The Combat Systems Gateway Module

A bundled solution for Unified Capabilities and C2 Data Integration

- Guaranteed service quality for voice, video and synchronous data

- Microsecond switching and tunable jitter buffers for minimum data latency

- Differentiation of users and applications within a service class

- Tactical interfaces that permit operation with existing communication platforms

- Viable IP router replacement for smaller units that pull services from upper echelon

- Easy configuration with the ability to choose pre-defined traffic policies from a graphical user interface

Tactical networks today span multiple enclaves supporting a diverse group of users and applications that must share bandwidth-constrained transmission resources. How can operators be sure that the most critical and important applications are receiving sufficient bandwidths?

The Combat Systems Gateway Module (CSGM) is a fully-integrated module that can be interfaced to existing tactical communication platforms. The CSGM performs Assured Services LAN (ASLAN) switch functions that aggregate time-sensitive IP data and synchronous serial data over Ethernet, Serial or T1/E1 transmission links.

The CSGM supports up to 1024 service policies with 8 service queues per port, strict priority queuing for real-time services, in-bound policing, and three color discard eligibility marking. This provides the predictable network experience associated with circuit technologies.

PacketAssure technology also offers features to simplify operation of the product. The DSCP mode automatically sets up policies to implement the GIG/NCID T.300 DSCP Guidelines. Experts can predefine and store service policy templates and class of service profiles that operators can easily invoke from a library when a change in mission requires it.

The CSGM features powerful, non-blocking VLAN switching with microsecond latency. Delay of synchronous data can be controlled with link buffering that can be configured to match the variable delay requirements. The result is that critical data is delivered on time, every time.

The CSGM offers flexible options for maintaining timing of synchronous data. Timing may be recovered from an external station clock, a CDI or NRZ data stream, or a T1/E1 link.

For legacy applications, the PacketAssure iQ and CV-MCU2 easily adapt CDI to Ethernet, Ethernet over T1/E1, and Ethernet over Serial interfaces, employing rugged tactical connectors. Tactical power and data ports have lightning protection. In addition, a 2RU pull out drawer is included to accommodate spares.

The Combat Systems Gateway Module has the ability to adapt, differentiate, prioritize, and transport data in legacy, current, and future networks.

Ultra ELECTRONICS

4 x CDI/Serial data
CX-11230, TFOCA-II or
HMA connector

Network

Ethernet
4 x 10/100/1000Base-T
1 x Fiber Ethernet – TFOCA-II or HMA

T1/E1 Transport
4 x IP over unstructured T1/E1

Ethernet and CDI/Serial data may be user or network side connections. T1/E1 is a network side connection only.

Description	Quantity	Connector Type	Data Rates
Rear Tactical Panel Ports:			
ASLAN Ethernet copper ports	4	Tactical RJ-45	10/100/1000 Base-T
ASLAN Serial CDI or EIA-530 ports	4	UG-1837 (CX-11230 cable)	Selected rates from 72 to 4608 Kbps
ASLAN Ethernet fiber port	1	TFOCA-II	1000 Base-LX
ASLAN unstructured T1/E1 (packet transport mode only)	4	Tactical RJ-45 DSX-1	1.544/2 Mbps
Additional Tactical Ports			
PAiQ Station Clock In	1	BNC	1,5, 10 Mhz - RS-422,TTL, Bipolar
CV-MCU2 Station Clock In	1	BNC	1,5, 10 Mhz - RS-422,TTL, Bipolar
CV-MCU2 Management	1	RJ-45	RS-232 9600 baud
PA iQ Management – Terminal	1	RJ-45	RS-232, rates to 115,200 baud
PA iQ Management – Ethernet	1	RJ-45	10/100 BASE-T
Aux. Power Out (2A max)	1		
Ground Lug	1		
Surge Protection			
Power	15 KA for 8/20 microseconds		
RJ-45, UG-1837 Connectors	20 KA for 8/20 microseconds		
System Specifications			
Size	23" x 16.5" x 34.5"		
Weight	90 lbs. approx.		
Power (Max)	210 Watts		
Voltage Range	90 - 130 / 180 - 264 VAC		
Frequency Range	47 - 63 Hz		

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