

DATA SHEET

TigoBridge B1 is an IO-Link Wireless Class B Bridge with an IP67 enclosure. It seamlessly and easily converts IO-Link devices to IO-Link Wireless. TigoBridge houses an internal antenna and two M12 connectors for data and power.

TigoBridge is a device that connects a wired IO-Link device, via IO-Link Wireless, to an IO-Link Wireless Master. A device can be an IO-Link sensor, IO-Link actuator or IO-Link multiport I/O hub.

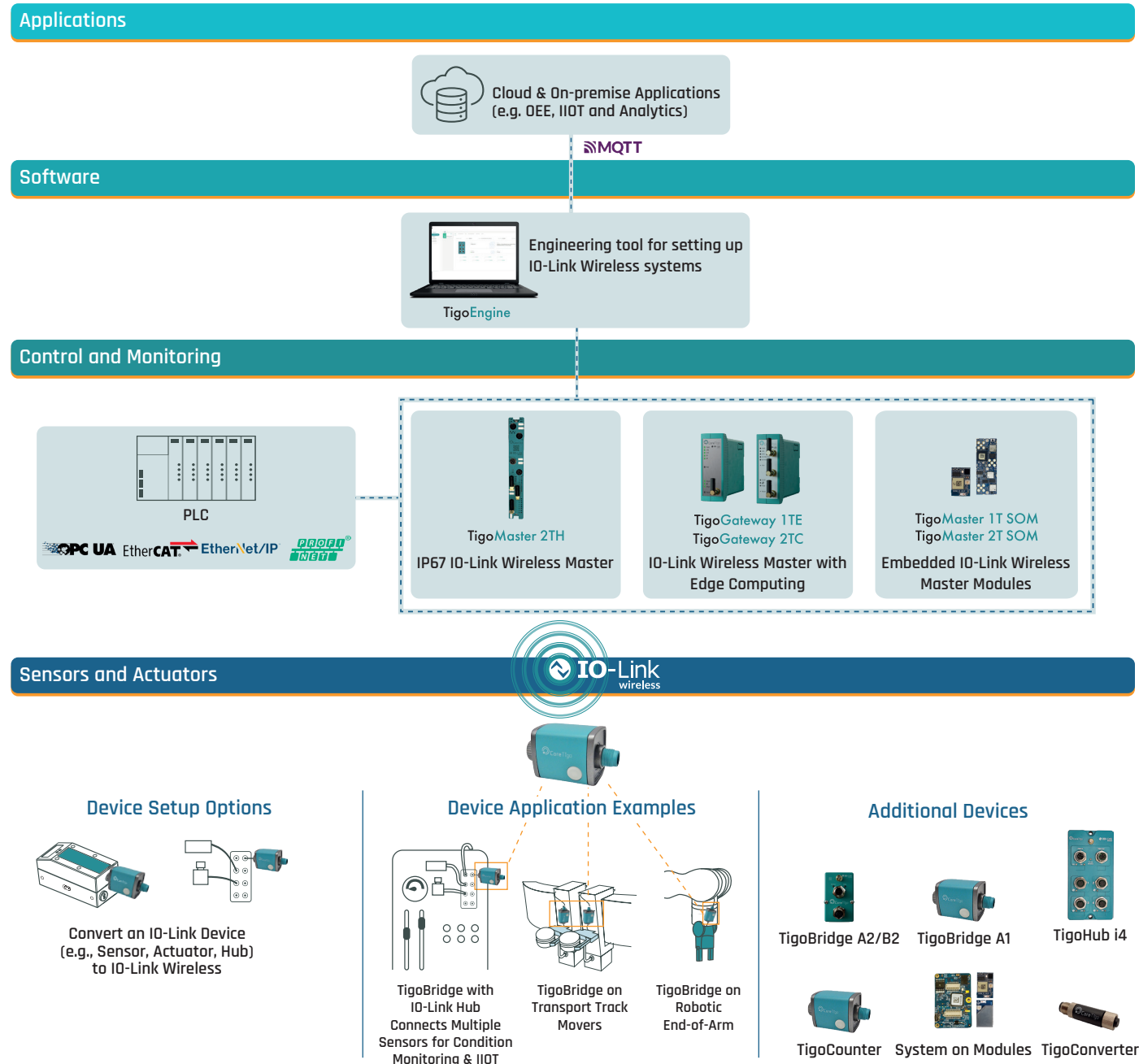
TigoBridge can be used in a variety of industrial applications, such as:

- Machine retrofit, for converting sensors (such as vibration, air flow) to IO-Link Wireless devices for condition monitoring and predictive maintenance
- Rotating components, such as rotary tables where the Bridge can be connected to clamps, valves and sensors on board the rotary table
- Enhancing independent transport track and conveying systems by connecting the Bridge to devices such as grippers and vacuum pumps on the movers

