

SIMPLIFIED DISTRIBUTED DATA COLLECTION

The micro-BitBox IoT appliance allows for cloud data collection and enterprise edge connectivity for OEM applications or smaller critical facilities or industrial IoT equipment that require mass data aggregation. The unit allows for simple integration into DIN rail enclosures or can optionally be wall/panel mounted. The micro-BitBox IoT appliance allows onboarding into the BitBox Platform of products or systems desiring remote management or monitoring. The unit is a perfect solution for intelligent energy metering, retail property automation, oil and gas applications, or remote un-staffed site monitoring of equipment.

The micro-BitBox sports a low power Intel® Celeron® processor N3350 1.1 GHz dual-core processor with 4GB system memory; delivering high performance and low power consumption for mass data acquisition needs. The unit offers complete digital and analog connectivity options to individual sub-systems via:

- Two Gigabit LAN/WAN ports
- Programmable Digital IO Port
- Configurable serial support (RS-232/422/485 ports)
- Two USB 2.0 ports

The micro-BitBox is simple to deploy and provision. Wire-up the devices to be monitored, connect an Outbound Ethernet connection (optionally Wifi or LTE) and apply power. All setup can be performed within the BitEngine Cloud Platform remotely. The unit allows native connectivity to BACnet/IP, BacNetMS/TP, MQTT, Modbus RTU/TCP, Serial, and over 100 other protocols to harvest data. The BitEngine cloud platform consolidates, tags, and formats all the BitBox harvested data into a single source API allowing remote analytics and visualization platforms to access the entire data-collection from a single API.

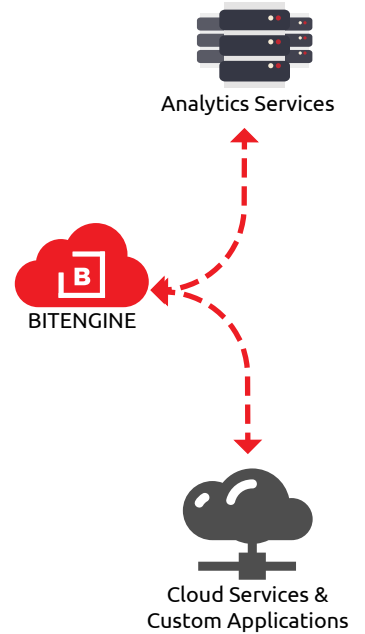
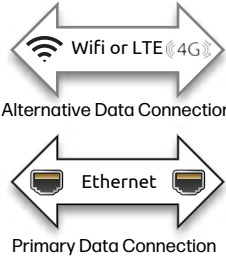
The unit can be DIN rail mounted taking up only a profile of only 1-1/4" width, or wall-mounted with an optional wall mount adapter. Power is supplied via a 12-24VDC terminal connection. Additionally, the unit holds an IP40 rating with a high-temperature threshold, and fanless design making it perfect for housing directly in sealed equipment or electrical cabinets.

LOCAL DEVICE NETWORK / DATA ACQUISITION

- Rest API
- Modbus RTU / TCP
- SNMP
- MQTT
- BACnet MS/TP & IP
- Serial RS232/422/485



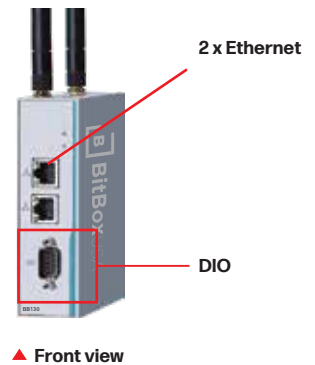
CLOUD CONNECTION



FEATURES AT A GLANCE

Facility data consolidated, organized, and accessible with the simplicity of a BitBox

- Solid State (Fanless) Industrial Design for long service life
- Single Serial COM Port (RS-232, RS-422, RS-485)
- Digital 8bit TLL I/O Port - Programmable
- 12/24VDC Powered
- Simple Cloud based on-boarding and configuration
- Protocol support for prevailing building systems and protocols
- Unified API support from the BitEngine with a Single Source API
- Simple connectivity Azure IOT, Google Cloud IOT, AWS IOT
- Local storage for data caching
- Low profile design for integrated OEM applications



SPECIFICATIONS

| | | |
|----------------------|--|--|
| Color | Silver | |
| Construction | Extruded aluminum and heavy-duty steel, IP40 | |
| CPU | Intel® Celeron® processor N3350 (1.1 GHz) | |
| Part number | BB120 | |
| System Memory | 4GB DDR3L 1866Mhz | |
| BIOS | AMI UEFI BIOS | |
| I/O | Serial Port | 1 x RS-232/422/485 (COM) with DB9 Connectors Native Protocols: BacNetMS/TP, ModBus RTU See www.bitboxusa.com for further serial protocol options Supports Auto Flow Control in RS-485 mode |
| | USB | 2 x USB 2.0 |
| | RTC | Battery on-board |
| | Local Storage | SSD 32GB - SATA III 6.0Gbit/s |
| | LAN | 1 x 10/100/1000 Mbps Ethernet (WAN - Cloud Service Connection) |
| | Ethernet Ports | 1 x 10/100/1000 Mbps Ethernet (LAN - Local Device Network) |
| | Power Input | DC terminal block: 12 - 24VDC Input (Power supply not included) |
| | Wireless | ^A 802.11a/g Wi-fi ^A 4G/LTE - Single SIM Card Support for 4G/LTE Networks |
| | DIO | 1 x DI/DO (8-Bit Programmable Female Connector DB9) TTL - 5V External isolation required DIO programming operation: - I/O sink current 10mA - Individual Input/Output programming |
| | Options | ^{AB} BBWN - Integral Wifi ^{AB} BBCN - Integral 4G/LTE Modem (Service Required) BB120WM - Wall Mount Adapter |

^A Denotes Optional add-on feature
^B Options may not be concurrently installed

| | |
|------------------------------|---|
| Integral Watchdog | Timer based: 255 levels, 1 to 255 sec. |
| System Indicator | Power, active |
| Power Supply | Power Input Range: 12 ~ 24 VDC |
| | Power Input Rating: 12 ~ 24 VDC, 1.39A ~ 0.72A |
| | Power Protection: DC Version with Over Voltage Protection +20% Reverse polarity protection |
| Operating Temperature | -20°C ~ +70°C (-4°F ~ +158°F) |
| Humidity | 10% ~ 95% |
| Vibration Endurance | 2 Gms (5 ~ 500Hz, amplitude 0.35 mm; operation/storage/Transport) |
| Weight | 0.3 kg (0.67 lb)/0.46 kg (1 lb) |
| Certificate | CE, FCC Class A |
| Dimensions | 31 mm (1.22") (W) x 100 mm (3.93") (D) x 125 mm (4.92") (H) |
| Mounting | DIN-rail, wall mount |
| OS Support | BBOS / Ubuntu |
| Remote Software | BitBox USA BitEngine Cloud Platform |

DIMENSIONS

