

Wireless bridging of two CAN networks

Fort VSC (vehicle safety controller) from Fort Robotics (USA) is a safety device for autonomous systems, mobile heavy equipment, and fixed machine systems. It complies with the ISO 13849 category 3 performance level d.

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SRC, E-Stop, and VSC devices (from left to right) (Source: Fort Robotics)

The on-machine controller acts as the safety receiver for company's SRC (safe remote control) and wireless E-Stop actuator. One controller can receive commands from several transmitters. A proprietary two-way protocol and several hardware and software layers monitor the wireless link stability. Wireless communication is possible up to 2 km in the line of sight. Frequency bands include 900 MHz and 2,4 GHz. Other frequencies and encryption are available.

CAN-Sync is one of the configuration options for the controller. Thereby, two VSC devices are combined as a CAN bridge system. CAN networks with different bit-rates can be linked. CAN-based higher-layer protocols such as CANopen and J1939 are supported. Besides CAN, EIA-232, and USB are supported. The IP66-protected device operates at temperatures from -40 °C to +70 °C. The power input ranges from 9 V_{DC} to 36 V_{DC}. Configuration of the controller is done via USB. A software tool for system configuration and sample applications for software development is available.

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