

VME GPS BREAKOUT BOARD (VGBB) CCA

Companion Board to Engility's VME GPS Circuit Card Product Line

The Convection Cooled VME VGBB allows VME GPS CCA users to easily debug and test Engility's VME GPS circuit cards. The VME VGBB interfaces with all of the VME GPS CCA's P2 connector's I/O signals via a ribbon cable (shipped with every board), bringing them from the rear of the VME backplane out to the face and also to the front panel of the card. The VME VGBB has many of the VME GPS CCA's P2 signal discretes broken out into common connectors for rapid integration. All of the rear P2 I/O are also broken out on the board for easy probing. This is done through a 96-pin male DIN connector labeled with the signal names. This can allow for the integration of PTTI and RF discretes. The VGBB eliminates the need for a custom P2 cable to be developed first in order to achieve integration of 1P and 1PPS. The VME VGBB can also be configured with up to three batteries (shipped with each board) to provide backup power to the GPS SAASM receiver hosted on Engility's VME GPS CCA. The VGBB CCA comes with a full 1-year warranty, and Engility ships three lithium batteries and a ribbon cable with each board.

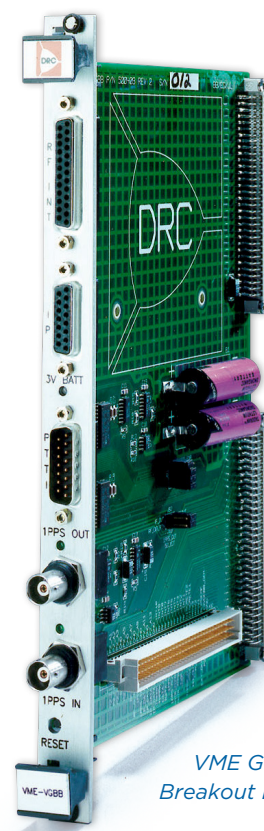
Environmental Specifications	Range	Standard
Operating Temperature Range	(-)40 to (+)85 degrees C	MIL-STD-810
Storage Temperature Range	(-)55 to (+)95 degrees C	MIL-STD-810
Relative Humidity Range	5% to 95%, non-condensing	MIL-STD-810
Operational Shock (w/o Lithium Battery)	35 g, half-sine, 3 msec	MIL-STD-810
Operational Vibration (w/o Lithium Battery)	2 Hz to 2 kHz	MIL-STD-810

Physical Specifications	
Dimensions	Form factor: VME 6U (160 mm x 233 mm)
Weight	12 oz. w/o batteries
Connectors	<ul style="list-style-type: none"> Two 96 position VME bus connectors for backplane interface Single 96 position right angle VME male bus connector BNC coax for 1 PPS OUT BNC coax for 1 PPS IN

Typical Power (without GPS Receiver)	Less than 2 watts
--------------------------------------	-------------------

Ordering Information	Available Part No.
VME GPS Breakout CCA	500690

Shipped with Every Board
<ul style="list-style-type: none"> Three Tadiran Long Life High Temperature Lithium Batteries P2 to P2 7 inch long ribbon cable



Features

- Brings all of I/O to the front panel for easy testing
- Rear P2 I/O broken out for easy probing
- Supplies backup power
- Conversion from RS422 to RS232
- Battery backup power up to 10 years
- LEDs for 1PPS (in and out)
- BNCs for 1PPS (in and out)
- VME GEM reset button
- DB15 male for PTTI
- DB15 female for IP (both RS422 and RS232) RF antenna discrete

Other Engility GPS Products and Accessories

Convection Cooled VME GPS CCA: The VME GPS CCA functions as a VME host adapter carrier for both the Rockwell Collins GEM VI and the Trimble Force 524D military-qualified 24-satellite channel GPS SAASM receivers. The VME GPS CCA provides transparent access for VME single-board computers to the real-time GPS messages stored in the receiver's dual-port RAM. The VME GPS board is a drop-in replacement for Engility's previous version, the VME GEM.

The VME GPS CCA's PowerPC 405 processor and two 802.3-compliant Ethernet ports provide a full-featured navigation solution in a single VME card slot. The entire dual-port RAM GPS message set is transparently accessible over either Ethernet port, using either TCP/IP or UDP protocol.

Conduction Cooled VME GPS CCA: This circuit card is a Conduction Cooled version of the VME GPS CCA with identical performance.

VME GB-GRAM CCA: The VME GB-GRAM CCA functions as a VME host adapter carrier for both the industry standard military-qualified 12-satellite channel GB-GRAM SAASM receivers. The VME GB-GRAM CCA allows full access to all GB-GRAM GPS message data via dual-port RAM over the VME backplane. In addition, the VME GB-GRAM CCA provides transparent access for VME single-board computers to the real-time GPS messages over its native RS232 and RS422 communication channels through the board's VME P2 connector.

The VME GB-GRAM CCA's PowerPC 405 processor and two 802.3-compliant Ethernet ports provide a full-featured navigation solution in a single VME card slot. The entire dual-port RAM GPS message set is transparently accessible over either Ethernet port, using either TCP/IP or UDP protocol.

Serial Test Interface Program (STIP): The STIP is a Windows-based program for use with the VME GPS CCA. STIP offers the ability to monitor GPS data and to test the VME GPS CCA with either the Trimble or the Rockwell Collins GPS SAASM. The STIP program provides control and monitoring of the GPS receiver by way of serial communication between the VME GB-GRAM CCA and a Windows PC.

Ethernet Test Interface Program (ETIP): ETIP is a Windows-based program for use with Engility's VME GPS CCA. ETIP offers the ability to monitor GPS data and to test the Engility VME GPS CCA with either the Trimble or the Rockwell Collins GPS SAASM. The ETIP program provides control and monitoring of the GPS receiver by way of 100 Mbyte/second IEEE 802.3 Ethernet communications between the VME GPS CCA and a Windows PC. The message protocol used between ETIP and the VMS GPS is message-based in accordance with Engility's GPS-Ethernet Interface Control Documents (ICDs).

For more information, please contact:

Ed DeMild

GPS Product Manager
Tel: 978.655.9702
ed.demild@engilitycorp.com

John VanDoren

Engineering
Tel: 978.655.9703
john.vandoren@engilitycorp.com

Engility Corporation

4803 Stonecroft Blvd.
Chantilly, VA 20151
Tel: 703.633.8300
www.engilitycorp.com

For more than 20 years, Engility has worked extensively with the Department of Defense Global Positioning Systems Directorate at the Los Angeles Air Force Base to provide innovative GPS products and solutions that satisfy security standards, policies, and procedures.