

GE Transportation

The ElectroLogIXS family of wayside electronics from GE - Transportation is designed to simplify the way you control your railroad. This versatile platform can be configured for advanced interlocking control, for crossing prediction, or for intermediate signaling.

- I ElectroLogIXS VLC for interlocking control
- X ElectroLogIXS XP4 for crossing prediction
- S ElectroLogIXS EC5 for intermediate signaling

Sharing modules and software tools across these applications can decrease your design time, simplify installation and maintenance, maximize training effectiveness, and reduce spares inventory requirements.

The ElectroLogIXS EC5 incorporates the time-tested Electro Code 5 track circuit technology into a larger, more flexible package. Accommodating double- and triple-track applications into a single control system simplifies installation and reduces cost. Graceful module degradation assures single I/O point failures will not affect the other operational modules. Vital serial communication ports enable the ElectroLogIXS EC5 to communicate with ElectroLogIXS XP4, EC5, or VLC systems.

All of the features that make EC5 the track circuit of choice— one-person digital setup for lamps and track circuits, common development software tools, simplified diagnostics and recorder functions—are included with the ElectroLogIXS EC5.

ElectroLogIXS EC5

For Intermediate Wayside Signaling



Architecture

The ElectroLogIXS EC5 consists of a chassis motherboard assembly, plug-in modules, a CDU-1 Control Display Unit (CMD) and personality modules with high-density terminal connections for hard wiring the system to wayside signal and track circuit connections. All modules have front-panel indicators that display module health status and function indicators for monitoring active I/O signals. The CDU or a computer terminal connected to the diagnostic port serves as the human/machine interface for system installation and setup, parameter adjustment, and system testing and troubleshooting.

Advanced Wayside Signal Functions

Leveraging proven principles from Electro Code 5 technology, the ElectroLogIXS EC5 expands system flexibility by providing for diverse applications in a single chassis. Double- and triple-track intermediate signal arrangements can now be addressed in a single unit. A communication link to a control office will support applications for multi-track holding signals. Multiple applications can be compiled into a single application file. Specific signal attributes can be selected from this file through use of vital software switches. Graceful degradation assures single point failures will not impede the overall operation of the system. A ground fault detector module provides the first step towards automated FRA testing.

Recording and Diagnostics

The ElectroLogIXS EC5 has a built-in recorder that logs up to 440 time-stamped vital and non-vital events as well as changes to system configuration and error messages. All recorded events can be printed both track side and in the office. Troubleshooting has also been simplified. Fault messages are flashed on the CDU display to pinpoint the fault condition and lead maintenance personnel directly to corrective action both inside and external to the equipment.

Application

Logic Station is a suite of application development tools from GE - Transportation. The package contains the project developer for file management, the ACE compiler to generate application equations in relay logic diagrams, the validator utility to certify compiled files, and a simulator to debug applications prior to installation. This tool set is designed for use with other GE - Transportation products including VHLC and EC5.

Communications and Networking

ElectroLogIXS EC5 can accommodate several types of communications I/O modules. The CIO-1A module provides access for local and remote event log and diagnostics monitoring along with an office communications connection. Other CIO-type modules can provide up to two vital serial connections to other devices. This multi-drop network solution can expand interlocking design limits by connecting multiple units as zone controllers. Additional connections to crossing prediction devices (XP4) can integrate crossing and wayside signal functions into a single system.

Specifications

Number of Tracks

Up to 8 track circuits

Maximum Track Circuit Length

23,000 ft @ 3 ohms per 1,000 ft ballast

Lamp Control

16 outputs per module;
9 modules per system (maximum)

Cab Signal Generator Controls

16 outputs per module; 2 modules per system
Cab rates 50, 75, 120, 180, 270

Vital Inputs/Outputs

8 inputs/6 outputs per module;
9 modules per system (maximum)

Operating Voltage

9.5 to 16.5 VDC

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