configuration, monitoring, and diagnostics via the IH Browser utility or SNMP.

Radio Specifications

Specification	Frequency	Channel
Frequency band (Varies by country)	2.412 GHz to 2.462 GHz (FCC) 2.412 GHz to 2.472 GHz (ETSI/NTRA)	1 to 11 1 to 13
	5.150 GHz to 5.250 GHz (FCC/ETSI/NTRA) 5.260 GHz to 5.350 GHz (NTRA)* 5.260 GHz to 5.580 GHz (FCC/ETSI)* 5.660 GHz to 5.700 GHz (FCC/ETSI)* 5.725 GHz to 5.850 GHz (FCC) * DFS channels with RADAR detection	36 to 48 52 to 64* 52 to 116* 132 to 140* 149 to 165
Wireless standards	802.11n, 802.11a, 802.11g, 802.11h (DFS), 802.11i (Security), 802.11e (QoS) 802.112Q (VLAN), 802.113af (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 2 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			
	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	

Specification	Value
802.11b 802.11a/g	11, 5.5, 2, 1 Mbps 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 Personal/Enterprise – 802.11i AES WPA2 Personal – 802.11i AES w/ Passphrase Legacy WPA TKIP, WEP support MAC ID filter, RADIUS
Network Features	NAT, VLAN, QoS, IGMP Snooping
Physical	
Enclosure	Extruded aluminum with DIN rail mount
Dimensions (H x W x D)	5.82 x 4.64 x 1.48 in, 14.8 x 11.8 x 3.8 cm
Shock	IEC 60068 2-27 (20g, 3-Axis)
Vibration	IEC 60068 2-6 (5g, 10Hz to 150Hz)
Ethernet Port	(1) 10/100/1000 Base-T connector, shielded RJ45 IEEE 802.3, 802.3u, 802.3x
Serial Port	(1) RS232 DB9 female (supports serial tunneling and Modbus TCP/IP to Modbus RTU connectivity)
Antenna Port	(3) RP-SMA connectors
Personality Module	Industrial microSD Memory Module (included)
Weight	1.1 lbs (499 g)
Environmental	
Operating Temperature	-40° to 167°F (-40° to 75°C) -40° to 158°F (-40° to 70°C), RLX2-IHNF Series B, C, and D only
Humidity	Up to 100% RH, with no condensation
External Power PoE Injector	10 to 24 VDC 802.3af PoE Powered Device
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 (802.11abgn Fast Industrial Hotspot Radio)
(1) A2502S-OA (2 dBi omni-directional stub antenna)
(1) Industrial-class microSD card with default configuration loaded
(1) Power connector plug (for connection to customer's DC power source wiring)
(1) Power connector wire insertion tool

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 Fast Industrial Hotspot

RLX2-IHNF-A (FCC model)
RLX2-IHNF-BR (ANATEL model)
RLX2-IHNF-E (ETSI model)
RLX2-IHNF-EG (NTRA model)
RLX2-IHNF-TW (NCC model)
RLX2-IHNF-JP (MIC model)
RLX2-IHNF-Z (Israel model)
RLX2-IHNF-RU (Russia Model)

Optional Accessories

Bench Test Kit

RLX-IHBTK

Includes: 115/230 VAC bench power supply, Ethernet and serial cables

To place an order, please contact a local ProSoft distributor.

A list of ProSoft-authorized distributors is available on our website at:

www.prosoft-technology.com

and select *Where to Buy* from the menu.