



## Roost User Manual RSW-200 Transmitter Module

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### **1) Compatibility**

2.4GHz Band ONLY

### **2) FCC Notice to OEM**

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### **CAUTION:**

Changes or modifications to this unit not expressly approved by Roost, Inc. could void the user's authority to operate this equipment.

Note: 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:

1. Reorient the Roost Smart Monitor
2. Consult [getroost.com/support](http://getroost.com/support) for help

**Radiation Exposure Statement:** This equipment complies with the FCC radiation exposure limit set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between radiator and your body.

**OEM Warning:** The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number – FCC ID: 2AE5A-RSW200. If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: 2AE5A-RSW200." Any similar wording that expresses the same meaning may be used. The Grantee may either provide such a label, an example of which must be included in the application for equipment authorization, or, must provide adequate instructions along with the module which explain this requirement. In the latter

case, a copy of these instructions must be included in the application for equipment authorization.

### 3) ISEDC Notice

This device complies with Innovation, Science, and Economic Development Canada license-exempt RSS standard(s). Operation is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation of the device.

Cet appareil est conforme à Industrie Canada une licence standard RSS exonérés (s). Son fonctionnement est soumis aux deux conditions suivantes:

- Cet appareil ne doit pas provoquer d'interférences
- Cet appareil doit accepter toute interference recue, y compris les interferences pouvant provoquer un fonctionnement indésirable de l'appareil..

**Radiation Exposure Statement:** This equipment complies with the IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

**Enoncé d'exposition aux rayonnements:** Cet équipement est conforme aux limites d'exposition aux rayonnements ioniques RSS-102 Pour un environnement incontrôlé. Cet équipement doit être installé et utilisé avec un Distance minimale de 20 cm entre le radiateur votre corps.

**OEM Warning:** The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its ISEDC identification number – IC: 20891-RSW200. If the ISEDC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: “Contains Transmitter Module IC: 20891-RSW200.” Any similar wording that expresses the same meaning may be used. The Grantee may either provide such a label, an example of which must be included in the application for equipment authorization, or, must provide adequate instructions along with the module which explain this requirement. In the latter case, a copy of these instructions must be included in the application for equipment authorization.

### 4) Safety Information

**WARNING:** Do not expose this Roost RSW-200 transmitter module to excessive heat, direct sunlight, or fire. Do not expose to excessive humidity, rain, moisture or other liquids. Store at room temperature between 40 and 80 degrees F for best results.

**WARNING:** Keep out of reach of children. Ingestion hazard. Harmful if swallowed.

### 5) Disposal Information

*The Roost RSW-200 Transmitter Module Must be Recycled or Disposed of Properly.*

When the Roost RSW-200 Transmitter module is no longer functional, please dispose of it properly, following the guidelines in accordance with applicable regulations for your country. In most countries, electronic printed circuit boards must be recycled.



### 6) No Lifesaving Uses of the Services

The Roost RSW-200 Transmitter module, Monitor app (including mobile and web applications), the Smart Monitor device, and the Smart Monitor software may be collectively referred to as the “Services”. The Roost Smart Monitor APP is not an alarm. The apps and device software are intended to be accessed and used for non-critical information and control of

the smart Monitor hardware. You will not rely on the Services for any health, lifesaving, or emergency purposes. Under no circumstances should you enter into a life-threatening environment. The Services (on their own or in combination with third-party products or services) are not a third-party monitored emergency notification system and are not certified for emergency response. Roost will not dispatch emergency authorities to your home in the event of an emergency

## **7) Electrical Specifications of the Roost RSW-200 Transmitter Module**

- Input Operating Voltage Range: 2.4V minimum, 3.3V Maximum, 3V nominal
- Absolute Maximum Input Voltage: 3.6V
- Input Current consumption (with no load on Control Interface Logic Signals), 6uA nom, 800mA max
- Digital Interface Logic Levels: 2.2V to 3.3V CMOS
- Digital Interface Output Drive Level: 10mA maximum
- Audio Signal Level: 50mV minimum, 5V Maximum, AC coupled, 3KHz nominal
- RF Transceiver operation: 2.4GHz Band 802.11 B,G,N
- Absolute Maximum Transmit power: 20 dBm
- Control Signal Connector Type: 8 Pin Molex 78732-8021. See schematic for Pin connections.
- Normal Operating Temperature Range: -0C to +40C
- Operable Temperature Range: -20C to +60C
- Maximum Humidity limit: 60C with 100% relative humidity for 24 hours operating
- Mechanical Vibration limit: Single axis sinusoidal for 4 hours, 10-30-10Hz sweeps at 2 cycles/min with 0.55mm displacement
- Mechanical Shock limit: half sine, 109G@8.0mSec. Two shocks in all three axes for a total of 12 shocks

## **8) HW Integration of the Roost RSW-200 Transmitter Module into OEM product**

The RSW-200 Transmitter Module is meant for Internet of Things applications.

- The module interface connector requires a land pattern on the motherboard PCB. Two mounting holes are provided in the PCB for either plastic screws, or plastic weld studs.
- As good practice with all radio PCBs,, it is expected the mother board holding the RSW-200 Transmitter Module will have, at a minimum, a continuous ground plane in the area directly beneath and outlining the RSW-200 Transmitter. This ground plane can be on the top, bottom, or internal layers and should be connected to the RSW-200 interface connector ground terminal.
- The RSW-200 Transmitter Module is expected to be in an RF inert plastic housing for the OEM end product.
  - The transmitter module was certified without any housing, but any RF losses in the plastic housing material will reduce emissions (wanted and unwanted), and reduce sensitivity.
  - The product has limited Electrostatic protection, particularly on the antennae input