

# Encompass® 5 Multiprotocol Reader Quick Reference Card

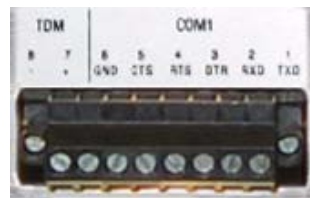
1

**ANTENNA MULTIPLEXING/CHECK TAG PORT**  
 Recommended Data Cable: 9-pin ribbon cable  
 Recommended Check Tag Antenna Cable:  
 50-ohm coaxial cable ( $\leq 3$  dB loss in cable)  
 Encompass 5 jack is DB9 socket connector



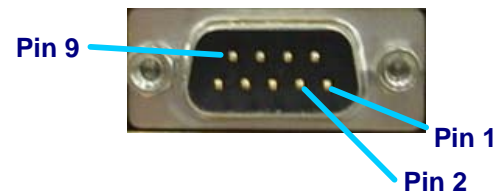
2

**TDM/COM1 PORT**  
 Recommended COM1 Port Data Cable: 20 AWG cable  
 Recommended TDM Cable: Belden 89182 (outdoor-rated)  
 Recommended TDM Cable: Belden 8132 (not outdoor-rated)  
 Mating connector (TransCore P/N 33357-01)  
 Installed on Encompass 5 jack



3

**COM2 PORT**  
 Recommended Cable: 20 AWG cable  
 Encompass 5 jack is DB9 plug connector



4

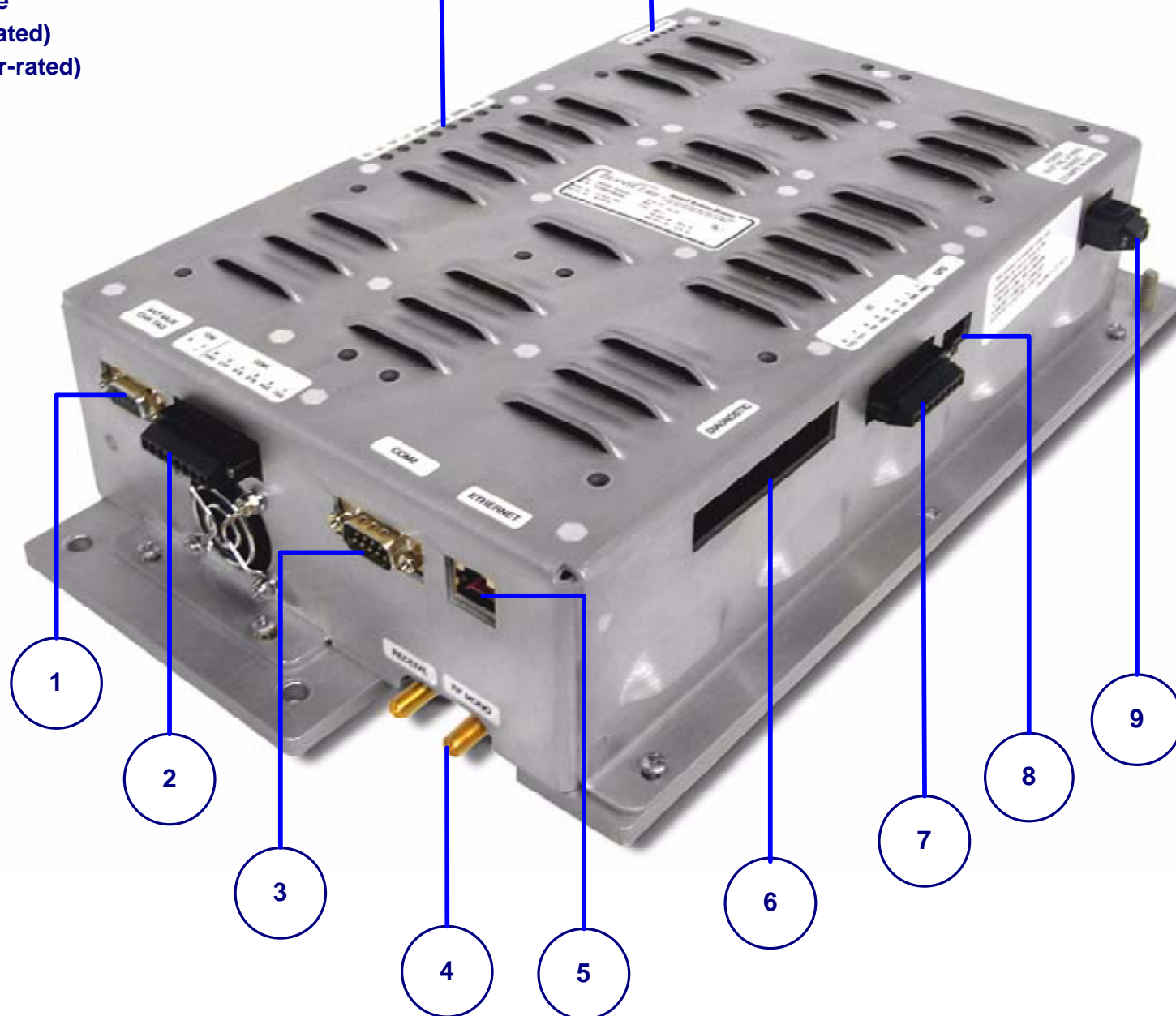
**ANTENNA PORT**  
 Recommended Cable: 50-ohm coaxial cable  
 AA3152 Universal Toll Antenna recommended  
**NOTE:** Use the RF MONO port for single-antenna installation  
**CAUTION:** Tighten antenna SMA connector to 10 in/lb only. Do not cross-thread the connectors when tightening.

