

TrainWise® Infotainment Display



The TrainWise® Infotainment Display (DS17) features the latest design in the rail transit industry for on-board passenger information, advertising, and infotainment services.

Available in a variety of form factors and resolutions, and with custom enclosure options to suit a wide variety of installation requirements.

The DS17 is designed for easy installation and integration with the train’s Ethernet network and onboard subsystems. It operates over a wide range of voltages for direct connection to the vehicle’s power system.

Product size and connectors may vary depending on configuration

Technical compliance

Railway standards	Compliant with IEEE and IEC rail design standards (including IEEE 16 and IEC60571/ EN50155) IEC 61375-3-4 Electronic railway equipment – Train communication network (TCN) – Part 3-4: Ethernet Consist Network (ECN)
Fire, smoke and toxicity	Compliant to 49 CFR Part 238.103 guidelines and NFPA-130

Display

Display	TFT LCD with LED Backlight
Display characteristics	Custom options available for specific project requirements: <ul style="list-style-type: none"> • Display resolution • Standard or ultra-widescreen (“stretch”) aspect ratio • Sunlight-readable • Contrast ratio
Brightness adjustment	Automatically via ambient light sensor
Viewing angle	>170° (H/V)

Processor and storage

Processor	i.MX6 with ARM Cortex A9 processor
Operating system	Linux, QNX
OS memory	1 GB DRAM, 1 GB NAND flash
Data logging capacity	4 GB Solid State Flash Memory (Larger memory configurations available)
Real-time clock	Battery backup for up to 8 years

Communications

Ethernet ports	2	IEEE 1473 (Type E) Ethernet, 100 Mbps, M12 D-Coded
USB ports	1	x Type C USB 2.0 On-The-Go (OTG)
Protocol support	✓	Protocols included in IEC 61375-3-4 Electronic railway equipment – Train communication network (TCN) – Part 3-4: Ethernet Consist Network for Standard End Devices
Secure web server	✓	Secure web server providing remote access for PTU, operations, and maintenance

Electrical interfaces

Power supply	1	Operating voltage range: 16VDC – 90VDC
Power consumption		Specific to each display type
Status output	1	Form A, 0.5 Amp, normally open, solid state output
Configuration inputs	6	Self-powered inputs, jumpered into vehicle interface connector to define unit location or other identification

Mechanical characteristics

Enclosure	Open-frame to allow rear mounting inside rail cars. Other enclosure types available as required; e.g. double-sided, window-mounted
Weight	Specific to each display type
Connectors	Ethernet: 2 x M12 D-coded Gigabit Ethernet (provision for daisy-chaining) USB: 1 x USB Type C Vehicle Interface: MIL-DTL-5015/SAE-AS50151 circular connector or alternate as required
Ingress protection	Front: IP51 - Back / Top / Sides: IP50

Environmental conditions

Operating temperature	-40°F to +158°F (-40°C to +70°C)
Storage temperature	-40°F to +185°F (-40°C to +85°C)
Shock and vibration	IEC 61373; Category 1, Class A
Dielectric withstand	1.15kVAC circuit to circuit and circuit to chassis

Electromagnetic compatibility

Surge immunity	IEC 62236-3-2, Table 7
Conducted emissions	IEC 62236-3-2, Table 3, 4, & 5
Conducted immunity	IEC 62236-3-2, Table 7 & 8
Radiated emissions	IEC 62236-3-2, Table 6
Radiated immunity	IEC 62236-3-2, Table 9 (with RF susceptibility verified to 6 GHz)
Electrical fast transient	IEC 62236-3-2, Table 7 & 8
Electrostatic discharge	IEC 62236-3-2, Table 9