

# Boomerang - BoomBridge series

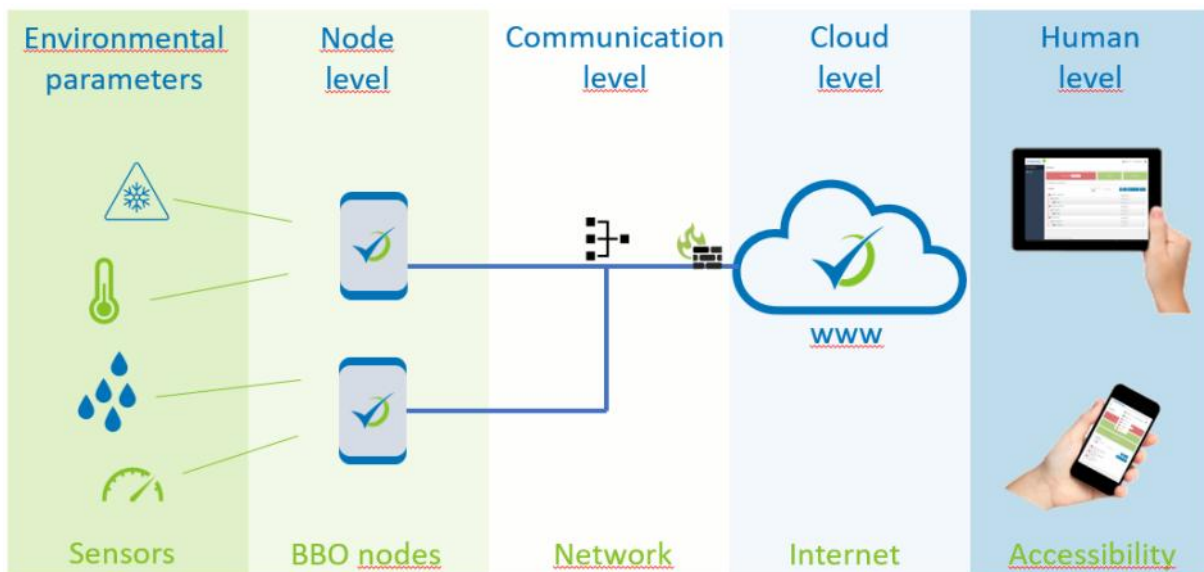
## Description

The Boomerang BoomBridge node series is an Ethernet communication concept for monitoring and logging of environmental parameters in laboratories; temperature, humidity, CO2 etc.

All nodes can connect multiple sensors or signals, and are a stable and cost efficient solution for monitoring and logging. The nodes communicate on Local Area networks (LAN) or Wide Area Networks (WAN) to the Boomerang service.

## Applications

- Hospital laboratories
- Blood banks
- IVF / Infertility clinics
- Biotech laboratories
- Clinical laboratories
- Chemistry laboratories
- University laboratories
- Pharmaceutical producers
- Food producers
- Restaurants
- Dairies
- Catering facilities
- Pharmacies
- Cold logistics
- Cold storage
- Veterinary labs



Boomerang BBO is a LAN-based multi-input node for continuous monitoring and logging. The BBO connects directly without gateways via LAN to a Boomerang On Premise or Boomerang Cloud server to provide easy installation and high flexibility.

The BBO is CE and FCC certified.

Typical usage for the BBO is when several types of equipment are located in the same room, this monitoring and log solution is cost-efficient. Eg. a bank of refrigerators or freezers in one room.

Part.no	Network	Short description
XBB006	Ethernet 10/100BASE-T	BoomBridge ONE, BBO - up to 19 digital sensors
XBB012	Ethernet 10/100BASE-T	Analog BBO - eight analog 4-20mA inputs
XBB021	Ethernet 10/100BASE-T	Analog BBO - 16 analog 0-10V inputs
XBB100	Ethernet 10/100/1000BASE-T	BBO Buffer device - up to four BBOs (XBB006, XBB012, XBB021)

**XBB006** - Ethernet BBO node for digital sensors

**Description**

The BBO connects directly to digital temperature sensors and digital RH/T-sensors (humidity). Onewire sensors.

When using the a Pt100-interface, XBT006, the BBO also connects Pt100-sensors for ultra-low temperatures.

