IMPROVE PRODUCTIVITY AND LOGISTICS WITH THE TRIMBLE TVG850 IN-VEHICLE TELEMATICS DEVICE

The Trimble TVG850 is purpose-built to provide high-performance, rugged durability, easy maintenance, and innovative expandability for heavy vehicle tracking and logistics within the construction materials industry.

The TVG850 enables heavy vehicles within this market, to transmit information in real-time. 3G (HSPA/EVDO) modems facilitate reliable communications across the globe, while standard Wi-Fi (802.11 b/g) and Class 1 Bluetooth wireless technology allow data transfer in and around the vehicle.

Expanded digital input/output capability, and the addition of a 10/100 Ethernet port, greatly expands the range of vehicle sensors that can now be connected, multiplying the possibilities for increased vehicle productivity and performance. Leveraging the Trimble Copernicus II GPS chipset and new GPS algorithms, TVG850 provides fast startup times and accurate position data in both foliage canopies and urban canyon environments.

TVG850’s all-new antenna offers the best possible wireless signal reception (WWAN as well as Wi-Fi and Bluetooth wireless technology) contained in a single low-profile enclosure.

KEY FEATURES AND BENEFITS

- Multi-Processor architecture, including a dedicated processor for vehicle bus integration
- Integrated communications
  - 3G
  - WWAN/HSPA/EVDO - U.S. ONLY
  - Wi-Fi (802.11 b/g)
  - Class 1 Bluetooth wireless technology (100 foot range)
- Advanced Trimble GPS Chipset
  - 12 channel SBAS GPS receiver, including WAAS and EGNOS
- Extensible architecture

For more information, visit www.trimble.com/TCL
### TECHNICAL SPECIFICATIONS

**Physical**
- Size: 14.0 cm x 21.0 cm x 4.0 cm (5.5 in x 8.3 in x 1.6 in)
- Weight: 0.78 kg (1.72 lb)
- Primary Processor: 400 MHz Freescale MPC5200
- Secondary Processor: ARM7
- Memory: 64MB NOR Flash and 64MB DDR SDRAM
- Material: Cast Aluminum with black powder coat

**Radios**
- Wireless Wide Area Network
- HSPA/UMTS
- GSM 850MHz
- GSM 1900MHz
- GSM 2100 MHz
- GSM 900MHz (GPRS)
- GSM 1850MHz (GPRS)
- EDGE Compatible
- EV-DO Rev. A
- Class 1 Bluetooth Wireless Technology
- High-power 802.11b/g module, supporting Wi-Fi diversity

**Certifications - Radiated and Conducted Emissions**
- HSPA/UMTS
- FCC Part 15 Compliant
- Industry Canada / RSS-310
- IC – complies with Canadian ICES-003
- RoHS
- WEEE
- CE (EN 55022)
- CE Safety (EN 60950-1)
- E-Mark
- C-Tick
- PTRCB
- AT&T Carrier Approval

**Electrical**
- Supply Voltage: 9 to 32 V DC
- Vehicular Transient Tolerance - Power Transients per ISO7637-2
- Power Consumption -Typical between 500mA – 1 amp @ 12V
- Ignition Sense Input: 0 to 32V DC
- Ignition Sense Sources: Both Relay and R-Terminal

**Environmental**
- Op Temperature: -30°C to +60°C (-22°F to +140°F)
- St Temperature: -40°C to +85°C (-40°F to +185°F)
- Humidity: 5-95% non-condensing

**GPS**
- Channels: 12 (L1 code only)
- Integrated real-time SBAS2
- Time to first fix: 30 seconds (typical)
- Accuracy (SBAS2): 2.5m (2.8-5.4 yards)

**Peripheral and I/O**
- USB 2.0 High Speed Host
- 10/100 Base T Ethernet
- Serial Interface: Two(2) RS232 serial ports at up to 115.2 K baud
- Digital Inputs: Four in addition to Ignition and R-Terminal
- Digital Outputs: Two (2) 500mA max. Open drain drivers 32V tolerant

**CANbus**
- Hardware Protocols: CAN V 2.0a, CAN v 2.0b
- Channels: 2
- Baud Rate: 125/150/500 kbit/sec
- Communications Protocols: ISO15765, J1939
- Hardware Protocols: CAN, ISO-9141
- J1850 (VPW and PWM)

**Vehicle Diagnostics**
- Hardware Protocols: CAN, ISO-9141 (K & L line)
- J1850 (VPW & PWM)
- J1708
- Baud Rate: 5 baud to 41.6k baud
- Communications Protocols: ISO-9141-2 (K-line)

**GPRS – Class 12 Modem**
- 4 frequency bands: GSM 850MHz, E-GSM 900MHz, GSM 1800MHz, and GSM 1900MHz
- Transmit Power: Min. (30dBm) and Max. (34dBm)
- Transmit Power: Min. (27dBm) and Max. (31dBm)
- Receive Sensitivity: Min. (-101dBm)
- Receive Sensitivity: Min. (-101dBm)
- Download Data Rate: Max. (60 Kbit/s)

**Radiated and Conducted Immunity**
- RF Emissions: EN 61000-4-3
- Electrostatic Discharge: EN 61000-4-2
- Radio Frequency: EN 61000-4-6
- Voltage Transient Immunity: EN 61000-4-5
- Test Specifications: EN 61000-4-3
- Parameters: 80MHz to 2000MHz
- Electrostatic Discharge: +/- 8KV Air Discharge; +/- 4KV
- Radio Frequency: EN 61000-4-6
- Parameters: Test level: 3V ms
- Voltage Transient Immunity: EN 61000-4-5
- Test specifications: ISO 7637-2 Class III
- Parameters: Test pulses 1, 2a, 2b, 3a, 3b, 4 & 5a

*Includes in-house RF cable insertion loss of 1dB (worst case)

Specifications subject to change without notice.