



AR^{220DB}: Advanced Rail 220MHz Radio

Seamless connectivity between AR^{220DB} and PTC 220 Base radios for efficient operations-centric communication.

Model #70010

Cost Efficient Data Communication Solution

Enable migration of detector and sensor data transport from legacy communications with confidence using our new fully interoperable AR^{220DB}. Designed specifically for field-to-base station communications, the AR^{220DB} radio leverages existing licensed spectrum and reduces recurrent operational costs.*

Key Features

- PTC/ITCnet® interoperable replacement for legacy detector / sensor communications infrastructure.
- RF fully interoperable with ITCR and ITCR^{NG} Base radios (Model MCC 63030 & 65030).
- Single full-rate transmitter.
- 4-channel half- or full-rate receiver.
- Field-to-Base station communications only.
- Meets AREMA and other relevant railroad standards.
- Same command line interface and operational processes found in Meteorcomm ITCR^{NG} PTC 220 radios.

Benefits

- Operates in the 217-220 frequency band to support all railroad I-ETMS communications*.
- 25W PEP Transmitter output power.
- PTC ITCnet® interoperable.

Meets Industry Standards and Regulatory Specifications

- Conforms to appropriate environmental specifications from AREMA and AAR Manual of Standards and Recommended Practices.



*** LIMITS OF USE: This equipment/device is not intended for use in PTC control operations. Use of the 220 MHz spectrum requires prior approval from the spectrum owner.**

General RF

Specifications	Details
Frequency Range	217.6 MHz to 222.0 MHz
Frequency Stability	±1.5 ppm over operating temperature range
Channel Spacing	25 kHz
Transceiver	Half Duplex
Channel Bandwidth	25 kHz
Channel Spacing	25 kHz
Antenna system impedance	50 Ohms

Interface

Specifications	Details
Ethernet	Two (2) ports of 10/100: - LAN1 – External Detector RJ-45 - MAINT – Maintenance RJ-45
Customer-side Antenna Connector	N connector male
Customer-side Power Connection	Wago connector (or equivalent): - Non-mobile: 231-203/026-000 - Mobile: 231-203/037-000
Protocols supporting detectors	FTP, SNTP

Environmental

Specifications	Details
Operating Temperature	-40C to +70C
Storage Temperature	-55C to +85C
Temperature Shock	-55C to +70C
Altitude (Operation)	-200 to 12,000 ft ASL
Humidity (Operation)	5 to 95%, non-condensing at +50C
Humidity storage (Operation)	5 to 95%, non-condensing
Other environmental considerations	Conforms with appropriate environmental specifications from AREMA and AAR Manual of Standards and Recommended Practices

Transmitter

Specifications	Details
RF Power	25 Watts (PEP), 1-% duty cycle
Modulation	$\pi/4$ -DQPSK
Regulatory	Conforms with appropriate FCC CFR 47 Part 80, Part 90, and others

Receiver

Specifications	Details
RX Channels	4 simultaneous receive
Modulation	$\pi/4$ -DQPSK: - 16 kbps half-rate

DC

Specifications	Details
Input VDC	10.9 to 15.5 VDC

Physical

Specifications	Details
Size	6" width; 4.4" depth; 2.1" height
Weight	≤ 2lbs
Mounting	- Bungalow: on wallboard or DIN rails. - Vehicle: appropriate location



Contact us for details

Contact our account management team for more information

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