



INDUSTRIAL CONNECTIVITY SOLUTIONS

A large, faint graphic of concentric circles, resembling a wireless signal or radar, is centered in the background of the lower half of the page. The circles are teal and fade out towards the edges.

Boosting Operational Excellence
with Reliable, Scalable, Flexible
and Cost-Effective Industrial-Grade
Wireless Solutions

APPLICATIONS AND USE CASES

CoreTigo's solution addresses the true need for wireless communication of sensors, actuators and devices at the field level in the factory that cannot be addressed today by existing wireless networks. We are providing the first wireless platform that fits the harsh industrial automation demands for low latency, reliability and scalability.

CONDITION MONITORING & IIOT

Wireless solutions make it more cost effective and simple to deploy sensors for condition monitoring (e.g. pressure, level, temperature sensors). An IIoT gateway further extends the connected enterprise by exposing manufacturers to a greater quantity of data from anywhere in the factory.

HAZARDOUS ENVIRONMENTS

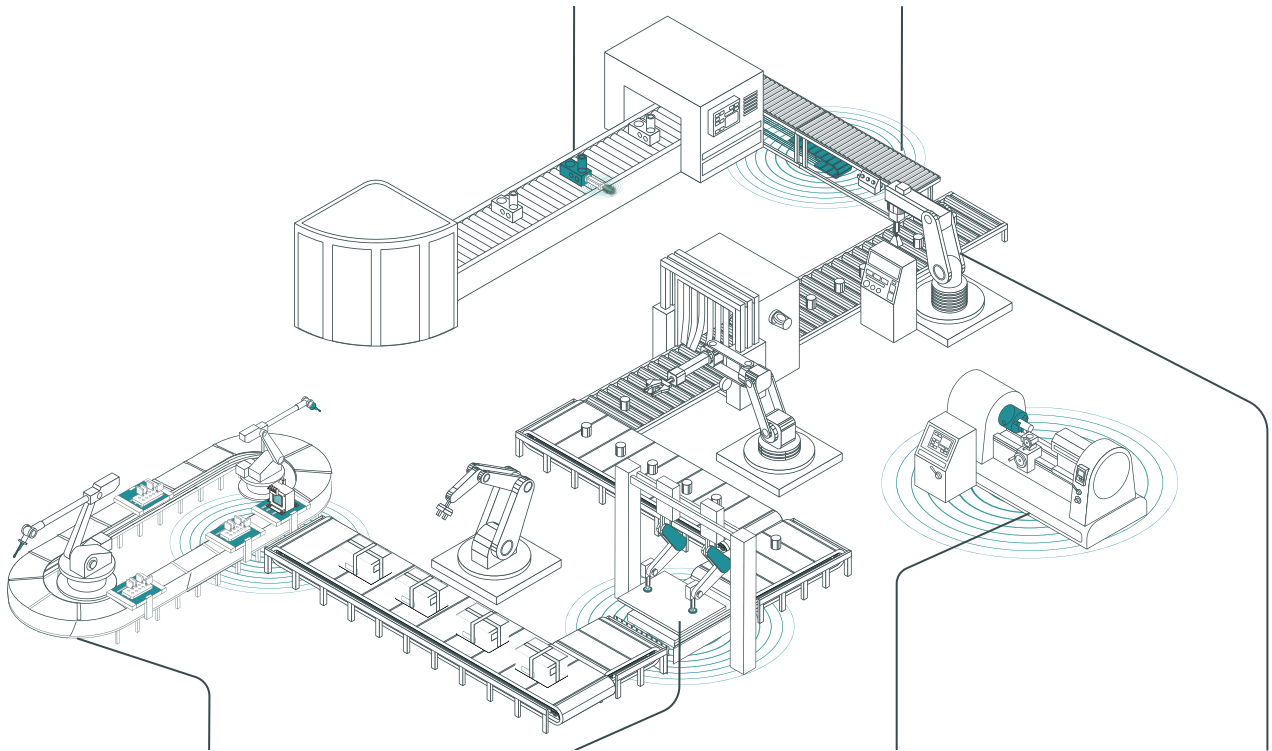
In hazardous and hygienic industrial environments (such as food & beverage), wireless solutions are important for reducing costs associated with very expensive cabling deployments and maintenance, contamination and safety.

MACHINE RETROFIT & DEPLOYMENT

Wireless connectivity enables simple and cost effective retrofit and revamp of numerous devices on existing machines, simplifies relocation and upgrades, and new machine deployment.

COMPLEX CABLING LAYOUTS

Mobile rail guided equipment such as large linear robots or drag chains with large cable braids limit mobility and tend to break/tear. A wireless solution reduces maintenance costs and unexpected downtime.



