

A RailOS® Certified Device

Computer Box

Small • Light • Scalable

The Computer Box integrates The Signalling Company's iEVC® (SIL4 Vital Computer) and unique real time operating system, RailOS®. The industry's most scalable computing platform, it can run multiple applications for both on-board and trackside domains with complete security and safety assurance. While RailOS® unifies The Signalling Company's application and device portfolio and is also the rail industry's first Open Application Development Platform available to 3rd Party Developers.



Technical Specifications

General Performance

Parameter	Specification	Compliance -or- Reference Conditions
Operating System	RailOS® and Linux	Open to 3rd Party App Development
Safety Integrity Level	SIL4	EN 50126/28/29
MTBF	89,268 Hours	
Boot Time	90 Seconds	
Design (Use) Life	20 Years	EN 50155 / L4, EN 50125 §4.3 T1
Redundancy	2oo2 Architecture 2 x Control Processors (CP) 1 x I/O Processor (IOP)	Option: Dual Redundancy
System Interfaces	Ethernet / Ethercat 16 x Vital Inputs (VI) 16 x Vital Outputs (VO)	Configurable Inputs (1 Vital or 2 Non Vital)
Processor	Atom E680T, 1.6 GHz, 400 MHz	
Memory	1GB RAM	
Fire Resistance	Hazard Level 3	EN45545-2



RailOS[®] Applications

Parameter	Specification	Compliance -or- Reference Conditions
On-Board Apps	ATP : ETCS, TBL1+, PZB, KVB+, PTC, ATO CBTC	Other Apps on request.
Trackside Apps	Interlocking, RBC, CBTC	Other Apps on request.
Other Apps	VCU, DAS, Remote Driving, PIS	Other Apps on request.
Open to 3rd Party App Development		

Electrical

Parameter	Specification	Compliance -or- Reference Conditions
Supply Voltage	24 VDC to 110 VDC	EN 50155
Power Consumption	60W Typical / 100W Max	
Power Interruption Class	Class S2, ≤10 ms	EN50155
Inrush Current	3 Amp	

Environmental

Parameter	Specification	Compliance -or- Reference Conditions
Operating Temperature	-25°C to +70°C	EN 50155 OT1 IP53
	-25°C to +55°C : Option	EN 50155 OT3 IP20
Ingress Protection	IP53 or IP20 (Option)	EN 60529
Altitude	2,000 m Above Sea Level	EN 50155
Humidity	5% to 95% RH (non-condensing)	EN 50125-1 / Class A1
Shock and Vibration	Cat 1 Class 1B	EN 61373
Hazardous Substances	RoHS	Directive 2011/65/EU
Storage Temperature	-40 to +85 °C	EN 50125-1 / Class A1
Fire Resistance	Hazard Level 3	EN45545-2

Mechanical

Parameter	Specification	Compliance -or- Reference Conditions
Dimensions	234 x 410 x 222 mm	W x D x H
Weight	14 kg	
User Access	100% Front Access	Integrated Handles
Mounting Orientation	Any Orientation - Direct Mounting	No 19in Rack - No Special Tooling
Connector Types	MIL-DTL-38999	

