DATASHEET

ELXM- SW6
ProLinx Edge® Mini

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 Access Point and Client modes. 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 downtime 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) 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	802.11ax, 802.11n, 802.11a, 802.11g, 802.11h (DFS), 802.11i (Security), 802.11e (QoS), 802.2Q (VLAN), 802.3af (PoE), IGMPv2 802.11k, 802.11v (wireless management, Client modes only)	
Max. Transmit power *Subject to regional regulatory limits	19 dBm @ MCS0 - 5 GHz (802.11n, ax) 15 dBm @ MCS8 - 5 GHz (802.11ac) 13 dBm @ MCS11 - 5 GHz (802.11ax) 17 dBm @ 54 Mb/s- 5 GHz (802.11a) 20 dBm @ MCS0 - 2.4 GHz (802.11n, ax) 17 dBm @ MCS7 - 2.4 GHz (802.11n, ax) 15 dBm @ MCS11 - 2.4 GHz (802.11ax) 20 dBm @ 54 Mb/s- 2.4 GHz (802.11g)	
	Antenna Impact: only 1 Antenna: Subtract 3 dB from values above, ±2dB 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)	-95 dBm @ MCS0	- 5 GHz (802.11n, ax)
	-77 dBm @ MCS7	- 5 GHz (802.11ax)
	-66 dBm @ MCS11	- 5 GHz (802.11ax)
	-92 dBm @ MCS0	- 2.4 GHz (802.11n, ax)
	-72 dBm @ MCS7	- 2.4 GHz (802.11ax)
	-63 dBm @ MCS11	- 2.4 GHz (802.11ax)
Security	WPA2/3 Personal/Enterprise 802.11w (Protected Management Frames) MAC ID filter, RADIUS	
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	
Weight	0.6 lbs (0.27 kg)	
Environmental		
Operating Temperature	-4°F to 149°F (-20°C to 65°C)	
Humidity	5-95% Relative Humidity, non-condensation	
External Power	10 to 30 VDC	
Peak Power Consumption	< 6W	
I/O		
Digital Input	No. inputs Thresholds input current Isolation	1 Off- 0 to 5V On-10 to 30V 2mA minimum 1500V minimum
Digital Output	No. outputs Type Load Isolation	1 Form A normally open 30V max; 370mA max built-in current limit 1500V minimum

Agency Approvals & Certifications

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

EMC	Description
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 requirementsPart 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)
ELXM-SW6-SG (Singapore)
ELXM-SW6-TH (Thailand)
ELXM-SW6-VN (Vietnam)

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

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www.prosoft-technology.com

and select *Where to Buy* from the menu.