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Operational description

The Enhanced Local Controller (ELC3) is the improved programmable hardware device that provides real-time monitoring, command and control of Elpas RTLS Safety, Security & Visibility Applications without the need for a PC-based host application machine. The device contains sufficient on-board memory to enroll up to 20,000 Elpas Active RFID tags/badges, store 100,000 event transactions.

The ELC3 also contains the process power to handle over 300 event/tag messages/second. Should electrical power fail, the ample storage resources of ELC3 prevent tag data loss, even in the highest tag volume environments. ELC3 uses JSON for interface with external control and monitoring applications to retrieve events.

The ELC3 can monitor up to sixty two Elpas RS-485 BUS Devices through two RS-485 Junction Boxes (P/N: 5-JBA10485). That includes 'State' changes to any wired security device inputs on the BUS, such as door contacts and alarm detectors.

Onboard inputs monitor alert sensors or emergency call buttons. Digital outputs trigger alert response devices. The ELC3 includes six inputs (three analog, three digital) and five outputs (two O.C. and three relays). ELC3 also includes one Wiegand input.

The Enhanced Local Controller contains a 433.92 MHz @ GFSK modulation transceiver and upon getting a message from a tag, sends back ACK signals. Supervision signals are not acknowledged.

An IC microcontroller CC430F513x of the RF circuit has a 26 MHz Y2 clock.Given to its input a digital message it converts to an RF burst according to its internal design. The U2 and U3 are RF switches which perform switching between the GFSK modulated signals reception to transmission. The Y4 is a saw filter for elimination unwanted RF frequencies of the receiving path. The RF received messages pass through Y4 and the digital switches into the microcontroller.