

User Manual

TX91503 – 915 MHz PowerSpot® Transmitter



PRODUCT DESCRIPTION

The Powercast TX91503 PowerSpot® RF Wireless Power transmitter is specially designed to provide both power and data to end devices containing Powercast's power harvesting technology. The PowerSpot transmitter contains a receiver that can hear when a Powercast-enabled harvesting device is in range, allowing it to stop power transmission when no harvesting devices are around. The transmitter can also be controlled by the PowerSpot app that can control periods of use. The PowerSpot transmitter is housed in a durable plastic case with several mounting options. Operational power is provided to the DC power connector, and there is a status LED to provide feedback on the transmitter's functional state. This device has a factory set, fixed power output of 3W EIRP.

FEATURES

- FCC and IC approved
- Flexible wall mounting options
- Transmits power and data
- Wide temperature range

PRODUCT CONTENTS

The following items are included:

Qty	Description
1	915 MHz PowerSpot transmitter
1	Power supply
1	Quick Start instruction card



POWERING APPLICATIONS

- Wireless battery charging
 - Headphones
 - Headsets
 - Game Controllers
 - Keyboards and Mice
 - Fitness Trackers
 - Smart Watches
 - Wearables
 - Smart Cards

ORDERING OPTIONS

United States Part Number	TX91503
Canada Part Number	TX91503-CA

Powercast products and technology are covered by one or more patents with other patents pending. All patent and trademark information can be found at <http://www.powercastco.com/IP/>.

SET-UP AND OPERATION

1. Mount the PowerSpot Transmitter at the back of a desk, counter or other area where you store your devices when not in use to create a PowerSpot recharging zone. Keyholes are also available on the rear of the transmitter case for wall mounted applications.
2. Plug the DC connector of the power supply into the connector on the side of the transmitter. Plug the power supply into a standard 120V outlet.
3. The PowerSpot transmitter will remain off until one of the following occurs:
 - a. An authorized device enters the PowerSpot recharging zone¹.
 - b. The button on the unit is pressed to recharge a device with a completely discharged battery. The unit will activate and transmit power for 30 minutes from a button press and then will turn off if an authorized device is not present.
4. When the PowerSpot transmitter is active and transmitting radio frequency (RF) energy, data is automatically included in the transmission and can be received and used to authorize the receiving device.

The status LED indicates the following operating conditions:

LED	Status	Description
Off	Off	5VDC is not applied
Solid Green	Active	Transmitting normally
Solid Red	Idle	PowerSpot is powered but not actively transmitting
Red with short Green Blinks	Active / Idle	An authorized device is requesting charge but is not in range of the PowerSpot
Red and Green Rapid Blinking	Startup or Fault	PowerSpot has just been powered on, or if already powered on is in a fault condition such as overheating
Red with long Green Blinks	Idle due to snooze	PowerSpot is powered but not actively transmitting due to the snooze set by the PowerSpot app

¹The PowerSpot app can override these conditions and keep the transmitter in an OFF state using the “Snooze” feature.

SNOOZE SETTING AND FIRMWARE UPDATES

Snooze setting for the PowerSpot transmitter:

1. Setting a Snooze time allows the user to set up to four time periods where the transmitter will remain OFF, even if a device within range requests a charge
2. Using the PowerSpot app, navigate to the Snooze tab
3. Enter the transmitter ID found on the back label of your transmitter
4. Select the “+” button to add events
5. Choose a start and end time for your event(s)
6. After adding desired events, hit “Set Snooze”
7. The app will report that the Snooze has been set successfully or not

Note: The PowerSpot transmitter will not transmit the RF energy that is used for power and data as described above while the Snooze is being set.

Note: When setting the Snooze, the transmitter's time is automatically synced with the time of the mobile phone.

Note: If power is disconnected from the PowerSpot transmitter, any previously set Snooze will be deleted.

Time re-syncing for the PowerSpot transmitter:

1. To re-sync the PowerSpot transmitter's time with the mobile phone, navigate to the "Snooze" tab in the PowerSpot app
2. Enter the transmitter's ID and hit "Sync Time"
3. The app will report that the time has been set successfully or not

If a firmware upgrade is available for the PowerSpot transmitter:

1. Unplug the power to the PowerSpot transmitter
2. Press and hold the top button down
3. With the button still pressed, plug the transmitter back in. Once powered on, the LED will be solid green and you can let go of the button
4. Within 2 minutes, navigate to the "Scan Devices" tab of the PowerSpot app. "PowerSpot" with a download icon should be available. Tap the download icon and then "Upgrade" to begin the firmware update.
5. Once the upgrade is complete, the app will report "Done".

