



The last wayside messaging solution you will need.

AR^{edge} is a future-proof, rail-qualified, wayside edge processing platform. Its flexible design is easily upgradeable to eliminate risk of early obsolescence and minimize lifecycle costs.

A Multi-Purpose Edge Computing Platform

With more processing horsepower than any other rail-qualified edge-processing solution, the AR^{edge} easily handles advanced wayside messaging, advanced analytics, and edge processing applications. The AR^{edge} was developed by a company that knows and works exclusively with railroads.

ARedge Supports

- Wayside ITCM messaging.
- CTC Field Gateway: Use as CTC over ITCM Field Gateway to support bi-directional communication between the field and Back Office.
- Site Monitoring for door alarms, main power status, and standby power plant status. Monitoring and control of wayside systems such as flange lubricators and switch heaters.
- Big data business intelligence and IoT with status information, logs, and other data from wayside devices (such as interlockings, grade crossing controllers, defect detectors, etc.).
- Visualization of wayside applications: Supporting containerization at the wayside.

Key Features



- Flexible design to support future expansion based on the AAR-standard ACC backplane.
- Quad-core, 64-bit processor with RHEL 6.10 or later.
- Expandable storage (32 GB standard).
- Extensive I/O support (Ethernet, USB, RS232, RS422 async or sync, GPIO).
- RHEL 6 and 7 RHEL certified
- GPS for secondary timing source.
- Systems Management Agent for remote management and recovery.
- Containerization support.
- Class D server (multiple active connections).

ARedge Cards

AR^{cpu}



Processor Card

Processor: 1.6/1.8 GHz Quad Core Intel Atom®
Memory: 8GB RAM
Storage: mSATA SSD; 32GB SLC; upgradeable
Operating System: RHEL 6.10 or later; RHEL 6 and 7 certified
Ethernet: 8x RJ-45; 1 GigE
GPS: Yes
USB: 2 - Type A USB 3.0 | 1 - Type C USB 2.0 console port
Input Power: 10 - 36 VDC | On 9.75 VDC; Off 8.5 VDC
Chassis: 2-slot (Std) | Dimension: 3.472" H x 7.971" W x 9.763" D
 4-slot (Opt) | Dimension: 3.472" H x 15.5" W x 9.763" D
Environmental: -40C to +70C | AREMA 11.5.1
Spec Compliance: AAR S-9202A | AAR S-9101; Section 8.3 | FCC Part 15

AR^{eio}



Extended Digital I/O Card

Serial Ports:

- 2x DB25 Async/Sync RS-232/RS422
- 2x RJ45 Async RS-232

For Protocols: ATCS (HDLC), Genisys, and other serial protocols

General Purpose I/O:

- 8x Digital Input/Output
- Configurable as input or output
- Configurable for voltage level or contact sensing
- Isolation per AREMA 11.5.1

Configuration Options:



2-Slot Chassis Configuration



4-Slot Chassis Configuration—Fits 19" rack

Ready to Implement ARedge?

Contact our accounts management team for more information.

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