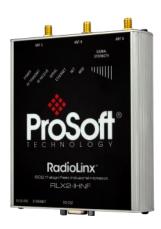# ProSoft® TECHNOLOGY

DATASHEET

802.11abgn
Fast Industrial Hotspot™
RLX2-IHNF

The ProSoft Technology Fast Industrial Hotspot (RLX2-IHNF) provides secure wireless solutions for plant-floor, SCADA automation, process control systems and mobile worker Wi-Fi infrastructure. 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. 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

♦ 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 10ms) 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 & 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 Power over Ethernet (PoE) to reduce cabling costs

♦ Disaster recovery feature allows the radio configuration to be stored on a microSD card for quick field replacement

♦ Connect serial networks (Modbus, DNP 3, etc.) over 802.11 wireless networks

♦ Simple local and remote configuration, monitoring, and wireless network diagnostics

♦ SNMP support

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)	1 to 11 1 to 13
	5.150 GHz to 5.250 GHz (FCC/ETSI) 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 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)	
	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		
	1 Channel	**2 Channels**	**Rate**	**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	

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

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 2-6 (20G, 3-Axis)
Vibration	IEC 60068 2-27 (5G, 10 to 150 Hz)
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°F to +167°F (-40°C to +75°C) -40°F to +158°F (-40°C to +70°C), RLX2-IHNF Series B 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	< 8W

Agency Approvals & Certifications

Wireless Approvals

Visit our web site at www.prosoft-technology.com for current wireless approval information.

Hazardous Locations

UL/cUL; Class 1, Div 2
Ex Certificate (ATEX Directive, Zone 2)

Regulatory

CSA/CB Safety
CE Mark
FCC/IC
ETSI

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

Ordering Information

To order this product, please use the following:

802.11abgn Fast Industrial Hotspot

RLX2-IHNF-A (FCC model)
RLX2-IHNF-E (ETSI model)
RLX2-IHNF-TW (NCC 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.