

DATASHEET

ProLinx Edge[®] Mini

ELXM-SW6

The ProSoft Technology Fast Industrial Hotspot (ELXM-SW6) 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.

The Hotspot supports Client modes and the 802.11ax technology works on data rates up to 1020 Mbps over the air. This provides excellent packet-per-second performance and robust communications in rugged industrial environments. The 802.11ax 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.



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.
- ◆ RADIUS security ensures secure networking with advanced authentication and encryption.
- ◆ Virtual Local Area Networks (VLAN) allow for secure remote network segmentation in Access Point mode.
- ◆ Network Address Translation (NAT) lets machine builders deploy machines with identical local IP configuration.
- ◆ Quality of Service (QoS) provides data prioritization for I/O control devices, video data, etc.
- ◆ 802.11r Fast Roaming over the Air and over DS 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.
- ◆ Disaster recovery feature allows the radio configuration to be stored on a microSD card for quick field replacement.
- ◆ Simple local and remote configuration, monitoring, and wireless network diagnostics via IH Browser utility or SNMP.

Radio Specifications

Specification	Frequency	Channel			
Frequency band (Varies by model)	2.412 GHz to 2.462 GHz (FCC)	1 to 11			
	2.412 GHz to 2.472 GHz (ETSI)	1 to 13			
	5.150 GHz to 5.250 GHz (FCC/ETSI)	36 to 48			
	5.260 GHz to 5.580 GHz (FCC/ETSI)*	52 to 116*			
	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	802.11ax, 802.11n, 802.11a, 802.11g, 802.11h (DFS), 802.11i (Security), 802.11e (QoS), 802.2Q (VLAN), IGMPv2 802.11k, 802.11v (wireless management, Client modes only)				
Max. Transmit power *Subject to regional regulatory limits	21 dBm @ MCS0 - 5 GHz (802.11n, ax) 18 dBm @ MCS7 - 5 GHz (802.11n, ax) 13 dBm @ MCS11 - 5 GHz (802.11n, ax) 21 dBm @ 54 Mb/s- 2.4 GHz (802.11a) 23 dBm @ MCS0 - 2.4 GHz (802.11n, ax) 22 dBm @ MCS7 - 2.4 GHz (802.11n, ax) 20 dBm @ MCS11 - 2.4 GHz (802.11ax) 21 dBm @ 54 Mb/s- 2.4 GHz (802.11g) Antenna Impact: only 1 Antenna: Subtract 3 dB from values above, ±3dB tolerance				
Channel data rates 802.11ax	MCS0 through MCS10 (3.2usec GI) 20, 40 or 80 MHz Channels with 1 Stream or 2 Streams				
	20 MHz Channel	40 MHz Channel			
	80 MHz Channel	Rate			
	Streams				
	7.3 Mbps	14.6 Mbps	30.6 Mbps	MCS0	1 Stream
	121.9 Mbps	243.8 Mbps	510.4 Mbps	MCS11	
	14.6 Mbps	29.3 Mbps	61.3 Mbps	MCS0	2 Streams
	243.8 Mbps	487.5 Mbps	1020.8 Mbps	MCS11	
Receiver sensitivity (Typical)	-94 dBm @ MCS0 - 5 GHz (802.11n, ax) -77 dBm @ MCS7 - 5 GHz (802.11ax) -67 dBm @ MCS11 - 5 GHz (802.11ax) -96 dBm @ MCS0 - 2.4 GHz (802.11n, ax) -79 dBm @ MCS7 - 2.4 GHz (802.11ax) -66 dBm @ MCS11 - 2.4 GHz (802.11ax)				
Security	WPA2/3 Personal/Enterprise 802.11w (Protected Management Frames) MAC ID filter, RADIUS Authentication over WLAN				
Network Features	NAT, VLAN, QoS, IGMP Snooping				
Physical					
Enclosure	IP30 - Plastic - DIN rail or surface mountable				
Dimensions (H x W x D)	5.11 x 1.57 x 3.94 in, 130 x 40 x 100 mm				
Shock	IEC 60068 2-27 (20g, 3-Axis)				
Vibration	IEC 60068 2-6 (5g, 10Hz to 150Hz) when panel mounted				
Ethernet Port	(1) 10/100/1000 Base-T connector, shielded RJ45 IEEE 802.3, 802.3u, 802.3x, 802.3ab, 802.3ac				
Antenna Port	(2) RP-SMA female connectors, compatible with RP-SMA male antennas				
SD Card	microSD for device configuration and firmware storage, easy device replacement, has to be ordered separately				
Weight	0.6 lbs (0.27 kg)				
Environmental					
Operating Temperature	-22°F to 149°F (-30°C to 65°C)				
Humidity	5-95% Relative Humidity, non-condensation				
External Power	10 to 36 VDC				
Peak Power Consumption	< 6W				
I/O					
Digital Input	No. inputs	1			
	Thresholds	Off- 0 to 5V On-10 to 30V			
	input current	2mA minimum			
	Isolation	1500V minimum			
Digital Output	No. outputs	1			
	Type	Form A normally open			
	Load	30V max; 370mA max built-in current limit			
	Isolation	1500V minimum			



Where Automation
Connects™

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EMC

ETSI EN 301 489-1 V2.2.3 (2019-11)	Electromagnetic compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard for Electromagnetic Compatibility
ETSI EN 301 489-17 V3.2.4 (2020-09)	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission Systems; Harmonised Standard for ElectroMagnetic Compatibility
EN IEC 61326-1: 2020	Electrical equipment for measurement, control and laboratory use EMC requirements Part 1: Generic requirements
FCC 47 CFR Part 15, Subpart B – Verification	Title 47: Telecommunication; Part 15—Radio Frequency Devices
ICES-003 Issue 7: 2020	Information Technology Equipment (including Digital Apparatus)

What's included in the box:

- (1) ELXM-SW6 (802.11ax Fast Industrial Hotspot Radio)
- (1) Power connector plug (for connection to customer's DC power source wiring)



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:

802.11ax Fast Industrial Hotspot

At product launch:

- ELXM-SW6-A (USA)
- ELXM-SW6-E (Europe)

Possible future variants:

- ELXM-SW6-AU (Australia & NZ)
- ELXM-SW6-BR (Brazil)
- ELXM-SW6-CN (China)
- ELXM-SW6-IN (India)
- ELXM-SW6-JP (Japan)
- ELXM-SW6-KR (Korea)
- ELXM-SW6-MX (Mexico)
- ELXM-SW6-MY (Malaysia)
- ELXM-SW6-SA (Saudi-Arabia)
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- ELXM-SW6-TH (Thailand)
- ELXM-SW6-VN (Vietnam)

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