MESH REAL TIME CLOCK, MESH-RTC

The MESH-RTC provides Real Time Clock functionality for the Silvair ecosystem of **Bluetooth®** mesh lighting controllers, such as the MESH-CTRL. The MESH-RTC unlocks the in-node scheduling (INS) feature recently introduced by Silvair in firmware version 2.20.0 and beyond.

Combining the reliability of **Bluetooth®** mesh with integrated battery backup, the MESH-RTC delivers a simple and robust mechanism for serving as a reliable time authority for **Bluetooth®** mesh networks.

Features:

- Robust control scheme with **Bluetooth®** mesh protocol
- Easily configured and provisioned through Silvair iOS mobile application
- No Internet connection required to setup or function
- Uninterrupted control after power outage or equipment relocation with internal battery backup
- Built-in rapid charge battery charger (full charge in ~4hr)

Applications:

- Horticultural Lighting – easily integrated into commercial or home grow environments
- Silvair in-node scheduling

Specifications:

- Powered from 7.5 V AC/DC Power Adapter
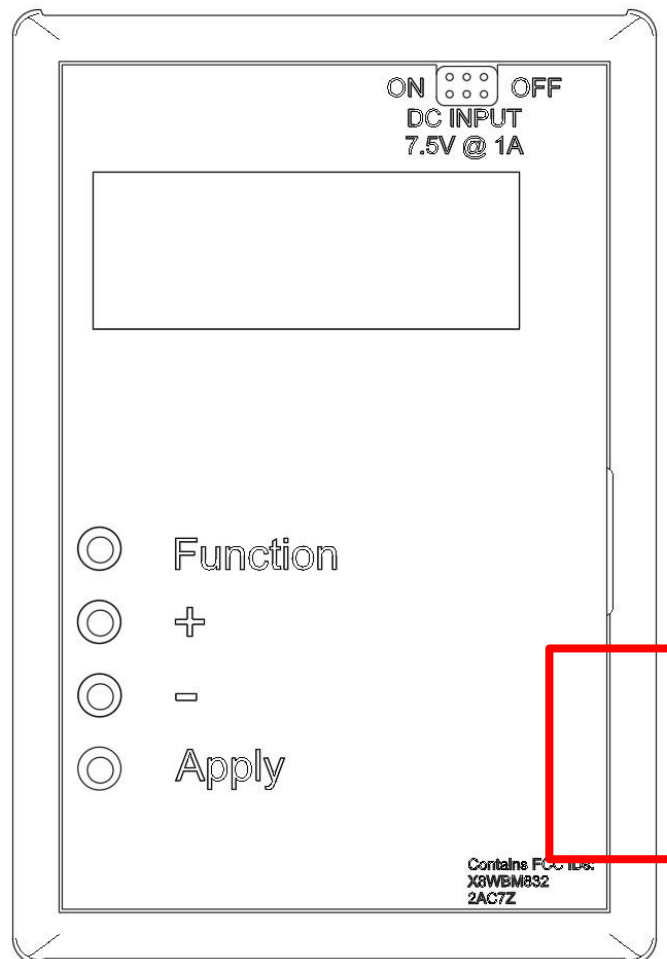- Integrated battery backup (3x NiMH AAA)

Range:

