

BLE Gateway



The Most Features in a Single Reader

The Venture Research BLE (Low Energy Bluetooth) Gateway reader sets the standard for a multi-protocol reader that has a diverse communication platform to satisfy the most demanding connectivity requirements. Along with BLE reading support, the reader is packed with communications features to accommodate the most demanding data delivery requirements. The BLE Gateway combines the following communication technologies in a single reader.

- BLE – Low Energy Bluetooth Reader – 4.0 specification.
- Wifi – a,b,g,n – Mimo Wifi support
- CAN – CAN Bus Support
- SERIAL – Serial Interfacing
- Cellular – 4GLTE – Multiple Carrier Support - Optional
- GPS – Dual constellation satellite – Optional

Support for Both Eddystone and iBeacon BLE Tags

The BLE Gateway is compatible with both Eddystone (Google) and iBeacon (Apple) tags

Multiple Power Options

The BLE Gateway can be powered by POE (Power over Ethernet), Direct AC connection with a power supply or by a 12v Battery. This simplifies wiring requirements and reduces cost for large deployments.

Designed for the Cloud

The BLE Gateway Reader shares the same API as all other Venture Research Products that are designed for direct cloud interfacing. Store and Forward to a direct REST interface is built in for rapid deployment. Using the REST interface, the requirement for expensive middleware is eliminated.

Secure Protocol Support Built In

For Aerospace, Medical and other applications that require the backhaul protocol to be secured, the reader provides the TLS 1.2 security Protocol.

Supports Device ID, Advertising and SCAN_RSP Packets

For IoT interfacing, the reader accepts Device ID broadcasts, Advertising and can perform SCAN_RSP requests to the BLE devices.

24 x 7 x 365 Support

Venture Research maintains a world class support organization currently supporting over 240 distribution centers with 24x7x365 proactive support. Like all Venture Research products, the Forklift Reader is capable of "phoning home" using a secure VPN connection allowing real time monitoring and updates. For further information, contact Venture Research at 866-RFID-111.

Applications

- IoT Sensor Data Collection
- Critical Material Tracking
- Security Systems
- RTLS (Real Time Location Systems)
- Cloud Gateway

Product Features

Features	Benefits
Supports both iBeacon and Eddystone BLE Protocols	Protocol independence ensures flexibility in BLE tag selection
12v, POE or AC Powered	Flexible power options to simplify wiring
Device ID, Advertising and SCAN_RSP packet support	Track BLE tags but also access their advertising information
BLE with WiFi or BLE only capability	Can act as a gateway using WiFi but also direct connect with Ethernet/Cellular
Rugged Enclosure	Designed for industrial environments
2 in x 2 out GPIO with CAN and Serial	Provides direct peripheral control and flexible input sensing
Integral store and forward capability for all transactions	Ready for the Cloud
Optional 4G LTE Cellular	Provides direct cloud interfacing for mobile applications
Integral SD Storage Card	Allows virtually unlimited storage and application loading capability

Specifications



BLE Gateway Electrical Specifications

Model	BLE-GATE-001
BLE Reader	Transmit power 8dBm max
Power	48 or 56 v POE 10-48 v DC regulated - 4 W
Antennas	2-2dBi Stub Antennas - SMA Connections

Interfacing

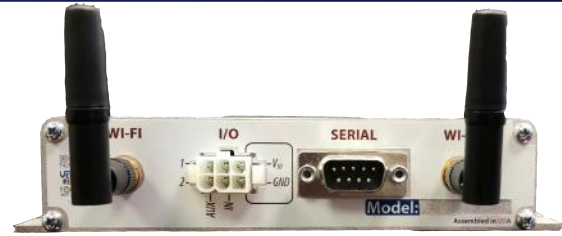
Ethernet	10/100 Mbps (POE)
WiFi	WiFi (802.11 a/b/g/n), MIMO Antenna Support
BLE	Low Energy Bluetooth reading of iBeacon or Eddystone beacons
GPS	GPS/GLONASS - with external antenna port (optional)
USB	USB A, USB OTG
Serial	Console Serial Port with FTDI support DB9 Female RS232 - Aux Port
CAN Bus	1 Mbps CAN Bus Interface
Cellular	Internal Sierra Wireless Cellular Module - Optional
SD Card	Up to 64 GB of additional storage for data and Applications
I/O	2 In (Sink or Source)/ 2 Out Conditioned

Operating System

Linux Build	Yocto project build (Android 4.x also available)
VPN Support	Built in multiple end point VPN embedded secure client (s).
Programming	C, C++, Python, Node, Java
Cloud Computing	Store and Forward with all filtering/aggregation being performed in the reader. Direct (REST) Web Service update capability using HTTP Post.

Warranty

- 1 year parts and labor
- 1 year, post 1 year maintenance agreement available



Optional Cable Protection End Caps

Mechanical

Dimensions: 6" W x 6.5" D x 1.5" H

BLE Gateway Options

Power	Part Number
Battery Backup	BLE-GATE-OPT-BATT-PACK
Battery Charger - Single Battery	BLE-GATE-OPT-BATT-CHRG1
Battery Charger - Quad Battery	BLE-GATE-OPT-BATT-CHRG4
Spare Battery	BLE-GATE-OPT-BATT
POE Injector - 48v	BLE-GATE-OPT-INJECT

Communications

4G LTE Module	BLE-GATE-OPT-CELL
Carrier Service - 1 Year	BLE-GATE-OPT-CELL-CARRIER
GPS	BLE-GATE-OPT-GPS

Peripherals

External Input (PIR Motion Sense)	BLE-GATE-OPT-PIR
CAN Bus Stacklight	BLE-GATE-OPT-CAN-STACK
Hi Gain WiFi Antennas (MIMO)	BLE-GATE-OPT-WIFI-ANT
Mobile External GPS Antenna	BLE-GATE-OPT-GPS-ANT
Mobile External Cellular Antenna	BLE-GATE-OPT-CELL-ANT
Combined WiFi/GPS Cellular Antenna	BLE-GATE-OPT-COMBO-ANT

Operating System

Open Embedded Linux	BLE-GATE-OPT_OS-LINUX
Android 4.0	BLE-GATE-OPT_OS_Android4

Cabling

CANBUS Interconnect Cable 15'	BLE-GATE-OPT_CAN_15
Serial Interface Cable to USB	BLE-GATE-OPT-USB-SER

NOTES:

- Call for Compatible Antennas and Cabling
- Cellular requires yearly service contract
- Specify service provider at time of order (AT&T, Verizon, T-Mobile, Sprint, Vodafone, Korea)
- Solar Powered option also available