

Managed OT-to-Cloud Connectivity

CloudRail

Product Bulletin

Americas



Belden's network and data solutions connect a wide variety of OT assets through a secure, scalable and flexible integration layer to digital services. This enables insight-based decision making that drives efficiency and sustainability through agile operations.

- **Accelerated time-to-value**
Connect any industrial asset to any cloud in hours instead of weeks, with plug-and-play access to 30,000+ sensors and data normalization capabilities.
- **Simplified edge-to-cloud data flow**
Acquire, process and seamlessly send data to any cloud (AWS, Microsoft Azure, Google etc.) in a consumable format, eliminating complex integrations and data silos.
- **Scalable and secure device management**
Roll out, manage and update thousands of globally distributed edge devices remotely from a centralized platform.

Out-of-the-box support for:

- **IO-Link, OPC UA and Modbus:** CloudRail supports more than 30,000 industrial sensors (IO-Link), OPC UA and Modbus TPC/RTU plug-and-play
- **major cloud platform integration:** CloudRail seamlessly integrates into all major cloud platforms:
 - » **AWS IoT** (Core, Sitewise, Sitewise Edge, Greengrass)
 - » **Microsoft Azure IoT** (Hub, Central, Edge)
 - » **MQTT** support for full flexibility

State-of-the-art cybersecurity features developed according to the certified IEC 62443 Secure Product Development Lifecycle Process



Belden's **CloudRail** software ingests data from legacy and modern equipment in industrial environments, preprocesses it locally and sends it – ready to use – to any cloud for further analysis and action.

CloudRail product families

- **CloudRail.Box Max:** A powerful managed edge gateway for data preprocessing at the edge and streamlined cloud connectivity.
- **CloudRail.OS:** A Docker container that runs the full CloudRail functionality on any type of hardware or in data centers.
- **CloudRail.DMC:** A centralized and cloud-based software to configure and manage all CloudRail Edge devices.

Your Benefits

Industrial networks keep scaling up – and data growth is inevitable. At the same time, organizations are aiming to collect more data from legacy equipment to propel performance and uptime gains.

Belden's CloudRail software empowers organizations to acquire data from any type of operational technology and send it to any cloud. With CloudRail, organizations can connect modern machines with standard protocols like OPC-UA and retrofit older equipment with sensors to gather, normalize and preprocess data. Organizations can tap that data to problem-solve locally at the edge or send to the cloud for visualization, further analysis and storage.

Applications

Historically, connecting industrial assets to the cloud has been a cumbersome, complicated undertaking. Older assets with legacy protocols are extremely complex to connect to modern digitization services, leaving many organizations stalled at the starting gate.

A fully managed solution, CloudRail connects all types of industrial equipment and adapts easily to new requirements. Features such as out-of-the box detection for 30,000+ industrial sensors, centralized device management, and plug-and-play cloud deployment make integrating industrial machines easy.

Organizations can use the data harnessed by CloudRail for advanced use cases, such as:

> Real-time OEE assessment

- Production process optimization
- Asset utilization improvement

> Condition-based monitoring

- Downtime reduction
- Predictive maintenance

> Energy monitoring

- Waste reduction
- Product Carbon Footprint (PCF) tracking

Markets

Purpose-built to solve the industrial connectivity challenge for modern and legacy assets, CloudRail benefits a wide range of industrial segments.

CloudRail is ideal for:

- Manufacturing
- Automotive
- Consumer Packaged Goods
- Food and Beverage
- Machine Building
- Material Handling
- Airports
- Intelligent Traffic Systems



Components used in a CloudRail solution

Americas

CloudRail Components - Americas

Product	Function	Link	Description	Order Number	Descriptive Number
	IO-Link Master	Link	IO-Link Master Ports Class A, metal housing IP67, IP69K, 60mm, 8 x M12 A-coded I/O connection 5-poles, 2 x M12 D-coded Ethernet connection 4-poles, 2 x M12 L-coded power supply; supports PROFINET, EtherNet/IP, EtherCAT, Modbus TCP, OPC UA, MQTT, CoAP, REST.	935700001	0980 XSL 3912-121-007D-00F
	M12 Power Cordset	Link	Female, straight, 5-pin (4+FE), L-coded, blue body, 50 V AC/60 V DC, 16 A; PUR grey cable, 1.50 mm ²	934849075 934849076 934849077 934849078	RKT 5L -949/2 M RKT 5L -949/5 M RKT 5L -949/10 M RKT 5L -949/15 M
	Ethernet Cordset	Link	M12 male, straight, 4-pin, D-coding; to an RJ45 male, straight, 8-pin, 24 AWG TPE cable, stranded/shielded, 2 twisted bonded pairs with teal jacket	900016223 900004147 900004148 900004149 900004150 900005130 900004151 900005273 900004152 900004416 900004154	0985 YM57530 103/0.5 M 0985 YM57530 103/1 M 0985 YM57530 103/2 M 0985 YM57530 103/3 M 0985 YM57530 103/5 M 0985 YM57530 103/6 M 0985 YM57530 103/10 M 0985 YM57530 103/12 M 0985 YM57530 103/15 M 0985 YM57530 103/25 M 0985 YM57530 103/30 M
	M12-M12 Sensor/Actuator Cordset	Link	Male straight A-coded translucent 4-pin M12 Standard connector to female straight A-coded translucent 4-pin M12 Standard connector; 230 V AC/DC, 4 A; PUR black cable, 4-wires, 0.34 mm ²	600003147 600001691 600003149 600003273 11825 600003364 11826 600006583 600003365	RST 4-RKT 4-225/0.3 M RST 4-RKT 4-225/0.6 M RST 4-RKT 4-225/1 M RST 4-RKT 4-225/1.5 M RST 4-RKT 4-225/2 M RST 4-RKT 4-225/3 M RST 4-RKT 4-225/5 M RST 4-RKT 4-225/7.5 M RST 4-RKT 4-225/10 M
	M12-M8 Sensor/Actuator Cordset	Link	Male straight A-coded translucent 4-pin M12 Standard connector to female straight A-coded translucent 4-pin M8 Standard connector, 30 V AC/DC, 4 A; PUR black cable, 4-wires, 0.34 mm ²	600002920 600002921 600002922 600002923 45991 600002924 600006595 600006596	RST 4-RKMV 4-225/0.3 M RST 4-RKMV 4-225/0.6 M RST 4-RKMV 4-225/1 M RST 4-RKMV 4-225/2 M RST 4-RKMV 4-225/3 M RST 4-RKMV 4-225/5 M RST 4-RKMV 4-225/10 M RST 4-RKMV 4-225/15 M
	DIN Rail Power Supply Unit	Link	Input 230 V AC; Output 24V DC / 1.3 A continuous	943662003	RPS 30, RAIL POWER SUPPLY
	DIN Rail Power Supply Unit	Link	Input 230V AC; Output 24V DC / 3.4-3.0 A continuous; min 5.0-4.5 A for typ. 4 sec	943662080	RPS 80 EEC



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