Intertech·Rail
Trusted Tracks Ahead

MPRX Reader

Ultracab II (UCII)(R) Ready

Features

- Designed for rail applications
- Fixed mount, integrated package (reader and RF module)
- Reads Association of American Railroads (AAR) format tags and Super eGo® (SeGo) protocol tags
- Supports SeGo read/write transactions
- Supports tag and mutual authentication
- 902-928 MHz RF range operation in North America
- Real-time clock
- Tag read buffering
- Programmable RF output power
- Programmable frequency
- Supports up to two Check Tag
- Multiplexes up to four antennas
- RailID Web Maintenance System
- Direct interface to UCII

The Multiprotocol Rail Reader (MPRX) is a fully integrated, self-contained 902- to 928-MHz wireless radio frequency identification (RFID) reader that is specifically designed for rail applications.

The MPRX is a replacement for TransCore's AI1200 Reader/AR2200 RF Module systems.

The MPRX can read AAR format and SeGo protocol tags.

All MPRXs provide unparalleled flexibility by offering a real-time clock; expanded tag read buffering; programmable RF output power;
programmable frequency range from 860.00 to 930.00 MHz1 in 250-kHz programmable frequency steps; system integrity checking; and programmable group select.

The MPRX employs advanced multiplexing techniques that improve reader performance at higher train speeds when compared to legacy products. In addition, this unique multiplexing mode provides the capability for one reader to manage up to four antennas, allowing a single reader to be used for two tracks.

The MPRX interfaces directly to TransCore's TRU rail wayside automatic equipment identification (AEI) controller to provide a complete railroad AEI reader system to the North American railroads.

Multiprotocol Rail Readers are quickly and easily installed, tested, and maintained by trained, authorized personnel.

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RF CHARACTERISTICS

Frequency Range

AAR-format: 902.25 to 903.75 MHz and 910.00 to 921.50 MHz
SeGo protocol: 911.75 to 919.75 MHz

RF Control

By sense inputs

Range

Read performance varies depending on tag and reader configuration and environment. Consult the Multiprotocol Rail Reader System Guide for tag and reader selection.

I/O CONTROL

Input: two independent dry contact closures for sense circuits
Output: one tag lock output RS–232, RS-422 and Ethernet ports

POWER REQUIREMENTS

Input Power

DC: 12 to 24V, 35 watts maximum DC: 24 to 110V, 35 watts maximum

RF Output Power

2 W maximum to 200 mW minimum, selectable in 1-dB steps
Available in 4 ports only LICENSING

Equipment License

The user is required to obtain a Part 90 site license from the FCC to operate the unit in the United States. Access the FCC Web site at www.wire- less.fcc.gov/uls for more information.

RF Interference

Units have been tested and are verified to Part 15 of the FCC rules for a Class A digital device.

Safety

Multiprotocol Rail Readers comply with the require- ments of Underwriters Laboratories UL–60950-1, Standard for Safety of Information Technology Equipment.

PHYSICAL Dimensions

Size: 13 x 5 x 2.49 in. (33 x 7.62 x 6.32 cm)
Weight: 5.7 lb

Mounting Location

In railside equipment hut or enclosure

Enclosure

Rated to IP65
The MPRR is enclosed in an aluminum housing.

ENVIRONMENTAL Operating Air

Temperature
-40°F to +158°F (-40°C to +70°C)

Storage Temperature

-40°F to +185°F (-40°C to +85°C)

Humidity

95% condensing

Vibration

The MPRR complies with vibration tolerance limits specified in AREMA C&S Manual, Class C, D, E, I and J.

Shock, Operational

The MPRR complies with shock tolerance limits specified in AREMA C&S Manual, Class C, D, E, I and J.

OPTIONS

Part Numbers

2-02-7-6501-XATCGE07B17
MPRX, 1 port, IP65/67, AREMA Class C,D,E,I and J, 24-110 VDC

The XATCGE07B17 version includes:
* Ultracab II (UCII)(R) protocol firmware, according to UCII manufacturer requirements and approvals
* RailID WebMaintenance firmware, according to UCII(R) manufacturer requirements. RailID WebMaintenance is required to program and maintain the unit.
* Single Port Only

Training

Installation, operation, and maintenance training for TransCore authorized dealers is available through TransCore. For details, contact TransCore.

DOCUMENTATION

Multiprotocol Rail Reader Quick Start Guide
Multiprotocol Rail Reader System Guide

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