5

**ETHERNET PORT**  
 Recommended Data Cable: Belden 7929A Paired  
 Category 5e (outdoor-rated)  
 Maximum Length: 330 feet (100 m)  
 RJ-45 jack

**FAULT/OPERATIONAL LEDs**  
 (see other side for descriptions)

**POWER LEDs**  
 (see other side for descriptions)



**DIAGNOSTIC TEST PORT**  
 Used for factory diagnostic testing only

**EXTERNAL DIGITAL INPUT/OUTPUT PORT**  
 Data Cable: 20 AWG wire  
 Mating Connector (TransCore P/N 33357-01)  
 Installed on Encompass 5 jack



**GPS TIMING PORT**  
 Data Cable: 20 AWG wire  
 Antenna Cable: 50-ohm coaxial cable  
 $\leq 12$  dB @1.575 GHz



**POWER REQUIREMENTS**  
 Input Supply Voltages  
 19V DC to 30V DC or  
 19V AC to 27V AC RMS @47 to 63 Hz

**Input Power**  
 DC or AC: 40 watts maximum

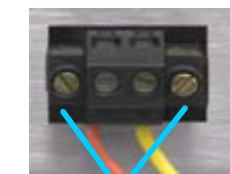
**In-rush Current**  
 8 amps (A) maximum,  $\leq 25$  milliseconds (ms)

**Transformer:** (TransCore P/N 76-6000-001)  
 110V AC or 220V AC input, 24V AC output

**Power Cable:** 12-22 AWG cable  
 Mating Connector (TransCore P/N 33356-01)  
 (1 each) and P/N 33358-01 (2 each) installed  
 on Encompass 5 jack

**CAUTION:** Wire gauge depends on wire resistance  
 versus overall wire length with respect to the  
 Encompass 5 reader's specified voltage range  
 and power rating.

(See other side for *Choosing a Power Supply*)



