Belden | ProSoft TECHNOLOGY A BELDEN BRAND

ProLinx Edge Mini ELXM-SW6

Wi-Fi 6 client with 6 GHz for mobile automation

Product Bulletin

Compact Wi-Fi 6 client for AGVs and mobile equipment with 6 GHz capability. Fast roaming under 100ms prevents safety shutdowns. Fully compatible with Wi-Fi 7 access points.

- **6 GHz capability unlocks massive scale:** Upgrade enables access to additional 25-60 radar-free channels. Connect thousands of AGVs per facility vs. hundreds on 5 GHz.
- **Fast roaming prevents costly downtime:** Sub-100ms handoff between access points avoids communication gaps that trigger safety shutdowns requiring 30-minute recovery.
- **Works seamlessly with Wi-Fi 7 infrastructure:** Wi-Fi 6 and Wi-Fi 7 fully compatible on 6 GHz. Pair with Wi-Fi 6E or Wi-Fi 7 access points for complete industrial 6 GHz solution.

Key features

- Wi-Fi 6 (802.11ax) with 2 × 2 MIMO for reliable mobile connectivity
- 6 GHz operation 2026 upgrade — expanded capability
- Selectable frequency bands: 2.4 GHz, 5 GHz, or 6 GHz depending on application needs
- Fast roaming <100ms using 802.11r/k/v protocols for seamless handoff
- Compact and lightweight IP30 design: DIN rail or surface mount installation on AGVs
- -20°C to +65°C operating temperature for industrial environments
- 10-30 V DC power input, <6 W peak consumption
- Gigabit Ethernet interface with RP-SMA antenna connectors
- Compatible with Wi-Fi 7 access points

The **ProLinx Edge Mini** delivers Wi-Fi 6 client connectivity with 2.4 GHz, 5 GHz and 6 GHz capability for mobile AGVs and autonomous equipment. Fast roaming under 100ms prevents safety shutdowns while compact form factor enables easy mounting on mobile platforms.

Your benefits

Scale beyond current AGV limits with 6 GHz access to 25-60 clean channels supporting thousands of robots per facility vs. hundreds on crowded 5 GHz.

Eliminate costly safety shutdowns through fast roaming under 100ms—communication gaps >150ms trigger safety stops requiring 30-minute recovery cycles.

Easy 6 GHz migration via upgrade with expanded capability. Flexible deployment with 2.4 GHz/5 GHz/6 GHz selectable operation matching infrastructure and application requirements.

Future-proof investment working seamlessly with both Wi-Fi 6 and Wi-Fi 7 access points.

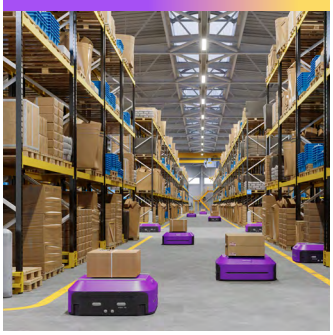
Compact installation on space-constrained AGVs using DIN rail or surface mounting.

Applications

- **High-density AGV fleets** in warehousing where hundreds to thousands of autonomous mobile robots require reliable wireless with fast handoff between zones
- **Safety-critical mobile equipment** where sub-100ms roaming prevents communication interruptions that trigger emergency stops and production delays
- **Retrofit warehouse automation** adding 6 GHz client capability to existing AGV fleets via firmware upgrade without hardware replacement
- **Multi-level facility operations** leveraging 6 GHz DFS-free channels for deterministic performance across mezzanine and racking areas
- **Automotive assembly lines** with mobile skillets and shuttles requiring seamless roaming
- **Pairs with Wi-Fi 6E or Wi-Fi 7 access points** for complete 6 GHz industrial wireless solution

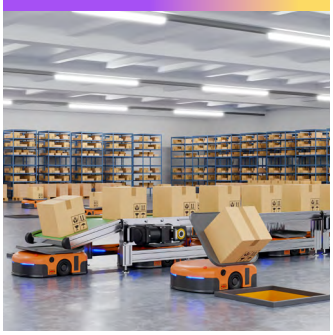
Markets

Warehousing and logistics operations scaling beyond today's 100-850 robot deployments toward 5,000-10,000 AGVs per facility.

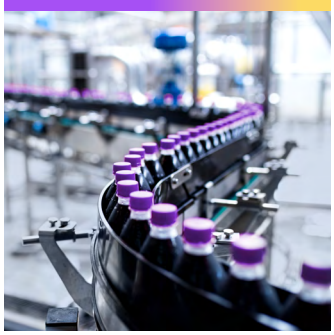


Automotive and discrete manufacturing plants with mobile assembly systems, intralogistics shuttles, and skillets requiring dedicated OT spectrum separate from enterprise IT.

E-commerce fulfillment centers with high throughput demands and dense autonomous equipment populations.



Food and beverage production needing reliable mobile equipment connectivity. Operations where 5 GHz channel negotiations take 3-6 months and delay automation projects.



Technical information

Product description	
Type	**ProLinx Edge™ Mini - ELXM-SW6**
Description	The ProSoft Technology Fast Industrial Hotspot (ELXM-SW6) provides secure wireless solutions for plant-floor, SCADA automation, process control systems. It operates in the 2.4 GHz, 5 GHz or 6 GHz bands, including DFS channels. The Hotspot Client modes 802.11ax technology works on data rates up to 1020 Mbit/s 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/IP and high-resolution video.
Port type and quantity	2 × 2 MIMO WLAN on 2.4 GHz, 5 GHz or 6 GHz; 1 x RJ45 Gigabit Ethernet; 1 x Terminal block with 10-30 V DC, Digital Input, Digital Output
Radio technology (WLAN)	
Radio standard	IEEE 802.11ax WLAN interface; 2 × 2 MIMO
Antenna connector	2 x RP-SMA
Frequency band	2.4 GHz, 5 GHz and 6 GHz WLAN bands (depending on regulatory region)
Radio topology	WLAN Client and Bridge supporting fast roaming 802.11r/k/v
Encryption	WPA2 and WPA3 in both Private and Enterprise modes
Interfaces	
Ethernet	RJ45, 10/100/1000 Mbit/s
Power	1 x Terminal block with 10-30 V DC, Digital Input, Digital Output
Power requirements	
Operating voltage	10-30 V DC
Ambient conditions	
Operation temperature	-20 °C to +65 °C
Storage/transport temperature	-40 °C to +75 °C
Environment	Indoor
Mechanical construction	
Dimensions (W x H x D)	40 × 130 × 100 mm
Mounting	DIN rail clip on back; Flat surface mounting from side
Protection class	IP30

NOTE: For complete specifications, firmware upgrade details, and 6 GHz regional availability, visit belden.com or contact your Belden representative.

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