CrossCheck GSM

Intelligent Integrated GPS/GSM Mobile Communicator for Asset Management Applications

KEY FEATURES AND BENEFITS

- **Asset management for security and efficiency**
- **Lower acquisition and operating costs**
- **Configurable IQ*Event Engine* for intelligent reporting**
- **Easy-to-use configuration tool**
- **Seamless two-way mobile to base station data communications**
- **Circuit-switched or SMS communications**

Trimble

The CrossCheck® GSM mobile communicator is a powerful, versatile, proven tool for the implementation of mobile asset management solutions.

The unit integrates GPS, GSM, and computing power in a single low–profile housing for lower acquisition and installation costs and greater reliability.

The size and power consumption of the GPS components are significantly reduced through use of Trimble's new FirstGPS™ architecture. Trimble's IQ*Event Engine*™ firmware provides improved security, efficiency, and lower operating costs through intelligent, configurable event and position reporting, and logging.

CrossCheck GSM Mobile Communicator and optional Voice Upgrade Kit

Asset Management

CrossCheck GSM is ideal for mobile asset management and security. Asset monitoring and control are enhanced using operating events (e.g.: trailer connect, ignition on/off, out of area) and discrete inputs to notify an operations center of abnormal vehicle activity.

Driver, vehicle and cargo security are enhanced using security events (e.g.: out of area, motion detection) and discrete inputs to alert an operations center of unauthorized activity. The mobile communicator also provides discrete outputs to activate vehicle security peripherals, for example, ignition lockout or audible alarms.

User-configurable power management modes can minimize power consumption consistent with vehicle reporting requirements.

Route Management

CrossCheck GSM can continuously record position, events, and vehicle status which can be immediately downloaded over-the-air or stored for downloading at a later time. Once downloaded, the data can support dispatch planning, highlight exceptions, improve route efficiency, improve customer service, and provide route verification, thus improving overall efficiency.

Consumer Applications

CrossCheck GSM provides the foundation for consumer services like roadside assistance, stolen vehicle recovery, navigation, and remote locksmith.

Fleet Management Software

CrossCheck GSM is the mobile element of Trimble's overall architecture for Automatic Vehicle Location applications, and is designed to help customers and resellers quickly develop custom end-user vehicle reporting and software solutions.

The CrossCheck IQ*Event Engine* Configuration Tool with graphic user interface provides an easy method to configure the system for most common operating scenarios.

Trimble's FleetVision® software is a simple, cost-effective solution for many base station applications.

The FleetVision External System Interface Software Developers' Kit (SDK) provides a method of developing customized solutions to satisfy specific fleet requirements.

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GENERAL SPECIFICATIONS

Power	Source: 9–32 VDC Call in progress: Standard 1.5 A peak @ 12 V; 600 mA average @ 12 V Call in progress: With Voice Upgrade Kit 2.0 A peak @ 12 V; 1100mA average @ 12 V Idle: Standard: 150 mA @ 12 V Idle: With Voice Upgrade Kit: 325 mA @ 12 V Sleep mode: 10 mA @ 12 V; 20 mA max @ 24 V
Log Memory	2,500 to 3,000 records Backup lithium battery, 3.6VDC; 5 year shelf life
Serial port	MDT/Aux: RS-232 DCE 300, 600, 1200, 2400, 4800, 9600 (default), 19200, and 38400 bps
Message formats	TAIP, TSIP, NMEA-0183 Version 2.1
Data rate over the air	9,600 bps maximum
Discrete I/O	Inputs: 4 switch closures and Ignition Sense Outputs: 3 200 mA low-side drivers
Status LEDs	GPS (green), Cellular (amber)

IQ*EVENT ENGINE* FIRMWARE SPECIFICATIONS

Event triggers	Four Inputs; Three Outputs; Power; Power management; Data log; Ignition; First GPS fix; GPS fix; GSM Service; GPS antenna; Battery over or under voltage; Regions; Speeds; Heading; Distance/Counter/Timer; Time elapsed or Time of day; User defined; or any combination
Event actions	Report to base (up to 10 destinations); Log report; Report to serial port; Modify another event; Change output state; Set or Increment a counter/timer/distance; Modify time/distance reporting; Change power management
Messaging	Accommodates a variety of mobile data terminals, laptops, palmtops and PDAs
Output data	Latitude, longitude, altitude, speed, heading, time and events
Ignition Sense	Off: < 0.8 V; On: > 2.4 V

PHYSICAL SPECIFICATIONS

Integrated Electronics:

Assembly	Top: Injection molded plastic with integrated shield Base: Aluminum
Size	228mm x 121mm x 36mm (W x D x H) 9.6" x 4.75" x 1.4"
Weight	485g (1 lb. 1.1 oz.)

Connectors:

MDT/Aux	DB9 (receptacle)
Power/ignition & Discrete I/O	Molex Micro-Fit 3.0 12-pin 2-row locking receptacle
Handset/Hands-free	RJ-45 10-pin
SIM Carrier	Part Number 39816
Antennas	GPS: SMA (receptacle) 50 Ω GSM: Mini UHF (receptacle) 50 Ω

GPS SPECIFICATIONS

Receiver	L1 frequency, C/A code (SPS), 8-channel continuous tracking receiver
Update rate	Once per second maximum
Accuracy*	Position: <10 meters (50% CEP) Velocity: <0.5 meter/second
First acquisition	Cold start: < 180 seconds 90% of cases Warm start: < 45 seconds 90% of cases Reacquisition after 15 sec blockage: < 2 seconds 90% of cases
Datum	WGS-84

GSM SPECIFICATIONS

GSM	Normal MS Class 4 (2W) @ 900 MHz (EGSM) Class 1 (1W) @ 1800 MHz (GSM1800)
SIM	3V
Type Approvals	CE Mark: EC R&TTE Type Examination

ENVIRONMENTAL SPECIFICATIONS

Temperature	Operating: –20°C to +55°C for GSM900 –10°C to +55°C for GSM1800 Non-operating: –25°C to +70°C
Humidity	5% to 95% RH, non-condensing at +40°C
Vibration	0.008 g^2/Hz 5 Hz +3 dB/octave 5Hz to 20 Hz 0.05 g^2/Hz 20 Hz to 100 Hz –3 dB/octave 100 Hz to 800 Hz 0.001 g^2/Hz 800 Hz to 1000 Hz
Shock	Operational: 40 g for 11 milliseconds Non-operational: 75 g for 6 milliseconds
Vehicle transient noise	ETS 300 342-1; section 9-5
MTBF	100,000 hours

ACCESSORIES (ORDERED SEPARATELY)

- GPS antennas: Permanent or magnetic mount
- Combination power and discrete I/O cable (10-packs)
- Voice Upgrade Kit
  Hands-free operation with cradle, integrated speaker and remote microphone
- FleetVision
- FleetVision External Systems Interface SDK
- Ruggedized Mobile Data Terminal

FOR MORE INFORMATION

- E-mail us at sales_info@trimble.com or crosscheck@trimble.com
- Visit our website at http://www.trimble.com/mpc/

* Note: All GPS receivers are subject to degradation of position and velocity accuracies under Department of Defense-imposed Selective Availability (S/A).

Specifications subject to change without notice

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