

The Radix IoT Appliance: Simplified Monitoring & Data Collection Platform for Facilities

The Radix IoT Appliance is an industrial grade Mango Hardware package allowing cloud data collection and enterprise edge connectivity within buildings utilizing the Radix IoT Cloud configuration and Data Organization Engine.

Simple deployment and flexible software-based protocol connectors within Mango displace the need for multiple gateways/bridges in a facility to gather data. The Radix IoT appliance squarely fits in smart building and IoT applications such as intelligent energy metering, factory automation, retail management, edge data-center monitoring, and global property management oversight.

The Radix IoT appliance sports a low power Braswell Intel® Celeron® processor N3160 with 8GB system memory, delivering high performance and low power consumption for mass data acquisition needs from a variety of subsystems within facilities. The unit offers complete digital connectivity to individual sub-systems via two Gigabit LAN ports, two RS-232/422/485 ports, two USB 2.0 ports, two USB 3.0 ports, and a digital IO interface.

The RD200 comes with Mango OS preinstalled and ready to go supporting dozens of protocols out of the box.

The Radix IoT Cloud Platform consolidates, tags, and formats all the Radix IoT harvested data into a single source API, allowing remote analytics and visualization platforms to access all the data from enterprise from a single source of data truth.

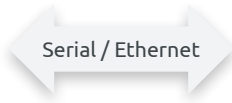
Cloud connectivity is achieved through the use of Mango CloudConnect allowing hundreds to thousands of Mango units to be deployed to form a telemetry network for both small or large portfolios of monitoring.

The unit requires minimal installation time, only requiring mounting in a rack or on a wall and wiring of inbound data connections and a single outbound Internet connection. Power can be supplied via a 12-24VDC power supply or via integral PoE-PD functionality eliminating separate power wiring.

The Radix IoT Gateway

Local Device Network / Data Acquisition

- Rest API
- Modbus RTU / TCP
- SNMP
- MySQL
- BACnet MS / TP & IP
- Serial RS232 / 422 / 485
- ... and many others



