

TrainWise® Passenger Information Server (PIS)



Product size and connectors may vary depending on configuration

The TrainWise® Passenger Information Server (PC08) provides centralized control for the Quester Tangent Train Passenger Information System. All onboard audio and sign data are stored in its database.

The PC08 coordinates announcements with location information from multiple sources (GPS, speed sensors, wayside tags, external systems, etc.). Combined with configurable digital route maps, the PC08 reliably synchronizes messages for station approach, arrival, and departure. An external data radio allows content uploads and monitoring from the wayside operations center.

The PIS easily integrates with train control and monitoring systems to support new or modernization projects.

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

Options

Expanded data storage	Additional storage for large audio/video files for infotainment, advertising, or automated announcement systems.
Serial interface	Optional RS485 serial interface for communication with on-board legacy signage
Configuration inputs	Self-powered inputs, jumpered into vehicle interface connector to define unit location or other identification

Processor and storage

Processor	i.MX6 with ARM Cortex A9 multicore 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

Communication

Ethernet ports	2	IEEE 1473 (Type E) Ethernet, 100 Mbps, M12 D-coded
USB ports	2	M8 USB 2.0: Supports connection to mass storage device (not supplied) 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		45 Watts (Max)
USB	2	1 x Type C USB 1 x M8 USB
Ethernet	2	M12 D-coded
Status output	1	Form A, 0.5 Amp, normally open, solid state output
Digital inputs	4	Type II (independent returns), wetting current, 2 kV protection
Status LEDs	✓	Power, Health Status, Network Status

Mechanical characteristics

Dimensions	14" x 9.7" x 2.3" (35.6 cm x 24.6 cm x 5.8 cm)
Weight	8 lb / 3.6 kg (approximate)
Connectors	Ethernet: 2 x M12 D-coded USB: 1 x M8; 1 x Type C Vehicle Interface: MIL-DTL-5015/SAE-AS50151 circular connector or alternate as required
Ingress protection	IP30

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