TigoBRIDGE B1 - CT231-0057-01



TigoBridge Network Topology



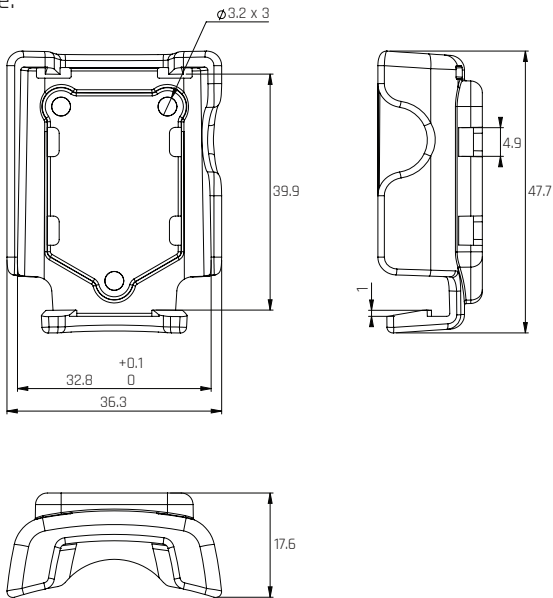
Mechanical

Dimensions

Units are in mm



Mounting cradle:



Package Dimensions

100x60x60 [mm]

Weight

38 [gr]

Mounting

Mounting cradle

Electrical & RF Data

Input Voltage

18-32 [V]*

Output Voltage on 1L+ and 2L+

Equals to Input Voltage

Typical Current Consumption

21 [mA]**

Max Output Supply Current - 1L+

1L+ = 1 [A]

Max Output Supply Current - 2L+

Max current of 2.5[A] under 50°C, linearly derated to 1[A] at 60°C.

Max Output Peak Current

1L+ = 1.2 [A]***

* TigoBridge power should be supplied from a limited, Class 2, power supply or via overcurrent protective device (fuse, breaker, etc.) rated 3A max.

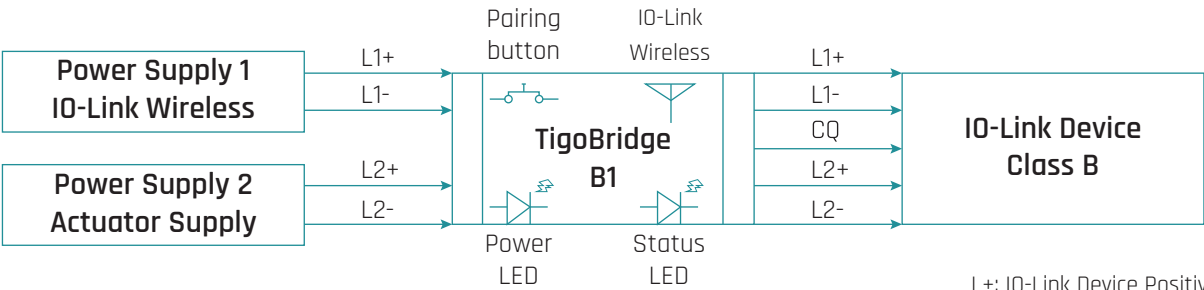
** For 24 VDC Supply input, without IO-Link device current consumption

*** For 30 minutes

Max Radio Output Power	10 [dBm]
Frequency Range	Unlicensed 2401-2480 MHz ISM band*
Rx sensitivity	PER 30% @ -92 [dBm] or better
Interfaces	
LEDs	• IO-Link – RGB three color LED • Power – Green color LED
Button	Pairing - external push button
Connectors	• Input connector: Plug M12, A coded, power Connector • Pin number 1: Input 1L+ Power supply • Pin number 2: Input 2L+ Power supply • Pin number 3: Input 1L- GND • Pin number 5: Input 2L- GND • Output Connector: Socket M12, A coded, IO-Link Class B Connector • Pin number 1: 1L+ positive supply to IO-Link device • Pin number 2: 2L+ positive supply to IO-Link device • Pin number 3: 1L- GND supply to IO-Link device • Pin number 4: CQ IO-Link Serial Communication • Pin number 5: 2L- GND supply to IO-Link device
Antenna	Internal isotropic antenna
Communication	
Protocols	• IO-Link • Supported transmission types: COM1, COM2, COM3 • Class B • IO-Link Wireless • IEC 61139-3 Standard * TigoBridge is an implementation of the IOLW W-Bridge
Certifications and Approvals	
FCC	• FCC ID: 2ATSM-TGBRIDGEA1 • FCC CFR Title 47 Part 15 Subpart C Section 15.247 • FCC CFR Title 47 Part 15 Subpart B
CE	• EN 301489-17 • EN 300328 • EN 62479:2010 • EN 61326-1 • EN 61010-1
UL	• UL 61010-1
Canada ISED	• IC: 26463-TGBRIDGEA1 • ICES-003 • IC RF Exposure report
Safety	• IEC 61010-1
Emission	• EN 61000-6-2 • EN55016-2-3 Radiated emission • EN55022 Conducted emission
Immunity	• EN 61000-6-2 • EN31000-4-2 Electrostatic discharge • EN61000-4-4 Fast transients/burst • EN61000-4-5 Surge immunity • EN61000-4-6 Conducted immunity

* All RF characteristics comply with the IO-Link Wireless Standard

Shock & Vibrations	• Sine vibration: IEC 60068-2-6 • Random vibration: IEC 60068-2-64 • Shock: IEC 60068-2-27 • Bumps: IEC 60068-2-27
Reach & RoHS	Complied
Operating Conditions	
Operating Temperature	-25°C to 60°C
IP Rating	IP67
Block Diagram	



L+: IO-Link Device Positive Supply
L-: IO-Link Device Negative Supply
CQ: IO-Link Tx/Rx Data

Electrical Connection

2X M12 5 pin A-Coded connectors



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