TRANSPORT TRACK SYSTEMS

In order to simplify customization/setup of workpieces in a flexible and agile manner, the moving shuttles on transport track systems need to be smarter. It is required to have a low latency and reliable wireless data communication for the sensors and actuators on the shuttles. Current tracks only enable power distribution to the shuttles. A wireless solution enables each shuttle to wirelessly communicate for control and monitoring independently.

LINEAR ROBOTS

Linear robots require complex cable layouts to support the rapid dynamic motion and flexibility while moving workpieces across a machine's area and in between production stages. Such cables tend to tear and lead to downtime and maintenance costs (e.g. press shop). Providing wireless data communication to the sensors and actuators connected to the linear robots reduces unplanned downtime, maintenance costs and complexity.

INTELLIGENT TOOLING

CNC, milling & grinding machines require constant data transmission while rotating, moving and cutting at high speeds in harsh environments with extreme conditions. Cable communication and other conventional wireless technologies are not feasible for such data collection. An industrial wireless solution enables ongoing data collection to enable predictive maintenance, data analysis and machine optimization.

ROBOTS/COBOTS

Cabling limits the motion and flexibility of end effectors (e.g. grippers, vacuum pumps) attached to robots/cobots and is cumbersome to deploy. A wireless solution embedded inside the sensor/actuator eliminates the cables and accessories required to run all along the robotic arm. Such a solution increases flexibility, and reduces overall complexity and cost.

ROTATING AND DYNAMIC COMPONENTS

Cabling limits the motion and flexibility of rotating and dynamic components. Rotating devices with sensors and actuators can now be wirelessly connected to reduce complexity, increase flexibility and add intelligence.

CORETIGO PRODUCT PORTFOLIO

IO-LINK IS NOW WIRELESS!

The Smart Factory requires intelligent, flexible and efficient connectivity at all levels. IO-Link Wireless communication suits these requirements and is especially advantageous where wired solutions are impractical, ineffective or cost-prohibitive.



TigoMASTER



TigoMaster 2T SOM
Wireless Masters

An embedded module (21x60mm) for designing and building a 2-Track IO-Link Wireless Master. Includes IO-Link Wireless radios, CoreTigo's Master software stack.



TigoMaster 2TH
Wireless Masters

A standalone 2-Track IO-Link Wireless Master with USB interface. Enables simple integration and connectivity to applications such as wireless end effector connectivity on Cobots.



TigoMaster 2TS
Wireless Masters

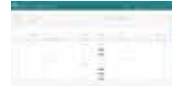
An IO-Link Wireless industrial-grade master for standalone and Industry 4.0 applications. It enables integration and connectivity with the automation OT network to transmit machinery data from the shop floor to the local manufacturing plant software or other Enterprise systems.



TigoGateway
Wireless Masters

An IO-Link Wireless industrial-grade gateway for cloud, Internet of Things and Industry 4.0 applications. It enables simultaneous integration and connectivity with both the factory automation OT network and the IT network to communicate machine data from the shop floor to the Cloud or other Enterprise systems.

TigoENGINE



TigoEngine
Software

Engineering Tool for system setup and configuration, network analytics & diagnostics, and monitoring.

TigoINSIGHTS



TigoInsights
Software

A Web-based business intelligence platform that enables a range of applications with visualization dashboards, analytics, reporting and alerting options.

TigoAIR



TigoAir SOM
Wireless Device

An embedded module (11x17mm) for designing and building IO-Link Wireless sensors, actuators or I/O hubs. Includes IO-Link Wireless radio and an upper-layer stack with an MCU that can run the device application.



TigoAir LP SOM
Wireless Device

An embedded module (11x18mm) for designing and building Low Power IO-Link Wireless sensors, actuators and devices. Includes IO-Link Wireless radio and an upper-layer stack with an MCU that can run the device application.

TigoBRIDGE



TigoBridge SOM
Wireless Device

An embedded module for designing and building IO-Link Wireless sensors and actuators. Converts IO-Link and Digital data to IO-Link Wireless.



TigoBridge
Wireless Device

IO-Link Wireless Bridge with IP67 Enclosure. Converts IO-Link and Digital data to IO-Link Wireless. Includes M12 connectors for data and power.

TigoSTARTER



Evaluation Kit

CoreTigo IO-Link Wireless Development Kit. Includes IO-Link Wireless Master, Devices, additional hardware and accessories, and SDK.

IO-LINK WIRELESS HIGHLIGHTS

- LOW LATENCY**
1.6msec (5msec cycle with 3 repetitions)
- RELIABLE**
Deterministic, 6 Orders of Magnitude More Reliable than Any Wireless
- SCALABLE**
100's of wireless devices per workcell/machine.
- INDUSTRIAL-GRADE**
Designed for Factory Automation, International Standard IEC 61131-9
- FLEXIBLE**
Increased Flexibility and Mobility
- COST EFFECTIVE**
Cable Reduction and Simple Setup

IO-LINK WIRELESS ARCHITECTURE

