



## Cellular Wireless Solutions

For maximum mobility, remote connectivity and network availability in today's industrial environments.



A connected enterprise requires secure and reliable cellular wireless connections in harsh environments. Belden's family of cellular wireless solutions include a broad portfolio of cellular routers, support for secure on-demand and always-on connectivity solutions and antennas that work seamlessly together.

**Be certain.  
Belden.**

# Industrial Cellular Wireless

## Magnum DX940e Router

- Obtain better connectivity with high speed 4G/LTE cellular interface for secure remote access
- Use high-end, robust cybersecurity mechanisms with advanced safety features, IP routing and guaranteed network protection with firewall layers
- Adhere to industry standards with NERC CIP compliant security elements



## OWL LTE M12 Cellular Routers

- Rugged LTE device for trains (EN50155) with M12 connectors
- Fully encrypted data streams with IPSec and OpenVPN
- For modern operators that want to deliver edge computing functionality: C, C++, Lua, Python
- GPS dead reckoning functionality allows train position estimation based on acceleration inside tunnels



## ICX35 Cellular Modem

- PTCRB and Verizon Certified
- 3G/4G LTE (with auto fallback)
- Secure, encrypted connectivity via OpenVPN, IPSec or ProSoft Connect™
- Hazardous area certified (C1D2, Atex Zone 2)
- Alarm notification (SMS)



## ProSoft Connect

- Secure, redundant and highly reliable cloud-native platform for device and communication management
- On-demand, secure remote access SRA connection
- Always on, Persistent Data Network (PDN)
- Single sign-on (SSO), virtual Lockout-Tagout (vLOTO), two-factor authentication
- IP whitelisting
- 25Bit AES encryption



## EAGLE40 Security Appliance

- High performance, next generation firewall and threat prevention appliance with cellular capabilities (coming soon)
- Ruggedized, compact design meets Class 1 Div 2 Haz. Loc and Substation compliance, with extended temperature range of -40°C to +70°C
- Runs on the Hirschmann HiSecOS software to ensure maximum network availability and data security



## OWL 4G Cellular Routers

- Global variants, US variant with Verizon, AT&T certification
- LTE Cat. 4 or M.1 with optional 11ac WLAN and GPS
- Tunnel technology IPSec OpenVPN, L2TP, GRE, PPTP
- Underlying open edge computing platform allows to build and deploy custom applications: C, C++, Lua, Python
- LPWAN variant with LTE Cat M.1 delivers longer range and a better connection inside buildings

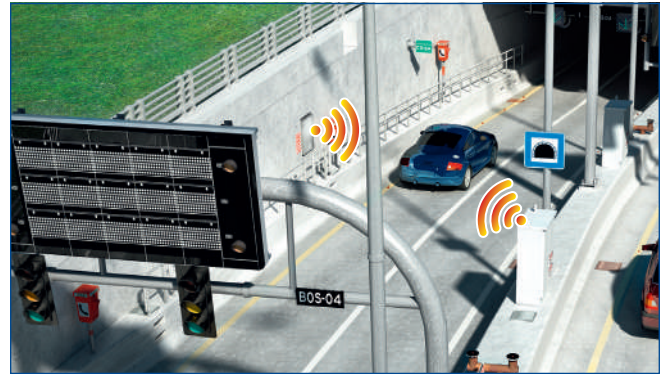


[belden.com/products/industrial/networking](http://belden.com/products/industrial/networking)

## Vertical Solutions



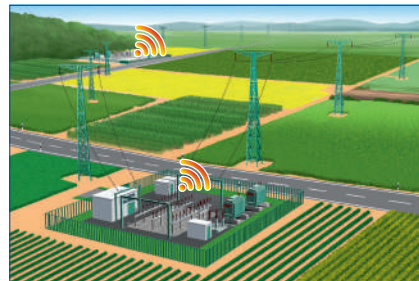
**Onboard Systems**



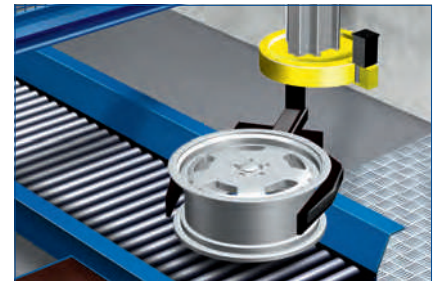
**Smart Cities & Traffic Systems**



**Logistics & Factory Automation**



**Smart Grids & Remote Asset Management**



**Machine Builder**



**Water**



**Oil & Gas**

- Advanced security features
- Built in redundancy protocols
- Market specific certifications

- Complete set of accessories
- Remote diagnostics
- IT-secure / OT-friendly remote connectivity


### Value-Added Benefits

The Belden Solution brings breadth you won't find with any other vendor. Consider the reliability of a total infrastructure built to work seamlessly in the harshest operating conditions. Based on true industry knowledge built over time in field-proven applications, Belden networks work.



