



Edge 1 Relay

BC510

The BC510 is a customisable Bluetooth 4.2 gateway that intelligently aggregates and relays data at the edge of the network. When used in conjunction with the Loop Location Engine, it can be deployed at scale to determine the real-time location of Bluetooth LE Tags.

Leveraging the power of edge computing technology, the BC510 can process thousands of Bluetooth LE beacons simultaneously and transmit the captured data over Ethernet (PoE) or Wi-Fi.

The BC510 is for indoor use in stock format, but is easy to house in an IP-rated enclosure for outdoor or industrial environments.



Benefits



SIMPLE DEPLOYMENT

- Compact size conveniently integrates into any environment
- Uniquely configurable via a web interface



MANAGEABLE

- Over-the-air updates (firmware)
- Device diagnostics (performance, status, and more)



POWERFUL & FLEXIBLE

- Process thousands of Bluetooth LE tag signals in real time
- Send data to cloud or on-premise service with MQTT, UDP or HTTP(S)



BROADCAST RANGE

- Proximity detection, line of sight: up to 400 meters
- Normal operation: 100 meters

For What

- Real-time, 2D tracking
- Proximity awareness

Works Great With

- Loop Local
- Loop Cloud
- BC2510
- BC2401
- BC313

For Who

- Warehousing
- Manufacturing
- Supply chain logistics
- Healthcare
- Hospitality
- Retail
- Sports



Specifications

MECHANICAL

Dimensions	58 mm (H) × 58 mm (W) × 26 mm (D)
Weight	54 g
Mounting Options	wall, truss, pole, ceiling/roof, rail
Enclosure Material	ABS

POWER

Power Source	PoE or Micro-USB
Power	1A Max
Input Voltage	48 V

ENVIRONMENTAL

Operating Temperature	-18°C to +55°C
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ETHERNET

PoE	IEEE 802.3af-2003
Data Rate	10/100 Mbps

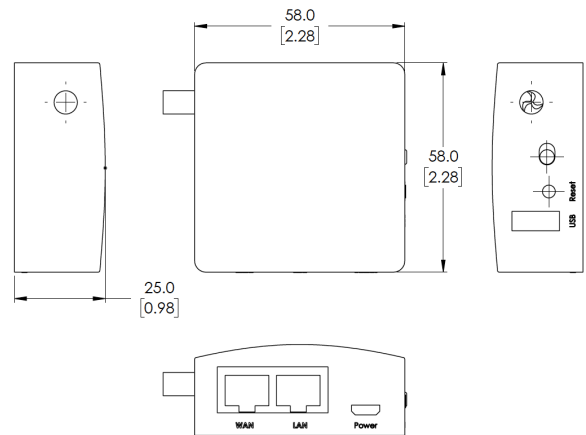
WI-FI

Wi-Fi	802.11 b/g/n 2.4 GHz with PCB antenna
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BLUETOOTH LE

Version	4.2
Frequency	2.402 GHz to 2.480 GHz
Module	BC010 (TI CC2640)
Tx Power	configurable, up to 0 dBm
Rx Sensitivity	-93 dBm
Range	up to 400 meters
Antenna	External whip
Protocols	Eddystone, iBeacon

Dimension Drawings



DEVICE

SOC	Atheros AR9331 @ 400Mhz
Flash	16 MB
RAM	64 MB
Ethernet	2 × 10.100M, 1 × POE
OS	OpenWRT CC 15.05
Protocols	UDP, MQTT, HTTP(S)

CERTIFICATIONS

FCC	Yes
IC	Yes
CE	Yes
RCM	Yes

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