

# 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

**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<sup>®</sup> 6 Multiprotocol Reader

## COMMUNICATION

### Frequency Range

**Downlink:** 911.75 to 919.75MHz adjustable in 0.25MHz steps

**Uplink:** 902.25 to 903.75MHz and 910.00 to 921.50MHz 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:** -40°F to +158°F (-40°C to +70°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<sub>peak-to-peak</sub>

20-200 Hz, 2 G<sub>peak</sub>

**No NEMA enclosure (random):**

10 to 500 Hz, 2 G<sub>rms</sub>

**In NEMA enclosure (random):**

10 to 500 Hz, 1 G<sub>rms</sub>

### Shock

**No NEMA enclosure:**

10 G sawtooth pulse at 11 ms duration

**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](http://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.

### Safety

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

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 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.

## For more information:

### Sales Support

800.923.4824

### Technical Support

505.856.8007

[transcore.com](http://transcore.com)

