Encompass® 5 Multiprotocol Reader

Features

▶ Compatible with multiple industry standard protocols

▶ Fully integrated reader and radio frequency module

▶ 915 MHz RF band operation

▶ Software-controlled RF power

▶ Ethernet and RS–232 communications

▶ Mounting up to 85 feet (26 meters) from antenna

▶ Ability to synchronize with other Encompass® 5 Multiprotocol Readers for multiple lane/multiple reader environments using either wired or GPS-based wireless synchronization

▶ Capable of buffering up to 100,000 tag transactions in flash memory

transcore.com

TransCore's Encompass® 5 Multiprotocol Reader is an integrated non-toll, multi-protocol 915 MHz radio frequency identification (RFID) reader system that includes an RF transceiver board and processor in a single assembly. The Multiprotocol Reader is ideal for non-toll, multi-lane installations with a requirement to read two tag protocols or to provide a migration path from an existing tag protocol.

The Encompass 5 Multiprotocol Reader is capable of reading any of the following protocols in a given installation:

▶ American Trucking Associations (ATA), full-frame and half-frame

▶ California Title 21

▶ eGo® — fully compliant with ANSI NCITS 256:2001 and ISO 18000-6B standards

▶ Interagency Group (IAG)

▶ Super eGo (SeGo) — a superset of the eGo protocol

▶ TransCore IT2200

Where multiple tag protocols are used in the same installation, the Multiprotocol Reader is capable of reading any two of the above protocols.

The Encompass 5 Multiprotocol Reader is also suitable for a variety of automatic vehicle identification transportation applications, including airport ground transportation management systems, electronic vehicle registration, parking, secure access, and rail applications.

The Encompass 5 Multiprotocol Reader can be integrated into an onsite lane controller or a NEMA enclosure. The Multiprotocol Reader transmits and receives signals through a single antenna.

TRANSCORE®

Encompass® 5 Multiprotocol Reader

COMMUNICATIONS

Frequency Range
Downlink: 911.75 to 919.75 MHz adjustable in 0.25 MHz steps

Uplink: 902.25 to 903.75 MHz and 910.00 to 921.50 MHz adjustable in 0.25 MHz steps

Actual downlink frequency range is protocol-dependent.

The above frequencies are in the location and monitoring service (LMS) band.

RF Control
Programmable with host command

Communications Interface
Ethernet, RS–232

Antenna Interface
50-ohm SMA connector

Read Range
Read performance varies depending on operating protocol, tag and reader configuration, and environment.

POWER REQUIREMENTS

Input Supply Voltages
DC: 19–30V DC
AC: 19–27V RMS @ 47–63 Hz

Input Power
DC or AC: 40 watts maximum

In-rush Current
8 amps max., duration £25 ms

PHYSICAL

Dimensions
Multiprotocol Reader Size (reader only):
14.5 x 8.6 x 3.0 in. (36.8 x 21.8 x 7.6 cm)

Multiprotocol Reader Weight (reader only): 6.5 lb (2.9 kg)

NEMA Enclosure Size:
18.6 x 18.0 x 10.6 in. (47.2 x 45.7 x 25.4 cm)

NEMA Enclosure Mounting Plate Size:
22.0 x 16.7 x 0.10 in. (55.8 x 42.4 x 0.25 cm)

Encompass 5 Weight (reader, NEMA Enclosure, and mounting plate): 32.0 lb (14.5 kg)

Mounting Location
In lane controller or NEMA enclosure

ENVIRONMENTAL

Operating Temperature
Encompass 5: -40°F to +158°F (-40°C to +70°C), integrated unit

Encompass 5 (in NEMA enclosure):
-40°F to +131°F (-40°C to +55°C)

Storage Temperature
Encompass 5: -40°F to +185°F (-40°C to +85°C)

Humidity
95% non-condensing

Vibration (no NEMA enclosure) (sinusoidal)
5 to 20 Hz, 0.1-inch peak-to-peak

20-200 Hz, 2 G peak

Vibration (no NEMA enclosure) (random)
10 to 500 Hz, 2 G_{rms}

Vibration (in NEMA enclosure) (random)
10 to 500 Hz, 1 G_{rms}

Shock (no NEMA enclosure)
10 G sawtooth pulse at 11 ms duration

Shock (in NEMA enclosure)
5 G sawtooth pulse at 10 ms duration

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: FIHMPI6000A

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.

Standards
The Encompass 5 Multiprotocol Reader complies with the requirements of Standard for Information Technology and Telecommunications Equipment (UL60950 Third Edition).

The Encompass 5 Multiprotocol Reader meets the limits established by RSS-137, Location and Monitoring Service (902-928 MHz), of the Industry Canada Standards.

OPTIONS

Enclosure
NEMA 4X enclosure

Wireless Reader Synchronization
GPS device assembly

Multiple Lane Operation
Antenna multiplexing

External Device Control
Digital input/output assembly

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

DOCUMENTATION
Encompass® 5 Multiprotocol Reader System Guide
Encompass® 5 Multiprotocol Reader Quick Reference Card

For more information:

Call **800.923.4824** (Sales Support) or **505.856.8007** (Technical Support)

TRANSCORE®

transcore.com