Intertech·Rail
Trusted Tracks Ahead

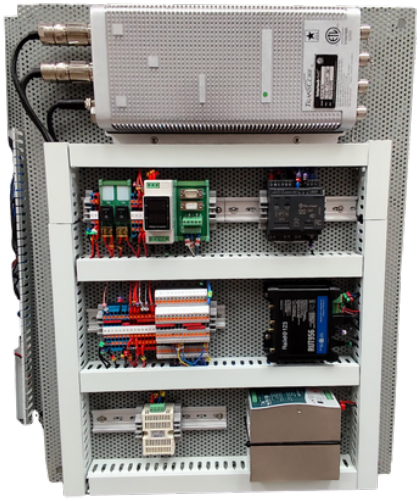
AEI Enclosure System

Features

- Multi-line support: up to 4 tracks, AEI antennas + axle sensors
- Rail-ID® Edge: local data processing, filtering, secure transmission
- MPRX Reader: multi-protocol, high-performance AEI tag capture, multiple antennas
- Power buffer: capacitor-based, keeps the modem active 40–50 s during outages
- Electrical monitoring: built-in voltmeter and ammeter
- Environmental sensors: temperature + humidity logging
- Rugged enclosure: IP65/IP67, UV resistant, -40 °C to +70 °C
- Cloud-ready: API integration with Rail-ID® Server or enterprise systems

Applications

- Rail yards: streamline train assembly, asset tracking across multiple lines
- Mainline operations: uninterrupted AEI + axle sensor data flow
- Harsh outdoor sites: reliable under heat, dust, and direct exposure
- Mission-critical logging: prevents data corruption during power loss
- Enterprise integration: clean, structured data for client platforms



The IntertechRail Multi-Line AEI Enclosure System is a purpose-built solution for railway operators who require precise asset tracking and resilient data management. Designed to support up to four independent tracks, it integrates AEI technology, Rail-ID® Edge computing, and environmental monitoring within a single enclosure. The result is a secure, reliable, and scalable platform that safeguards operational data even in harsh outdoor conditions.

Unlike conventional AEI enclosures, this system combines advanced sensing, power resilience, and cloud connectivity to ensure uninterrupted operations. A built-in capacitor bank provides up to 50 seconds of backup power during outages, giving the modem time to complete file storage safely. Environmental sensors continuously log temperature and humidity, offering operators valuable diagnostics for system validation and root-cause analysis. An optional solar module enables deployment in remote sites without grid power.

MECHANICAL STRUCTURE

Hammond enclosure

Stainless steel or aluminum, IP65/IP67

Internal perforated panel for modular component mounting

Mounting options

Wall, pole, or internal panel only

Dimensions and weight

Project-specific

Environmental resistance

IK08/IK10, UV protection, -40 °C to +70 °C

Processing and Communication Units

Rail-ID® Edge Modem

4 × Ethernet ports (10/100 Mbps)

WAN, Wi-Fi 2.4 GHz, RS232, RS485, digital I/O

Configurable IP, automatic failover

VPN, Modbus, and MQTT support

MPRX Rail Reader (4 ports)

UHF RFID reading (902–928 MHz)

Connects up to 4 external antennas

Compatible with log-periodic and compact HE antennas (TransCore)

External Antenna 22G

LTE/5G support for modem signal extension

Sensors

IntertechRail Axle Sensor

Dedicated railway mounting bracket

Industrial communication cable included

Bidirectional axle detection

Temperature/Humidity Sensor (SHT40)

High precision

RS-485 Modbus RTU communication

Measurement and Monitoring

Digital voltmeter/ammeter (up to 100 VDC / 20 A, optional 50 A)

