

# Encompass® 1i Handheld Reader

## Features

- ▶ Portable multiprotocol reader and mobile computer
- ▶ Suitable for electronic vehicle registration and compliance, rail, fleet, electronic toll collection, government, airports, and parking/security access applications
- ▶ Ideal for exception-based scanning
- ▶ Reduces errors and redundant manual data entry
- ▶ Reads the following protocols:
  - ATA full-frame and half-frame
  - TransCore Super eGo®
  - eGo (ISO 18000-6B)
  - Wiegand
- ▶ WiFi 802.11 b/g standard
- ▶ Bluetooth standard
- ▶ Selectable 10-key or phone style numeric keypads
- ▶ 1D/2D area imager standard
- ▶ Wide area networking optional
- ▶ TransCore supplied software<sup>1</sup>
- ▶ Tag/reader demonstration
- ▶ Application programmer's interface
- ▶ Software developer's kit
- ▶ Rated for use in harsh operating environments
- ▶ Components provided in convenient kits for easy ordering
- ▶ Optional UL listed non-incendive models

1. When RFID scan handle reader and mobile computer are purchased from TransCore



The Encompass® 1i Handheld Reader combines TransCore's IP30 TC RFID Scan Handle and the Intermec CN3x Mobile Computer (models CN3e and CN3f). The handheld reader is ideal for radio frequency identification (RFID) applications requiring an extended read range, multitag sorting, and memory capacity not provided by proximity technology.

TransCore's E1i handheld reader is targeted at transportation-specific applications. The E1i was designed expressly for electronic vehicle registration and compliance, rail, fleet, electronic toll collection, government, airports, and parking/security access applications. The handheld reader allows users to read and store tag information eliminating time-consuming and error prone tag data entry tasks.

The E1i handheld reader offers users the capability of verifying tag read exceptions encountered at fixed-reader RFID sites, such as commercial, private, government, and airport parking facilities. The handheld reader's typical read range is 3.5 to 12 feet (1.1 to 3.7 meters) depending on the tag type being read. The handheld reader can read from the following tag types: TransCore eGo and eGo Plus in Super eGo (SeGo) mode RFID tags; and Association of American Railroads (AAR); American Trucking Associations (ATA); and International Organization for Standardization (ISO) tags, whether programmed as full frame or half frame. Multitag sorting, or filtering, allows the user to specify groups within a population of eGo or eGo Plus (SeGo mode) tags to be selected and read.

The Encompass 1i handheld reader is designed for easy, comfortable RFID reading, yet it is rugged enough to withstand harsh working environments. Phone style (123) and 10-key (789) numeric keypads are available on all models and alpha keypads are available on select models. The rechargeable lithium-ion battery pack powers the RFID reader for an entire shift.

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# Encompass® 1i Handheld Reader

## FREQUENCY

915 MHz band frequency-hopping for unlicensed operation in the United States and Canada.

## READ RANGES

**Typical read ranges:** 3.5 to 12 ft (1.1 to 3.7 m) (tag dependent)

## DATA RATE

**Typical data rates:** 10 to 80 kbps (protocol dependent)

## MODELS AVAILABLE

ATA/AAR read only  
Super eGo/eGo/ATA read only

## HARDWARE FEATURES

### Power Requirements

IP30 TC – Removable 2400 mAh lithium-ion battery pack  
CN3x – Rechargeable 3.7 V, 4000 mAh lithium-ion battery pack

### LEDs

LEDs located on the IP30 TC RFID Scan Handle indicate the following statuses: (1) reader power; (2) host communications; (3) RF power; (4) tag read; and (5) battery status.

### Keypad Options

10-key (789) or phone style (123) numeric keypads are available on all CN3x models and alpha keypads are available on select models

### Integrated Scanner (standard)

1D/2D omnidirectional area imager suitable for reading bar codes and signature capture

### Hazardous Location Certifications (optional)

UL listing (United States and Canada)  
Division 2, Class I, Groups A, B C, D:T4  
Division 2, Class II, Groups F, G, T4  
Division 2, Class III, T4

## PHYSICAL CHARACTERISTICS

### Weight

**CN3x with IP30 TC RFID Scan Handle:**  
2.07 lb (0.94 kg)

## Dimensions

**CN3x mobile computer:**  
7.7 x 3.2 x 1.25 in. (19.6 x 8.1 x 2.8 cm)

## ENVIRONMENT

### Operating Temperature

32°F to 122°F (0°C to 50°C)

### Storage Temperature

-4°F to 158°F (-20°C to 70°C)

### Humidity

10 to 95% humidity, non-condensing

## COMPLIANCE

### RF Interference

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

### Drop Survival

**CN3x mobile computer:** 6 ft (1.8 m) drop on all faces, edges and corners in accordance with MIL-STD-810G

**IP30 TC:** 4 ft (1.2 m) drop 26 times to concrete

### Environmental Ratings

CN3x and IP30 TC are sealed against windblown rain and dust in accordance with International Electrotechnical Commission's (IEC) 529 IP64 rating.

## COMMUNICATIONS

### IP30 TC to CN3x Mobile Computer

Bluetooth

### CN3x Client to Host

Ethernet (standard)  
USB 1.1 (host and client)  
IrDA

## NETWORKING

### Wireless LAN (standard)

IEEE 802.11 b/g (2.4 GHz)

### Wireless PAN (standard)

Integrated Bluetooth Class 2, V2.0

## Wireless WAN (optional)

GSM/GPRS/EDGE or  
CDMA/1xRTT/EV-DO

## SOFTWARE/FIRMWARE FEATURES

### Protocols

ATA/AAR  
eGo (ISO 18000-6B)  
Super eGo (SeGo)

### Multitag Access (Filtering)

User-specified groups within a population of eGo tags can be selected and read from using multitag access commands.

### Application Programming Interface

To simplify and expedite customer application development, each CN3x mobile computer purchased from TransCore includes a preloaded application programming interface (API).

### Software Developer's Kit

To further assist in customer application program development, an optional software developer's kit (SDK) and SDK documentation is available upon request.

### Tag/Reader Demonstration Software

Preloaded TransCore application program using the available API and SDK.

- ▶ Manages interaction between mobile computer and RFID scan handle
- ▶ Detects tag type, reads tag data, decodes and parses data (when required), and displays read data in human readable form
- ▶ Supports full frame and half frame tags and can decode ATA, standard AAR, and Wiegand encoded tags
- ▶ Provided at no additional cost on E1i readers purchased from TransCore

## ACCESSORIES

Mobile computer accessory kit includes single dock/charger, single dock Ethernet module, power supply, power cord, and Quick Start Guide

## DOCUMENTATION

Encompass® 1i Handheld Reader Quick Start Guide  
Software developer's kit documentation

For more information:

Call **214.461.6443** (Sales Support) • **505.856.8007** (Technical Support)

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