**CAUTION:**  
 Loosen mounting screws before  
 removing plug.

# Encompass® 5 Multiprotocol Reader Quick Reference Card

## Choosing a Power Supply

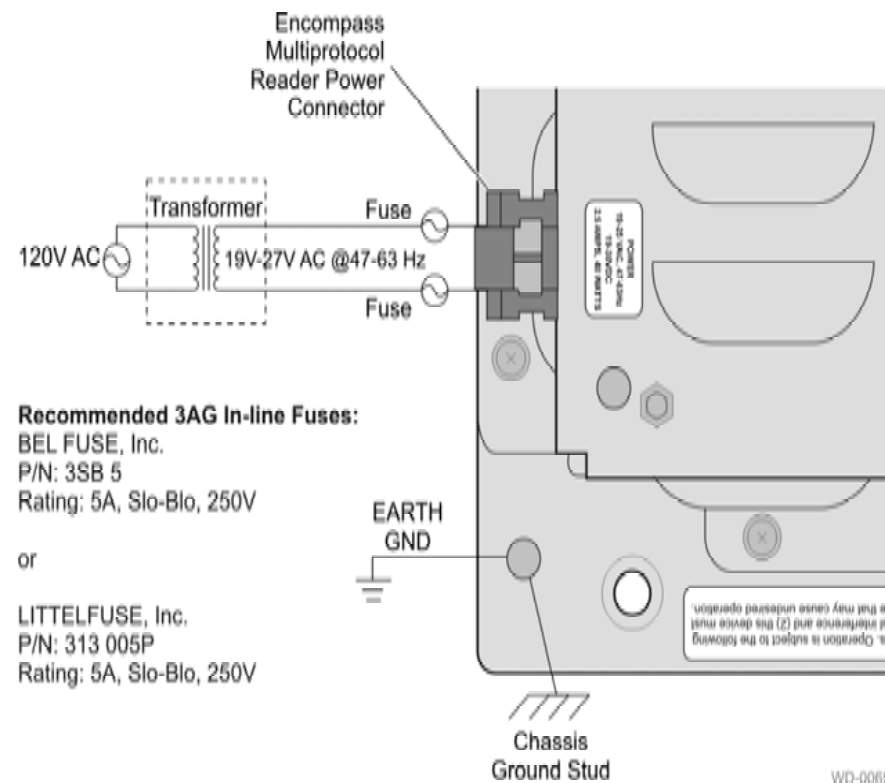
Consider these factors when choosing a power supply:

1. Input voltage: 19V to 30V DC or 19V to 27V AC RMS @47 to 63 Hz, in-rush current: 8A maximum, ≤25 ms. (See Power Requirements on other side for additional Encompass 5 requirements.)
2. Operating temperature of power supply and power cable
3. Power cable gauge and length. TransCore recommends using 12 to 22 AWG cable to Encompass 5.

### Power Supply Accessory Kit

Part Number	Description
76-6000-001	110V AC or 220V AC to 24V AC transformer

**CAUTION:** Wire gauge depends on wire resistance versus overall wire length with respect to the Encompass 5 reader's specified voltage range and power rating.



### AC Power Wiring Diagram

(Refer to Encompass Reader System Guide for DC Power Wiring Diagram.)

## Power LEDs (item 10 from other side)



POWER LED	INDICATION
PWR	19V to 30V DC or 19V to 27V AC supplied
+5	+5 volt power supply functioning
+10.5	+10.5 volt power supply functioning
+5.5	+5.5 volt power supply functioning
+7	+7 volt power supply functioning
-5.5	-5.5 volt power supply functioning

## Equipment Licensing

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.fcc.gov](http://www.fcc.gov) for more information.

FCC ID: F1HMPI6000A

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

## Fault/Operational LEDs (item 11 from other side)



THREE FAULT INDICATION LEDs*			
ERR3	ERR2	ERR1	FAILURE MODE
●	●	●	Microprocessor resetting
●	●	○	Power supply failure
●	○	●	Transceiver failure
●	○	○	TDM/GPS failure
○	●	●	No communication with lane controller/host
○	●	○	Other failure
○	○	●	Data in buffer
○	○	○	No failure

OPERATIONAL LEDs	INDICATION
RDR	Encompass 5 communicating with host
LC	Host communicating with Encompass 5
TIF	Encompass 5 transacting with tag. LED lit when Encompass 5 receives correctly decoded tag message including correct cyclic redundancy check for message. The LED is lit for 250 ms following a tag transaction.
UL	RF uplink signal on
DL	RF downlink signal on

\*If multiple faults occur, the highest priority fault displays. For example, if the microprocessor is resetting (highest priority) and the power supply fails (second highest priority), the microprocessor fault indication displays until it is cleared.

## Start Up

Perform the following startup procedures:

1. Connect antenna to Encompass 5 at RF MONO port.
2. Connect COM1 or Ethernet cable depending on communication configuration.
3. Connect other options as needed.
4. Connect AC or DC power to Encompass 5. Power LEDs should light.
5. Set commands as required for your application.
6. Send Set Mode command to Encompass 5 from host.

## Troubleshooting

Perform these troubleshooting procedures:

1. Make sure all connectors are secure.
2. Make sure Encompass 5 is powered up by checking Power LEDs.
3. Make sure Encompass 5 is communicating with host.

If system does not respond to troubleshooting, contact TransCore Customer Service at [transcore.com/rfidsupport](http://transcore.com/rfidsupport).

For support, contact TransCore Customer Service at [transcore.com/rfidsupport](http://transcore.com/rfidsupport)