Plus, you'll find Belden professionals actively engaged in the governance organizations and work groups exploring new technologies and setting standards for optimum performance.

## Wireless Product Selection



### On-Board Transportation

Applications	Reference Product
<ul style="list-style-type: none"> <li>• Suitable for on-board trains and metros</li> <li>• Certified for EN50155 reliability and vibration-proof M12 connectors</li> <li>• GPS and Dead Reckoning for orientation and position data inside tunnels</li> </ul>	<b>OWL LTE M12</b> 

### Heightened Security for Energy and PT&D Applications

Applications	Reference Product	
	EAGLE40	DX940e
<ul style="list-style-type: none"> <li>• Security for harsh industrial environments requiring Class 1 Div. 2 or substation environment needing IEEE 1613 and IEC 61850-3 certifications</li> </ul>		
<ul style="list-style-type: none"> <li>• Securely implement zones and conduits for defense in depth</li> </ul>	●	●
<ul style="list-style-type: none"> <li>• Data transmission encryption and intrusion detection and prevention using state-of-the-art deep packet inspection</li> </ul>	●	L3 stateful firewall
<ul style="list-style-type: none"> <li>• Support for legacy infrastructure and IP connectivity and 4G/LTE WAN connectivity. Cellular can be used as the primary or backup connection.</li> </ul>	Future	●

### Cellular Remote Connectivity for Machine Builders, Discrete Manufacturing, Utilities and Automotive

Applications	Reference Product	
	ICX35	OWL 4G
<ul style="list-style-type: none"> <li>• Easy to deploy out-of-the box with minimal configuration required</li> </ul>		
<ul style="list-style-type: none"> <li>• Custom logic functions written in languages like C, C++, Lua, Python, NodeJS or Node Red for edge compute function on device</li> </ul>	●	Configuration required
<ul style="list-style-type: none"> <li>• Reliable communications with geographically dispersed sites</li> </ul>	●	●
<ul style="list-style-type: none"> <li>• Suitable for oil and gas plants, water and waste water stations and discrete manufacturing facilities</li> </ul>	●	●
<ul style="list-style-type: none"> <li>• ProSoft CONNECT with IT-secure features such as single sign-on, one-time use passwords, 256-Bit AES encryption, virtual Lockout-Tagout (vLOTO™)</li> </ul>	●	
<ul style="list-style-type: none"> <li>• Cloud support</li> </ul>	ProSoft CONNECT™	Node Red: MQTT, Azure, Amazon, Cumulocity, ...
<ul style="list-style-type: none"> <li>• Whitelisting for limiting remote asset access</li> </ul>	●	●
<ul style="list-style-type: none"> <li>• Geographical ready deployments and region specific certifications</li> </ul>	ICX35-HWC-A NA, LATAM, AUS, Singapore ICX35-HWC-E EU, RoW, Singapore	OWL 4G EU + WLAN OWL 4G NA + WLAN OWL 4G AUS + WLAN

## Technical Specifications

Cellular Routers	M12 Connectivity	RJ45 Connectivity	FE Support (100 Mbit/s)	GE Support (1000 Mbit/s)	IEEE 802.11ac WLAN	VPN (IPSec, OpenVPN)	Programmability	VRRP	SD Card or USB	-40°C to +70°C	IEC 61850	EN50155 or E-Mark	Class 1 Div 2	24V DC	2G/3G	4G/LTE	GPS/GLONASS	SIM Cards	
	Functionality										Application Environment			Cellular					
OWL LTE M12	●		●			●	●	●	●	●		●		●	●	●	●	●	2
OWL 4G		●	●		●	●	●	●	●	●		●		●	●	●	●	●	2
ICX35		●	●			●				●			●	●	●	●	●	●	1
Magnum DX940e Router		●	●			●				●		●	●	●	●	●	●	●	1
Eagle 40		●	●	●		●				●	●		●	●	●	●	●	●	

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