The Expeditionary Convergence Module

A bundled solution for Unified Capabilities traffic management

- Guaranteed service quality for voice, video and synchronous data

- Transportable, integrated package supports LAN switching and QoS, encryption, and timing

- Tactical interfaces permit operation with existing communication platforms

- Differentiates users and applications within a service class

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

- Simplifies IP router configuration for smaller units that pull services from upper echelon

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 Expeditionary Convergence Module (ECM) is a fully-integrated module that can be interfaced to existing tactical communication platforms to perform Assured Services LAN (ASLAN) functions. The ECM has the ability to adapt, differentiate, prioritize, encrypt, and transport data in legacy, current, and future networks.

The ECM adapts data formats using the PacketAssure iQ1000 and the CV-MCU2. Whether converting serial traffic to optical transmission paths, or packetizing Circuit Emulation Services, the ECM easily interfaces with tactical networks.

Data differentiation is accomplished by the ECM by utilizing VLAN switching to separate traffic flows. This allows the ECM to handle secure and non-secure traffic.
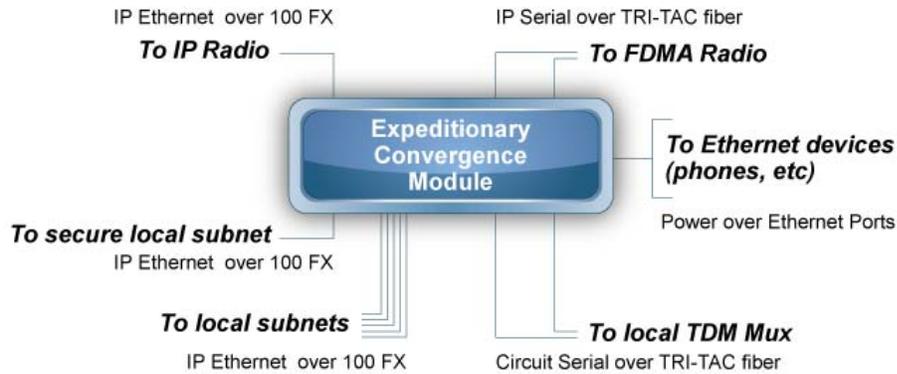
The ECM's data prioritization is performed by the PacketAssure iQ. PacketAssure iQ QoS technology supports up to 1024 service policies with 8 service queues per port, strict priority queuing for real-time services, in-bound policing, and three-color discard eligibility marking. This provides the predictable 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 invoke from a library when a change in mission requires it.

Data encryption is provided by a 1RU encryption unit shelf that can house two KIV-7MiPs. This crypto shelf, the smallest in the industry, allows the ECM to support COMSEC requirements for both Ethernet and Serial traffic.

The ECM's data transport capabilities are supplied by the PacketAssure iQ and the CV-MCU2. The PacketAssure iQ aggregates time-sensitive IP data and synchronous serial data over Ethernet or Serial transmission links; while the CV-MCU2 Ethernet Bridge and Universal Converter Modules provide data fiber extensions to Ethernet and serial traffic. The ECM also provides a GPS timing source.

With the inclusion of a management server, the ECM allows all elements to be managed from a single Ethernet port. The ECM provides a comprehensive set of capabilities that address all aspects of tactical communications in a ruggedized, transportable, easy to use, bundled solution.

Ultra ELECTRONICS

IP Ethernet over 100 FX
To IP Radio

IP Serial over TRI-TAC fiber
To FDMA Radio

Expeditionary Convergence Module

To Ethernet devices (phones, etc)
Power over Ethernet Ports

To secure local subnet
IP Ethernet over 100 FX

To local subnets
IP Ethernet over 100 FX

To local TDM Mux
Circuit Serial over TRI-TAC fiber

ECM Sub-Modules

Traffic Management: PacketAssure iQ1000

ASLAN Ports	Quantity	Connector Type	Data Rates
Copper Ethernet	8	RJ-45	10/100/1000BASE-T
Optical Ethernet (SFP)	4	SM HMA Expanded Beam	1000BASE-FX
EIA-530 Serial ports - Access	2	DB-25	600 bps to 18.432 Mbps
EIA-530 Serial ports - Transport	2	DB-25	64 kbps to 18.432 Mbps

Traffic Distribution: Juniper EX2200 PoE Switch

ASLAN Ports	Quantity	Connector Type	Data Rates
Copper Ethernet	24	RJ-45	10/100/1000BASE-T
Optical Ethernet (SFP)	4	SM HMA Expanded Beam	1000BASE-FX

Traffic Conversion: CV-MCU2 Protocol Converter

Ports	Quantity	Connector Type	Data Rates
TRI-TAC NRZ/Fiber Converters	3	(1) DB25 and (1) HMA per card	16 Kbps to 20 Mbps
Copper Ethernet to FX Converters	4	(1)RJ-45 and (1)HMA per port	100 FX

Traffic Encryption: Universal M Rack; Supports two KIV-7MiPs

Ports	Quantity	Connector Type	Data Rates
Serial Data Encryptor	2/unit	(1) DB25 Red and (1)DB25 Black/ Encryptor	Synchronous to 50 Mbps
HAIPE Encryptor	1/unit	(1)RJ-45 Red and (1)RJ-45 Black	10/100BASE-T

Console Management: Moxa NPort 5600 Serial Device Server

Ports	Quantity	Connector Type	Data Rates
Serial	8 (4 AUX)	RJ-45	50 bps to 921.6 Kbps
Ethernet	1	RJ-45	10/100BASE-T

GPS Timing: Symmetricom XL-GPS with additional 1, 5, 10MHz/MPPS card

Ports	Quantity	Connector Type	Data Rates
GPS Antenna In	1	BNC	Antenna Specific
GPS Timing Out	5 (2 Aux)	BNC	1MHz, 5MHz, 10MHz

System Specifications:	Dimensions	Weight	Power Consumption
	19.9"x23"x36.4"	155 lbs.	300W - 900W

ASLAN Switch Specifications	**Fiber Modem Specifications**
All PacketAssure iQ1000 specifications apply	All CV-MCU2 specifications apply

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