



OSSiQ[®]
REAL WIRELESS POWER™

COTA[®] WPT SYSTEM USER MANUAL

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COTA WIRELESS POWER TRANSFER SYSTEM USER MANUAL

1 PRODUCT DESCRIPTION

The Cota® Wireless Power Transfer system (Cota WPT system) transmits power by using radio waves in the 2.4 GHz Industrial, Scientific, and Medical (ISM) band defined by the FCC. The Cota WPT system constantly communicates with the Cota Wireless Power Transfer Client (Cota WPT client) to identify paths along which power can be delivered, and sends power along these paths. Power may be delivered up to a maximum distance of 1 meter from the front of the Cota Tx203 Power Source (Cota Tx203 power source).

The Cota WPT client is designed to receive RF power from a Cota Tx203 power source and may be used to provide stable power to a variety of devices through its 5 V USB port. The Cota WPT client may be placed on a table-top or mounted on a wall or other stable surface.

2 SET-UP

If the Cota Tx203 power source can be installed on a wall or suspended from the ceiling. Installation should be performed by qualified contractors and electricians. Such installations must ensure adequate ventilation around the rear panel of the Cota Tx203 power source. For tabletop use, place the Cota Tx203 power source in the provided table stand. A VESA mount may be used to secure the Cota WPT source to a stand or wall. Ensure that the Cota Tx203 power source is secured and cannot fall. Avoid tripping hazards by ensuring proper placement of the AC power cable or the Ethernet cable, when powering through power-over-Ethernet (PoE).

The Cota WPT client shall be placed within 1 meter of the front of the Cota Tx203 power source and at no more than a 60° offset from the front of the Cota Tx203 power source.

3 OPERATING THE COTA Tx203 POWER SOURCE AND COTA WPT CLIENT

Plug the Cota Tx203 power source into an AC wall outlet and apply power. The light ring on the Cota Tx203 power source should illuminate, changing colors slowly and continuously while the Cota Tx203 power source is initializing. For light ring colors and their meanings, see [Section 4, Light Ring Status](#).

3.1 PERFORM POWER NETWORK CHECK

1. Connect to the Cota Tx203 power source by using the internal Wi-Fi™ hot spot (preferable) or the company's LAN network and Cota power transmitter's Ethernet.
2. Log in to the Cota Desktop Utility (Cota DTU) interface by using the power transmitter's Wi-Fi, for example **Tile_51** with **ossiawifi** as the password.

3.2 ENABLE COTA Tx203 POWER SOURCE OPERATION

1. In the **Cota DTU >> System Status** window, verify that all the components are showing the correct values. The Cota WPT clients are factory registered with your Cota Tx203 power source and will appear in the **Receiver List** window.
2. Select the desired Cota WPT client and click **Start Charge**.
3. When shutting down the Cota Tx203 power source, first click the `Shutdown` command button in the Cota DTU **Debug Commands** window, and then wait for 30 seconds before disconnecting the Cota Tx203 power source from AC power.

4 LIGHT RING STATUS

State	Light Ring Color Pattern	Description
Idle/Debug	Slowly flashing orange	The system is in Idle or Debug state where the HostMCU Firmware stops discovering the power receivers, performing power receiver queries, or scheduling TPS. The HostMCU Firmware, however, still handles new commands and asynchronous messages from power receivers. The system enters this state when the Pause command is used at the command line interface (CLI) or in the Cota DTU. The system also remains in this state if the <code>Debug Mode</code> parameter is set to true in the <code>Cota_Config.json</code> file. To exit this state, enter the Run command at the CLI or in the Cota DTU.
Calibration	Purple segments progressing	The system is performing power transmitter calibration and initialization. The power transmitter enters this state automatically upon starting up, but users can also initiate a manual calibration in the Cota DTU.
Wait for Power Receivers	Light red background color with one bright light segment moving slowly in circle	The power transmitter has been initialized and calibrated, but it does not detect any power receiver devices within the vicinity.
Ready	Green background color with one pink light segment moving in circle	The power transmitter detected at least one power receiver and is ready to deliver power to that power receiver, however, the power receivers might not have been authorized or enabled to receive power. Users can use the Cota DTU to register and enable power delivery.

(Continued)

State	Light Ring Color Pattern	Description
Running TPS	Multiple rings (magenta color on the power transmitters) and light patterns moving quickly in circle	The system is delivering power to power receivers.
Identifying	Solid green color ring flashing every second	Users can use the Cota DTU to locate the power transmitter. Upon clicking Identify Transmitter in the Cota DTU, the light ring will flash for at least 15 seconds (configurable duration); this capability allows users to associate the Cota DTU with the physical power transmitter.
Error/Over temp	Solid red color ring flashing every second	The power transmitter has encountered an error and cannot continue without intervention. All critical errors will force the power transmitter to enter this state. Users should check the power transmitter log and power transmitter temperature for more information about the error. The log files can be viewed in the Cota DTU window.

5 SPECIFICATION

5.1 COTA Tx203 POWER SOURCE

Item	Description
Modulation	Power: Continuous Wave (CW) Signal Data: IEEE 802.15.4
Frequency	2.4 GHz to 2.5 GHz
Power Field	60° from the front of the Cota Tx203 power source, horizontally and vertically to a maximum distance of 1 meter
Operating Temperature	10° C to 40° C
Environment	Indoor use only
Mounting	Wall, ceiling, or table-top mounting
Power	120 VAC

6 SUPPORT

Technical support for Ossia products can be initiated through the following methods:

Website contact form: <https://www.ossia.com/contact/>

Telephone: +1 (425) 406-6477

7 FCC INFORMATION

Cota Tx203 Power Source: FCC ID: 2A557OSSIACOTATX203

NOTE This device complies with Part 15 of FCC Rules, Operation is Subject to following two conditions:

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

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

This equipment has been tested and found to comply within 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 (RF) 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 the 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:

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

For products available on the USA/Canada market, only channels 1 to 11 are available for 2.4 GHz WLAN.

This device and its antenna(s) must not be co-located or operated in conjunction with any other antenna or transmitter except in accordance with FCC's multi-transmitter procedures.

NOTE This device operates in the 5.15~5.25 GHz frequency range and is restricted to indoor use only.

IMPORTANT NOTE FCC Radiation Exposure Statement; Co-location of this module with other transmitter that operates simultaneously are required to be evaluated using the FCC multi-transmitter procedures.

This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The device contains an integral antenna hence, the device must be installed so that there is a separation distance of at least 20cm from all persons.



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