- The range between a MESH-RTC and one of the MESH light controllers can vary greatly. Factors determining communication range include obstacles (walls, equipment, etc.) and enclosure material. In open air, the range between two units can exceed 200m. However, if either device is enclosed in a metal structure, the range could be limited to under 1m.
- A benefit of using the MESH-RTC and the NVision eco-system of Bluetooth® mesh lighting controllers is that they all employ mesh technology, in which each device rebroadcasts the message it receives, thus extending the overall coverage area of the mesh network.
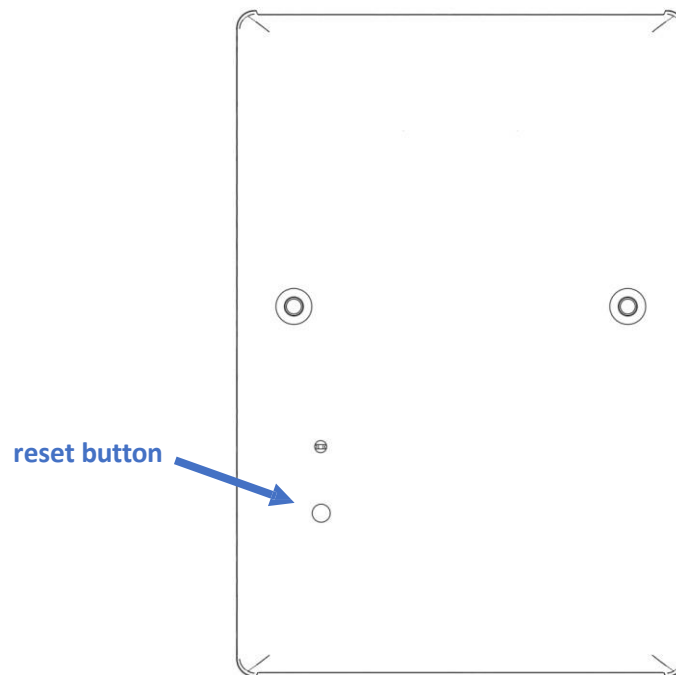
Antenna Location:

- The **RED** box indicates the PCB antenna location. If the MESH-RTC is located within a custom enclosure, please make sure the enclosure material allows for the propagation of wireless signals through the material. For instance, window-less metal enclosures are not an ideal housing for wireless devices.
- For best Bluetooth range performance, keep all external metal at least 30mm from the antenna area.

ON OFF
DC INPUT
7.5V @ 1A

○ Function

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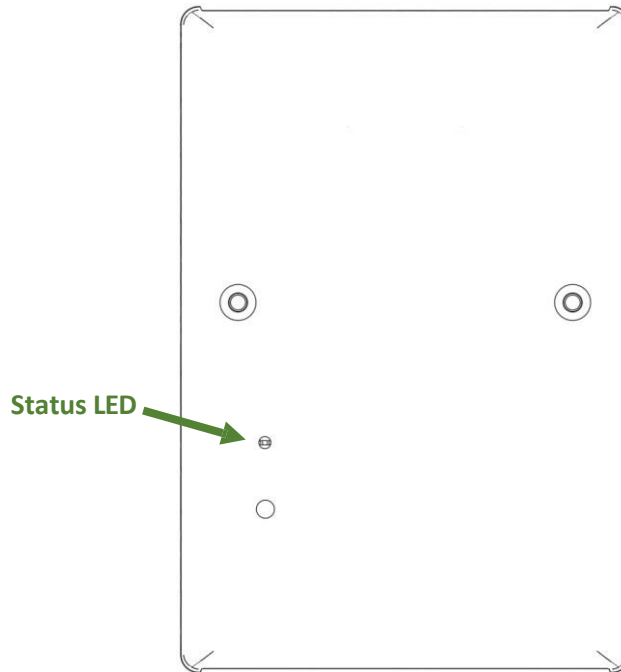Apply

Contains FCC IDs:
X8WBM832
2AC7Z

Factory Reset:

- The MESH-RTC can be reset to the factory default state by holding the **reset button** for a minimum of 5 seconds while power is applied. While the **reset button** is being held down, the **status LED** will stay on for 1 second, then fast blink 2 times per second for 5 seconds, and then turn off. Once the reset is complete, the **status LED** will blink at 3 times per second to indicate the device is in an unprovisioned state.

reset button

Status LED:

- The **status LED** indicates the MESH-RTC is in one of two states:
  - **Unprovisioned State:** The **status LED** will blink approximately 3 times per second.
  - **Provisioned State:** The **status LED** will blink approximately 1 time every 2 seconds. The **status LED** also indicates when a mesh package is received by blinking two times in rapid succession.

Status LED

In the box:

- MESH-RTC
- 7.5V AC/DC Power Adapter
- Quick Start Guide (url)
- Detailed User Manual (url)

Certifications:

- Bluetooth QDID: Pending
- FCC ID: X8WBM832 & 2AC7Z-ESP32WROOM32E
- IC (Industrial Canada) ID: 4100A-BM832
- CE: Compliant

Information in this document is subject to change.