Typical usage for the BBO is when several types of equipment are located in the same room, this monitoring and log solution is cost-efficient. Eg. a bank of refrigerators or freezers in one room.


**Technical data**

Size (L×H×W)	191×40×125 mm
Mounting bracket	Part of boxing
Power supply	Included 230VAC (5V)
Network	10/100BASE-T Ethernet
No of sensors	Up to 19 sensors

**Available sensors  
-20°C to +85°C**

Part no.	Probe size	Temperature range
FT040	60 mm	-20°C to +85°C
FT041	15 mm(flex)	-20°C to +85°C
FH010	Wall mounted	RH/T (%RH & °C)

BoomBridge interface unit  
XBT006 for Pt100 sensor


**Available Pt100-sensors  
-200°C to +200°C**

Part no.	Probe size	Temperature range
FT012	60 mm	-90°C to +200°C
FT004	600 mm	-200°C to +200°C
FT052	15 mm (flex)	-20°C to +200°C
FT020	Ø 2,1 mm	-60°C to +250°C

**XBB012** - Ethernet BBO node for 8 × 4-20mA signals

**Description**

This BBO can monitor eight 4-20mA signal (current loop). The analog 4-20mA signal has been an industry standard for sensors and instruments since decades ago.

The availability of sensors, meters and instruments with 4-20mA interfaces, provides an incredibly wide range of possibilities; such as CO<sub>2</sub>-sensors, O<sub>2</sub>-sensors, Particle-counters, Differential-Pressure sensors etc..

The XBB012 also provides a 24VDC supply/source for the current loop.


**Technical data**

Size (L×H×W)	271×90×170 mm
Mounting bracket	Part of boxing
Power supply	Included 230VAC (24V)
Network	10/100BASE-T Ethernet
No of inputs	Up to eight (8)

**Examples of sensors available**

Part no.	Description
FC014	Vaisala GMP251 CO <sub>2</sub> -probe
FC019	Analox O <sub>2</sub> NE+ Oxygen alarm
FH012	Vaisala HMT120 RH/T-probe
XBV003	Micatrone MF-PD Diff.pressure sensor

**XBB021** - Ethernet BBO node for 16 × 0-10V signals

**Description**

This BBO can monitor sixteen (16) voltage signals, 0-10 Volt. The analog 0-10V signal is a widely used industry standard for sensors and instruments.

The availability of sensors, meters and instruments providing 0-10V or 0-5V interfaces, provides an incredibly wide range of possibilities; such as CO<sub>2</sub>-sensors, O<sub>2</sub>-sensors, Particle-counters, Differential-Pressure sensors etc.

**Technical data**

Size (L×H×W)	191×60×125 mm
Mounting bracket	Part of boxing
Power supply	Included 230VAC (5V)
Network	10/100BASE-T Ethernet
No of inputs	Up to sixteen (16)



**XBB100** - Ethernet BBO Buffer device

**Description**

The BBO Buffer connects directly to Gigabit Ethernet LAN sockets (10/100/1000 Base-T) and can handle up to four Boomerang BBO devices.

**Functionality:**

The BBO Buffer will prevent data losses in the log, when network interrupts occur.

In case of network interrupts between the Boomerang 3.0 and the BBO Buffer, the BBO Buffer will store/buffer logging values for the BBO devices. The Boomerang system will alert users for communication problems.

As soon as the network connection between the Boomerang 3.0 and the BBO Buffer is established again, the BBO Buffer will send the buffered data to Boomerang 3.0.

Which means, the traceability is complete and the history records are restored. I.e. the users have evidence and can take decisions based on facts in the history records. Also already installed systems can be retrofitted with BBO Buffer(s).

Typical usage for the BBO Buffer is when "buffer memory" is desired/requested in a BBO-solution.

**Technical data**

Size (L×H×W)	113×89×28 mm
Mounting bracket	Part of boxing
Power supply	Included 230VAC (24V)
Network	10/100/1000 Ethernet
No of buffered ports	Up to four (4) BBOs can connect
Buffer memory size	8GByte >200 000 readings/logs (more than 30 days)
Version compatibility	Boomerang 3.0
BBO compatibility	XBB006 XBB012 XBB021