Note: If the PowerSpot transmitter is not connected to the app within 2 minutes, it will automatically return to normal operation.

Note: The transmitter will not transmit the RF energy that is used for power and data as described above during a firmware upgrade.

To determine the current firmware version of your transmitter:

1. Press and hold the button on the top of the PowerSpot transmitter for at least 5 seconds
2. Continue holding the button and utilize the "PowerSpot" app on the "Scan Devices" tab to determine the firmware version

Note: The PowerSpot transmitter will stop communicating the firmware version and return to normal operation when the button is released.

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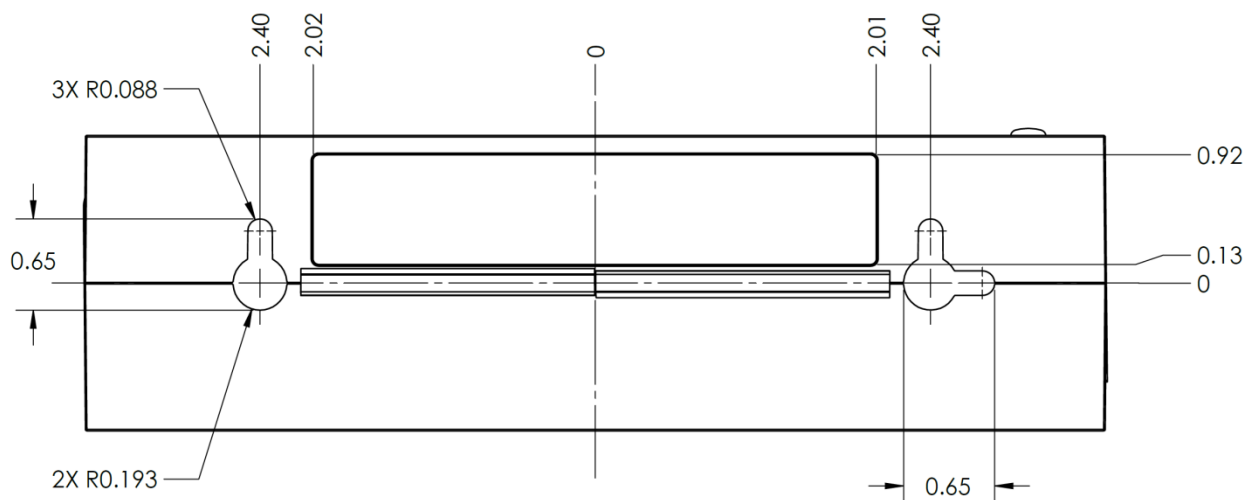
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SPECIFICATIONS

Item	Description
Frequency	915 MHz Center Frequency
Data	Amplitude Shift Keying (ASK)
Power output	3 watts EIRP
Beam pattern	70° width, 130° height Horizontal Polarization (tabletop mounting)
Approvals	United States - FCC ID: YESTX91503 Canada - IC ID: 8985A-TX91503
Data Communications	An 8-bit, factory-set, TX91503 identification (ID) number is broadcast with the wireless power. The ID number can be found on the TX91503 label.
Operating Temperature	-20°C to 40°C
Environment	Indoor use only
Mounting	Mount at the back of a desktop or countertop to create a PowerSpot recharging area 2 keyholes (See mechanical drawing for dimensions) for wall mounting
Power	5VDC/1A through included Power Supply
Color	Black/Blue
Dimensions	7.3" × 2.1" × 1.4" (185.4 x 53.3 x 35.6 mm)
Firmware Upgrade Communication	Bluetooth Low Energy (BLE)

MECHANICAL (REAR VIEW)



*Dimensions in inches

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SUPPORT

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

Website contact form: <http://www.powercastco.com/contact/>

Telephone: +1 412-455-5800

COMPLIANCE STATEMENTS

Changes or modifications not expressly approved by Powercast could void the user's authority to operate the equipment. Use and maintain device only as specified in this manual.

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 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 Industry Canada licence-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, et (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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WARNING!

FCC Radiation Exposure Statement:

This equipment complies with FCC's RF radiation exposure limits set forth for an uncontrolled environment under the following conditions:

1. This equipment should be installed and operated such that a minimum separation distance of 20cm is maintained between the radiator (antenna) & user's/nearby person's body at all times.
2. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

IC Radiation Exposure Statement:

This equipment complies with IC's RF radiation exposure limits set forth for an uncontrolled environment under the following conditions:

1. This equipment should be installed and operated such that a minimum separation distance of 30cm is maintained between the radiator (antenna) & user's/nearby person's body at all times.
2. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.