

Elevator Monitoring System

The Elevator Monitoring System (EMS) is an advanced Printed Circuit Board (PCB)-based solution designed to enhance the functionality and connectivity of elevator systems. It leverages the power of the STM32WB55 microcontroller, equipped with MATTER (formerly known as Project CHIP) protocol and Bluetooth wireless capabilities, to provide efficient and secure elevator control and monitoring. EMS seamlessly interfaces with elevator control units through the CAN controller MCP2515, facilitating data collection and transmission to a remote server via networking hubs such as Google Hub.

Key Features:

- MATTER Protocol Integration:

EMS is built around the cutting-edge MATTER protocol, ensuring future-proof connectivity and interoperability with various smart devices. This protocol allows EMS to communicate with other MATTER-compatible devices, enabling advanced functionality and remote monitoring.

- Networking and Data Sharing:

Multiple EMS units can connect to each other, forming a robust network of elevator monitoring systems. Among these units, one EMS acts as the master EMS, responsible for collecting data from all other EMS devices within the network. The master EMS then efficiently pushes this consolidated data to a remote server via a networking hub, such as Google Hub. This networked approach enhances data redundancy and ensures that all critical elevator information is readily available for analysis and control.

- Bluetooth Connectivity:

EMS is designed to incorporate Bluetooth functionality, allowing users to connect to the system using their smartphones. Users can utilize their smartphones to call elevators, further enhancing the user experience and convenience. While this feature is only at conceptual stage, it promises to add a new level of interactivity and ease of use to the elevator system.

- Universal Serial Bus (USB) Type C

USB Type C is allow the Elevator Monitoring System to communicate as well as

Thank you.

Best regards,
HIGHLAND