

DATA SHEET

C1000 Enterprise Bluetooth Router (Indoor Use)

Cassia Networks C1000 is the world's leading long-range Bluetooth router designed for indoor applications, including hospitals, clinics, senior centers, schools, gyms, and home. It extends Bluetooth's range up to 1000 feet open space and enables remote control of 22 Bluetooth low energy devices without requiring any changes to the Bluetooth end devices. The C1000 acts as an internet gateway working with the Cassia Access Controller for easy deployment and management.

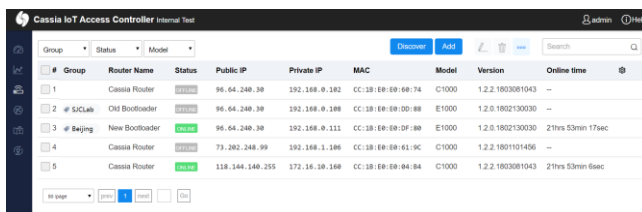


OVERVIEW

The Cassia C1000 Enterprise Bluetooth Router can be used for a variety of applications, including medical & health, senior safety, fitness & sports and other industrial applications. This powerful Bluetooth router is designed for indoor usage, attaching directly to a pole, or simply sitting on a desk.

The C1000 has a built-in smart antenna array designed specifically for Bluetooth. It also supports Ethernet and 2.4GHz Wi-Fi. The C1000 is a first of its kind enterprise Bluetooth router capable of extending Bluetooth's range up to 1000 feet and expanding the number of devices that can be paired and connected to 22 Bluetooth devices. The C1000 can be used as a protocol gateway, which translates between Bluetooth LE protocol and IP protocol. This enables Internet access to your Bluetooth LE devices from a remote location.

The Cassia RESTful APIs enable the integration of proprietary Bluetooth low energy devices to the C1000 without changing the end devices. In addition, the Cassia IoT Access Controller (AC) provides easy to use device management at scale. Solution providers use the AC to deploy and manage hundreds of Cassia C1000 routers and thousands of connected devices from a single user interface.



#	Group	Router Name	Status	Public IP	Private IP	MAC	Model	Version	Online time
1		Cassia Router	Online	96.64.249.39	192.168.0.182	CC:18:EE:09:60:74	C1000	1.2.2.1903081043	—
2	@ SUCLab	Old Bootloader	Offline	96.64.249.39	192.168.0.188	CC:18:EE:09:00:88	E1000	1.2.0.1902130030	—
3	@ Baijing	New Bootloader	Online	96.64.249.39	192.168.0.111	CC:18:EE:09:0F:89	E1000	1.2.0.1902130030	21hrs 53min 17sec
4		Cassia Router	Online	73.282.248.99	192.168.3.196	CC:18:EE:09:61:9C	C1000	1.2.2.1901101406	—
5		Cassia Router	Online	118.144.149.255	172.16.19.169	CC:18:EE:09:04:84	C1000	1.2.2.1903081043	21hrs 53min 6sec

UNIQUE BENEFITS

Seamless Bluetooth Coverage

With its smart antenna and RF management technology, the C1000 delivers wall penetrating Bluetooth coverage of up to 1000 feet. Its long-range capability increases "connection density" and reduces cost, allowing solution providers to deploy seamless Bluetooth coverage.

Remote Access and Control

The C1000 connects your Bluetooth low energy devices, uploads the aggregated device data to the AC via your LAN or Internet, and allows them to be controlled remotely.

Easy Integration

Cassia's C1000 provides a set of RESTful APIs which developers can easily integrate into their native mobile app or cloud applications. Cassia partners use the extended range and routing capabilities of the C1000 without a need to make costly changes to their Bluetooth end devices.

Easy Setup and Management

Cassia's C1000 comes with Wi-Fi hotspot mode, which improves a user's overall setup experience when performing an initial installation without network access.

The C1000 can be managed by the Cassia IoT AC. Administrators can quickly provision and check the status of all routers in their network (connected and/or identified sensors, throughput, CPU consumption, device location, and more).

Room-based Location Tracking

Together with the Cassia IoT AC, the C1000 tracks and reports the location of Bluetooth low energy devices, providing geolocation data in real-time.

Edge Computing

Partners can run their own applications inside a container within the router for reduced latency, customized command and control, and better data management. Currently, the C1000 supports Ubuntu OS with built-in packages for Python2 and NodeJS.

Flexible Deployment

In a network restricted environment, the C1000 can be configured in “Stand-Alone Mode”, where the data is sent directly to a local third-party application server. In a remote management scenario, users can setup “AC Manage Mode” in the C1000 router to send data to a remote third-party application via the Cassia IoT AC.

Tx Power

Based on the country code selected, the C1000's Bluetooth transmit power and Wi-Fi transmit power are limited to the maximum value allowed by that country.



ADVANCED FEATURES

Processor & Memory

- CPU: 4 core ARM Cortex-A5, up to 1.5GHz
- 256MB RAM DDR3, 4GB eMMC storage

Bluetooth

- BLE chip: 2x CSR8811
- Bluetooth version: 4.0/4.1
- LE Connections: Up to 22 connections
- Frequency: 2.400 to 2.483 GHz
- Data rates: up to 2x1Mbps
- TX power: 0 to 10dBm
- RX sensitivity: -105dBm
- Antenna Gain: 5.7dbi vertical polarized

Wi-Fi (802.11 b/g/n)

- Frequency: 2.4 GHz
- Mode: Wi-Fi client or hotspot (for setup only)
- TX power: 17.5 to 12.5dBm
- RX sensitivity: -96 to -71dBm
- Antenna: Omnidirectional

Multiple Roles

- Supports broadcaster, listener, sender and receiver roles
- Can play multiple roles simultaneously.

Security Services

- Support Bluetooth 4.1 security standards
- Bluetooth Secure Simple Pairing (Just Works, Passkey Entry, OOB)
- Advanced 128bit AES encryption
- Password protected router Webpage
- Communication between the Cassia IoT AC and the router is based on DTLS1.0 over UDP
- MQTT connection between Cassia router and the broker is encrypted.
- Firmware is signed by certificate to ensure authenticity
- Supports HTTPS access to the Cassia AC and router

Power Interface

- 12V ADC
- Power consumption: up to 2.5W for normal usage; 3G/4G dongle adds up to 2.5W

Other Interfaces

- 10/100 BASE-T Ethernet (RJ-45) uplink
- Reset button
- LED lights: Power / System
- USB 2.0 (can be used for 3G/4G dongle)

Mechanical

- Dimensions:
 - 124 mm (D) x 198 mm (H)
 - 4.9-inch (D) x 7.8 inch (H)
- Weight: 680 g / 24 oz

Environmental

- Operating:
 - Temperature: 0°C to +40°C (+32°F to +104°F)
 - Humidity: 0% to 90% non-condensing
- Storage and transportation:
 - Temperature: -40°C to +70°C (-40°F to +158°F)

Certification

- FCC (US), IC (Canada), BQB, SRRC (China)

Warranty

- 1-year limited hardware warranty