

Features

- ▶ Specially designed for rail yard applications
- ▶ Multiprotocol
- ▶ Fixed mount, integrated package with waterproof enclosure
- ▶ Reads Super eGo® (SeGo), eGo, ATA/AAR, Gen2 and/or IAG tags
- ▶ 915 MHz RF band operation in North America
- ▶ Half-frame, full-frame (ATA), and Wiegand capability
- ▶ Internal and external antenna models
- ▶ Real-time clock
- ▶ Tag read buffering
- ▶ Programmable RF output power
- ▶ Integration with wheel sensors
- ▶ P/N:
2-02-4-0001 - RS232 Internal
2-02-4-0002 - RS422 Internal
2-02-4-0007 - RS232 External
2-02-4-0008 - RS422 External



TransCore's Yard Reader is a family of fully integrated, self-contained 915 MHz wireless radio frequency identification (RFID) readers that are specifically targeted at rail yard applications. Each Yard reader includes a radio frequency (RF) module, digital signal processor (DSP), power supply, antenna (unless external antenna option is selected), input/output interfaces, and RS-232 or RS-422 serial communications interface.

The new Yard family includes models capable of reading any two of the following standard protocols:

- ▶ Super eGo
- ▶ eGo (ISO 18000 6B)
- ▶ American Trucking Associations (ATA)
- ▶ Association of American Railroads (AAR)
- ▶ Interagency Group (IAG)
- ▶ Gen2

Additionally, for compatibility with existing security systems, Yard Reader can read half-frame and full-frame ATA tags and Wiegand formatted tags and identification cards.

All Yard readers provide unparalleled flexibility by offering a real-time clock; expanded tag read buffering; programmable RF power; 250 KHz programmable frequency steps; system integrity checking; and programmable group select.

Yard readers are quickly and easily installed, tested, and maintained by TransCore trained, authorized personnel. The Yard Reader's command set is compatible with all TransCore's readers.

Yard Reader

RF CHARACTERISTICS

Frequency Range

865 to 870 MHz capable
902 to 928 MHz capable
911.75 to 919.75 MHz FCC-authorized in United States

Internal Antenna Gain

9.5 dBi

RF Control

By sense input or host command

Polarization

Linear, horizontal

Range

Read performance varies depending on tag and reader configuration and environment. Using the eGo or eGo Plus Windshield Sticker Tags, typical read range should be 12 to 17 ft (3.7 to 5.2 m).

I/O CONTROL

Input: two independent dry contact closures for sense circuits

Output: two independent Form-C contacts

RS-232 with Wiegand or RS-422 with Wiegand-compatible host interface

POWER REQUIREMENTS

Input Power

16 to 20V AC, 47 to 63 Hz, or 16 to 28V DC

RF Output Power

2 W maximum to 200 mW minimum, selectable in 1dB steps

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.wireless.fcc.gov/uls for more information.

FCC ID: F1H05531

Industry Canada ID: 1584A-05531

Users in all countries should check with the appropriate local authorities for licensing requirements.

COMPLIANCE

RF Interference

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

Safety

Yard readers comply with the requirements of Underwriters Laboratories UL-1950, Standard for Safety of Information Technology Equipment.

PHYSICAL

Dimensions

Size: 15.5 x 15.5 x 3.25 in. (39.4 x 39.4 x 8.25 cm)

Weight: 9.5 lb (4.3 kg)

Mounting Location

Pole or wall mount

Indoor or outdoor

Enclosure

The system is environmentally sealed in a tamper-proof, polycarbonate housing.

ENVIRONMENTAL

Operating Air Temperature

-40°F to +131°F (-40°C to +55°C)

Humidity

100% condensing

Vibration

0.5 G_{rms}, 10 to 500 Hz

OPTIONS

Cable Accessory Kits

Cable Accessory Kits allow flexibility in installing the Yard reader. Include the part number when ordering.

Wall Mount Bracket

Allows adjustment in all planes when used to install the reader on a flat surface. Include the part number 54-1620-001 when ordering.

Transformer

A Class C transformer (part number 76-1620-005) is available to allow 110V AC to 18V AC conversion. Include the part number when ordering.

Training

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

DOCUMENTATION

Yard Reader Quick Start Guide

Yard Reader System Guide