The AI1422E Transportation Reader is the next generation of TransCore’s on-board readers. The streamlined AI1422E incorporates the latest technology while maintaining the functionality of the original AI1422.

The AI1422E retains familiar features for backwards compatibility, adding a wide-input DC power supply (24-110V), software-controlled RF power, and more communication options. The AI1422E boasts Ethernet and RS422 communications for long-distance applications as well as the standard dual-RS232 ports for compatibility. All interfaces support simultaneous host communications in real-time for passing tag data to the host computer.

The AI1422E Transportation Reader is a rack-mountable unit designed for installation in an on-train electronic cabinet, with an under-train antenna and tags mounted at fixed positions on the railbed or guideway sleepers. The AI1422E Transportation Reader sends tag data to the train’s host computer for processing.

The AI1422E offers both 915MHz and ETSI compliant models for global use. The 915MHz model is compatible with TransCore’s 915MHz transportation tags and rail antennas. The ETSI model is compatible with TransCore’s suite of ETSI compliant tags and antennas.

**Features**
- Wide-input DC power supply (24-110V)
- Software-controlled RF power
- 1U standard rack-mount design
- Multiple communication schemes allow simultaneous monitoring over Ethernet, RS422, and RS232
- LED indicator lights give feedback on power status, RF, and tag lock
- Meets AREMA C&S and EN 50155 regulations for on-train devices

**Applications**
- Rack-mounted rail environment
- On-board train environment
AI1422E Transportation Reader

COMMUNICATION

Available Frequency Ranges
FCC: 902-928MHz, Fixed Frequency
ETSI: 865.7-867.5MHz, Frequency Hopping

Protocols
American Trucking Association (ATA)
American Association of Railroads (AAR)

HARDWARE FEATURES

RF Connector
N-type Socket

Communication Ports
1 – Main RS232 (DB9)
1 – Auxiliary RS232 (DB9)
1 – RS422 (Terminal Block)
1 – Ethernet (M12-10/100)

I/O Connector
16 Pin Phoenix Connector with:
5V Logic tag lock
5V Logic power active
5V Logic RF active
5V Logic trigger input
5V Wiegand output

POWER REQUIREMENTS

Input Voltage
24VDC-110VDC ± 30%
(12-150VDC Min/Max)

PHYSICAL

Dimensions
Size: 19.0 x 1.75 x 9.0 in (48.3 x 4.4 x 22.9 cm)
Weight: 5 lb (2.27 kg)

COMPLIANCE

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

REGULATORY

Standards
Designed to meet the following standards:
AREMA C&S Part 11.5.1 Class C
AREMA C&S Part 11.5.1 Class D
AREMA C&S Part 11.5.1 Class E
AREMA C&S Part 11.5.1 Class J
EN 50125-3:2003
EN 50121-3-2
EN 50121-3-2
EN 50121-3-2
EN 50121-3-2
EN 50121-3-2
EN 50121-3-2
EN 50121-3-2
EN 50121-3-2
EN 50121-3-2
EN 50121-3-2

LICENSING

Equipment License
FCC: The user is required to obtain a Part 90 site license from the FCC to operate in the United States. Access the FCC website at http://wireless.fcc.gov/uls for more information.
FCC ID: FIHAI1422E

ETSI: Designed and tested for EN 302 208 1&2 (2014-06) and EN 301 489 (2009-05) compliance

ENVIRONMENTAL

Operating Temperature
-40ºF to +158ºF (-40ºC to +70ºC)

Storage Temperature
-67ºF to +185ºF (-55ºC to +85ºC)

Humidity
0 to 95% non-condensing over operating temperature range

Vibration Tolerance
Complies with AREMA C&S Manual, Part 11.5.1 Class I & J
Complies with EN61373

Shock Tolerance
Complies with AREMA C&S Manual, Part 11.5.1 Class I & J
Complies with EN61373

For more information:

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transcore.com