

Encompass® 6

Multiprotocol Reader

TransCore's Encompass® 6 Multiprotocol Reader is a fully integrated, self-contained 915 MHz wireless radio frequency identification (RFID) reader that is compatible with multiple industry standard protocols. The Encompass 6 is designed for high performance applications including open road tolling, parking and security access, electronic vehicle registration (EVR), rail applications, and traffic management.

The Encompass 6 Multiprotocol Reader can be integrated into an on-site lane controller or NEMA enclosure. The optional mux module allows the Encompass 6 reader to multiplex up to 4 antennas.

The Encompass 6 is compatible with any of the following standard protocols:

Read Only:

- American Trucking Associations (ATA)
- California Title 21
- ISO/IEC 18000-63 (6C)

Read/Write:

- eGo® ISO 18000 6B
- Interagency Group (IAG/TDM)
- Super eGo (SeGo)
- ASTM v6

The Encompass 6 synchronizes with other Encompass 6 readers for multiple lane and multiple reader environments using either wired or GPS-based wireless synchronization.



Features

- ▶ Multiprotocol
- ▶ Can be integrated into an on-site lane controller or NEMA enclosure
- ▶ 915 MHz RF band operation in North America
- ▶ Ethernet and RS-232 communications
- ▶ Multiplex up to 4 antennas
- ▶ Tag read buffering up to 500,000 tag transactions in non-volatile memory
- ▶ Software controlled RF power

Applications

- ▶ Open Road Tolling
- ▶ Parking
- ▶ Security Access
- ▶ Electronic Vehicle Registration
- ▶ Rail Applications
- ▶ Traffic Management

Encompass[®] 6 Multiprotocol Reader

COMMUNICATION

Frequency Range

Downlink: 911.75 to 919.75 MHz adjustable in 0.25MHz steps

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

RF Control

Programmable with host command

Communications Interface

Ethernet, RS-232

Antenna Interface

50-ohm SMA connector

Read/Write Range

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

POWER REQUIREMENTS

Input Supply Voltages

DC: 19 to 30V DC

AC: 19 to 27V RMS @ 47-63Hz

Input Power

DC or AC: 40 watts maximum

In-rush Current

8 amps max, duration \leq 25 ms

PHYSICAL

Dimensions

Reader Only: 14.5 x 8.6 x 3.0in (36.8 x 21.8 x 7.6cm)

NEMA Encl: 18.6 x 18.0 x 10.6in (47.2 x 45.7 x 25.4cm)

NEMA Enclosure Mounting Plate:

22.0 x 16.7 x 0.10in (55.8 x 42.4 x 0.25cm)

Weight

Reader Only: 6.5 lb (2.9 kg)

Reader, NEMA enclosure, and mounting plate:

32.0 lb (14.5 kg)

Mounting Location

Lane controller or NEMA enclosure

ENVIRONMENTAL

Operating Temperature

Encompass 6: -29°F to +165°F (-34°C to +74°C), integrated unit

Encompass 6 in NEMA Enclosure: -40°F to +131°F (-40°C to +55°C)

Storage Temperature

-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}

No NEMA enclosure (random):

10 to 500 Hz, 2 G_{rms}

In NEMA enclosure (random):

10 to 500 Hz, 1 G_{rms}

Shock

No NEMA enclosure:

10 G sawtooth pulse at 11 ms duration

In NEMA enclosure:

5 G sawtooth pulse at 10 ms duration

COMPLIANCE

RF Interference

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

Safety

Complies with the requirements of Standard for Information Technology and Telecommunications Equipment (UL60950)

Meets the limits established by RSS-137, Location and Monitoring Service (902-928 MHz), of the Industry Canada Standards

OmniAir certified, RFID-6C-SPD Tolling, 2022091601

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 website at www.wireless.fcc.gov/uls for more information.

FCC ID: F1HMPI6000A

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

OPTIONS

Enclosure

NEMA 4X enclosure

Wireless Reader Synchronization

GPS module

Multiple Lane Operation

Antenna multiplex module

External Device Control

Digital input/output module

Training

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

Model Part Number

10-6002-NNN E6 Reader

10-6001-NNN E6 Reader w/ NEMA Enclosure

For more information:

Sales Support

800.923.4824

Technical Support

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transcore.com

