Cassia Networks
The Future of Connected Things

DATA SHEET

Cassia X1000 Outdoor and Indoor Enterprise Bluetooth Router

The Cassia X1000 is the world's first long range enterprise Bluetooth router that can be used in both indoor and outdoor environments. 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 X1000 acts as an internet gateway working with the Cassia Access Controller for easy deployment and management.

The Cassia X1000 enterprise Bluetooth router can be used in both indoor and outdoor environments, supports POE and offers enhanced functionalities., It can be attached to the pole or wall with an included mounting kit or placed on a desktop or counter space. It receives power from PoE via the uplink Ethernet port. X1000 is fully weather proof, and is widely deployed in school campus, sports field, stadiums, manufacturing yards and large metropolitan areas.

The X1000 has a built-in smart antenna array designed specifically for Bluetooth. It also supports Ethernet and 2.4GHz Wi-Fi. The X1000 is a first of its kind enterprise Bluetooth router capable of extending Bluetooth's range up to 1000 feet in open space and expanding the number of devices that can be paired and connected to 22 Bluetooth low energy devices, or listening to potentially hundreds of devices at the same time when operating in broadcast mode. The X1000 can be used as a protocol gateway, which translates between Bluetooth protocol and IP protocol. This enables Internet access to your Bluetooth low energy devices from a remote location.

The Cassia SDK allows our partners to connect their proprietary Bluetooth low energy devices to the X1000 Bluetooth router without changing their Bluetooth end devices. In addition, Cassia offers the ultimate device management solution called the Cassia IoT Access Controller (AC). Solution providers can use the AC to deploy and manage hundreds of Cassia X1000 routers and thousands of their connected devices from a single easy-to-use user interface.

UNIQUE BENEFITS

Seamless Bluetooth Coverage

With smart antenna and RF management technology, the X1000 can deliver stable Bluetooth coverage of 1000+ feet open air. This capability allows partners to deploy seamless Bluetooth coverage indoor and out.

Remote Access and Control

The X1000 connects your Bluetooth low energy devices that are within its coverage to your LAN or Internet, assigns them into groups, and allows them to be controlled remotely.

Easy Integration (SDK)

By simply integrating the Cassia SDK into a native mobile app or cloud server, partners can use the extended range and routing capabilities of the X1000

without requiring any changes to the Bluetooth end devices.

Easy Deployment and Management

The X1000 is setup and managed by the Cassia IoT AC. Administrators can quickly deploy and check the status of all Bluetooth devices in their network (routers, sensors, bandwidth, battery life, device location, and more).

Location Tracking

Together with the Cassia AC, the X1000 can track and report location of the Bluetooth low energy devices within its coverage, providing geolocation data in real time.

ADVANCED FEATURES

RADIO FREQUENCY

The Cassia X1000 supports and follows the Bluetooth 4.0 standards.

- Working frequency: ISM band 2.402 ~ 2.480GHz
- Duplex mode: full duplex, time division duplex (TDD)

MULTIPLE ROLES

The Cassia X1000 supports broadcaster, listener, sender and receiver roles, and can play multiple roles simultaneously.

SECURITY SERVICES

- Support Bluetooth 4.0 security standards
- Support FIPS wireless standards
- Advanced military grade 128bit AES encryption

NETWORKING CONNECTIONS

- Integrated Wi-Fi on 802.11b/g/n (2.4GHz)
- 10/100 BASE-T Ethernet support

MOUNTING

- Mount kit to attach the router to the wall or pole is included

POWER INTERFACE

- Power over Ethernet: 802.3af/at compliant source

OTHER INTERFACES

- Reset button: Factory reset
- Visual indicator (LED): Power/System
- USB 2.0 (can be used for 3G/4G dongle)
- Uplink: 10/100 BASE-T Ethernet (RJ-45)

LOCATIONING

- Use with the Cassia AC to report location of Bluetooth low energy devices

MECHANICAL

- Dimensions/weight:
  - 154 mm (BD) x 143mm (TD) x 259mm (H)
  - Weight: 1.5 lbs.

ENVIRONMENTAL

- Operating:
  - Temperature: -40 to 65°C (-40 to 149°F)
  - Humidity: 0% to 90% non-condensing
- Storage and transportation:
  - Temperature: -50° C to +70° C (-58° F to +158° F)
- Wind resistance:
  - Up to 85-MPH sustained winds
  - Up to 135-MPH wind gusts

CERTIFICATION

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

WARRANTY

- 1-year limited warranty

FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

"To comply with FCC RF exposure compliance requirements, this grant is applicable to only Mobile Configurations. The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

Canadian Compliance Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. l'appareil ne doit pas produire de brouillage;
2. l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement

This radio transmitter (IC: 22505-X1000) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list below, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (IC: 22505-X1000) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste ci-dessous et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

Industry Canada Statement

CAN ICES-3 (B)/NMB-3(B)