DIN-rail mounting

Power and Protection

AC/DC Converter

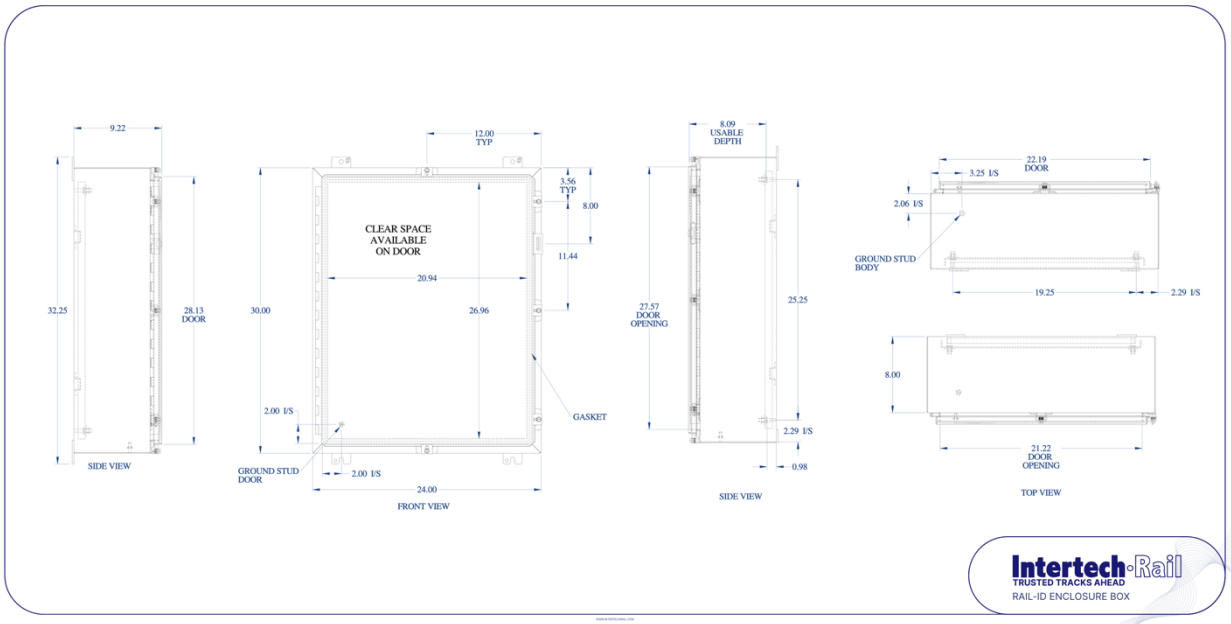
100–240 VAC input, 24 VDC / 2.5 A / 60 W output

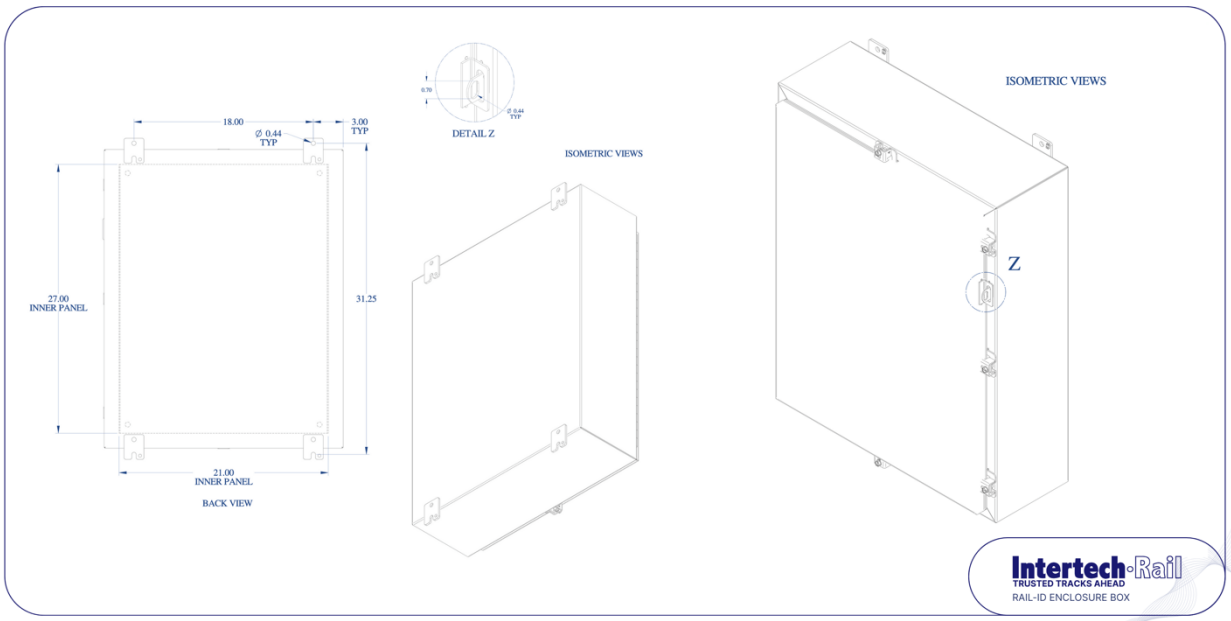
Capacitor Buffer

backup power up to 40 A load, 40–50 s runtime

Industrial Terminals

Quick, secure connections





Intertech·Rail
Trusted Tracks Ahead

sales@intertechrail.com
www.intertechrail.com

+1 614 302 1900 (USA)

+55 11 985974011 (Brazil)
1501 Venera Ave Suite 340
Coral Gables, FL 33146