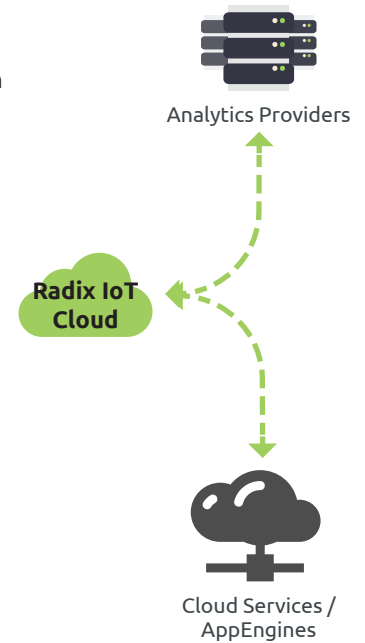
WAN / Outbound Connection



Primary Data Connection



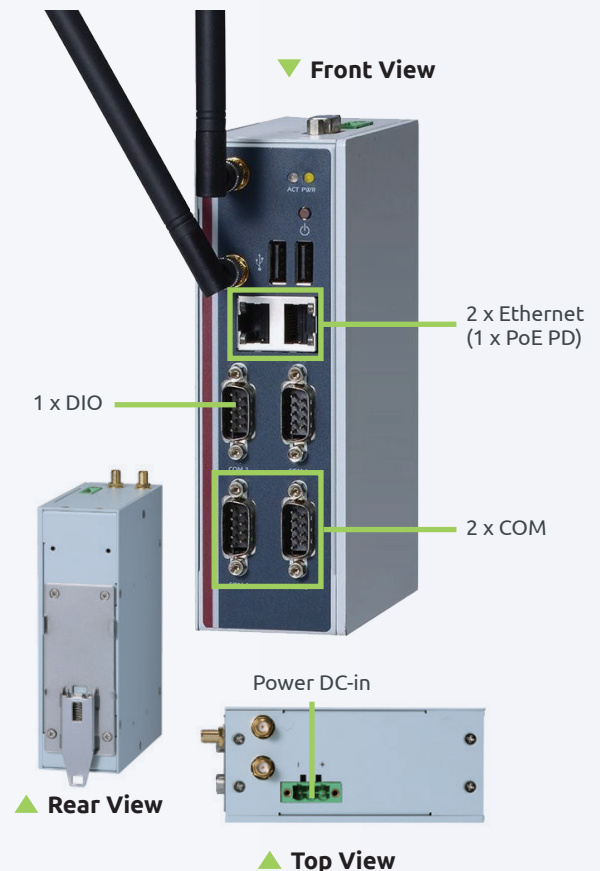
Optional Fall Back & Configuration



Features at a Glance

Facility data consolidated, organized, and accessible with the simplicity of Radix IoT.

- Fan-less industrial design for long service life
- Multiple communications inputs data sources
- Double redundant outbound / back-haul data connections
- 12/24VDC Powered or Power over Ethernet (802.3at Compliant)
- Simple Cloud based on-boarding and configuration
- Protocol support for prevailing building systems and protocols
- Unified API support from the Radix IoT Cloud with a single source API
- Local storage options for data caching
- Enterprise native for mass location deployment and management



Specifications

Standard Color	White	
Construction	Extruded aluminum and heavy-duty steel, IP40	
CPU	Intel® Celeron® processor N3160 (1.6 GHz/4-core)	
Part Number	BB200	
System Memory	8GB	
I/O	Serial Port	2 x RS-232/422/485 (COM 1/2) with DB9 Connectors Native Protocols: BacNetMS/TP, ModBus RTU See RadixIoT.com For further serial protocol options Supports Auto Flow Control in RS-485 mode
	USB	2 x USB 3.0 2 x USB 2.0
	RTC	Battery on-board
	Local Storage	Standard: SSD 480GB - mSATA
	LAN Ethernet Ports	1 x 10/100/1000 Mbps Ethernet (WAN - Cloud Service Connection) 1 x 10/100/1000 Mbps Ethernet (LAN - Local Device Network) 1 x PoE PD compliant with IEEE 802.3at (WAN Port)
	Power Input	DC terminal block: 12 ~ 24V DC-In PoE: IEEE 802.3at
	Wireless	^ 802.11a/g Wi-fi ^ Optional 4G/LTE - Single SIM card support for 4G/LTE networks
	DIO	1 x Digital I/O connector DB9 8-bit programming connector TTL - 5V External isolation required DIO programming operation: <ul style="list-style-type: none"> I/O sink current is 8 ~ 10mA - (Output drive current ±50 mA) Individual input/output programming
Options	^ BBCN - Integral 4G/LTE modem (service required) ^ Denotes optional add-on feature	

Integral Watchdog	Timer based: 255 levels, 1 ~ 255 sec.
System Indicator	Power, active, COMs (TX/RX)
Power Supply	Power Input Range: 12 ~ 24 VDC Power Input Rating: 12 ~ 24 VDC, 2.09 ~ 1.09A Power Protection: DC Version OVP, Reverse Protection
Operating Temperature	-20°C ~ +60°C (-4°F ~ +140°F) *The frequency of CPU will down when system operating temperature over +55°C
Humidity	10% ~ 95%
Vibration Endurance	2 Gms (5 ~ 500Hz, amplitude 0.35 mm; operation/storage/transport)
Weight	1.0 kg (2.2 lb)/1.50 kg (3.3 lb)
Certificate	CE, FCC
Dimensions	48 mm (1.88") (W) x 110 mm (4.33") (D) x 155 mm (6.1") (H)
Mounting	DIN-rail, wall mount
Remote Software	Radix IoT Cloud

Dimensions

All dimensions in millimeters

