CUBIC™

VINE

Features and Benefits

- **Edge Compute and Video:** Combined CDL Data Link UI, Networking, and FMV feed management

- **Modular System Growth:** Integrates seamlessly with Cubic's Mantis II and Sharklink SDT systems

- **Simplified UX:** Easily view, manage, and understand massive amounts of real-time or archived video

- **Man Portable Networking:** Provides secure networking with on board router, switch, and server

- **Data Link Interoperatbility:** CDL (Std CDL and BE-CDL) specification compliant

- **Onboard Network decoder:** End-to-end IP Video delivery over a managed network

- **Gender Flip-Flop:** Software Configurable for surface (SCE) or platform (PCE) operation

Video Interface and Network Execution (VINE) Module

Cubic's Video Interface Network Execution (VINE) module is comprised of Cubic's tried and trusted User Interface Group (UIG 2.0), Cubic's TeraLogics' Unified Video (UV) operating on Cubic's M3-SE ruggedized networking platform hardware.

VINE supports Legacy, Standard and Bandwidth-Efficient CDL waveforms with Cubic's Multiband Miniature Trasceiver. When combined with a Mantis II antenna or Sharklink SDT antenna, VINE creates a powerful Data Link terminal capable of operating in the harshest environments to provide valuable real time data and video.

Unified Video powers metadata-rich FMV processing, storage, and dissemination in real-time from anywhere in the world. With its suite of robust tools intelligence analysts can find, scrub, view, annotate and tag imagery, and add metadata to FMV in real-time across the enterprise. Unified Video connects to any video and/or metadata source to collect, index, record, and broadcast mission critical insights for rapid analysis. Both the user portal and network share the same asynchronous technology, the system can easily scale to support thousand of concurrent videos and users around the globe.

Product Descritpion

The UIG 2.0 has been fielded in Cubic's Mantis II system for the past 5 years on programs such as TacMobile PCDL, CDLS Tech Refresh, FireScout, JALN-M, and BACN SNP. The UI component provides the complement functionality to the AG transceiver assembly in the split modem processing architecture. It provides the software for supporting antenna and RF hardware controls as well as firmware for audio encode/decode, data link framing and IP switching/routing functions. There is also an audio channel that is Continuously Variable Slope Delta (CVSD)–encoded/decoded. The UI provides interfaces to the NSA Type-1 encryption device for COMSEC functionality.

Cubic's M3-SE networking platform provides a small, fully ruggedized solution that has been proven repeatedly in expeditionary environments. The platform includes a switch/router, a UPS, and a server. The server hosts the UV application. The UV software configures the router for video distribution and provides video viewing and distribution (storing/accessing to/from local storage or networked database). The UV application stores and retrieves Full Motion Video (FMV) files from local storage. This application works seamlessly in a standalone or networked configuration. The software is unclassified and is currently in the Department of the Navy (DoN) Application and Database Management System (DADMS) registration process.

In addition to these components, Cubic has incorporated a Commercial Off-the-Shelf (COTS) multichannel video decoder. The unit can support a minimum of two streams of Moving Picture Experts Group (MPEG)-2 or H.264 via a 10/1000 BaseT Ethernet interface from the UIG and decode them to output the required two RS-170 analog video streams. The decoder supports output of both color and monochrome RS-170 image data.

Specifications

Interfaces
Ethernet: 10/100 BASE-T Ethernet Interfaces
Fiber Optic in 500m lengths (7km maximum dislocation)
DS-102 key fill interface
Analog RS-170 video

Physical Specifications	
Size	22.5" W x 20.0" L x 16.3" H
Weight	106.5 lbs
Power	188 W MAX, 100-240 VAC, 50/60Hz, 20A

Encryption
NSA Type-1
AES-256

Video Management
Low Latency Web-based Video Streaming: Up to 4 feeds
DVR Archive : 10TB (Stream Recording, Search, and Playback)
MPEG-2 and H.264 Transcoding/Transrating
Analog RS-170 monochrome or color image data

Waveform – Programable
Std-CDL
BE-CDL modes 1 through 8, 101, and 104
Tactical 1.6,3.2,6.4 and 466ER (Future Capability)
VNW (Future Capability)

Server and Networking M3-SE-SVR4	
Skylake i7-6822, or Xeon E3-1505L / Quad Core and Cisco ESR-5951(Router)/ ESS-2020 (Switch)	
Mware(R)/Virtualization	
32 GB onboard RAM and two (2) SSD drive bays	
11 x FE Ports (2 x Router, 9 x Switch, 4 x PoE+)	2 x Console Ports (1 x Router, 1 x Switch)
2 x GE Switch Ports	1 x Zeroize Button (Erases Userselected Information)
2 x SFP Switch Ports (Shared with GE Ports)	2 x DC I/O Ports (1 x Front, 1 x Side)

Cubic's Video Interface Network Execution (VINE) Module Components

1. Cubic M3-SE Server
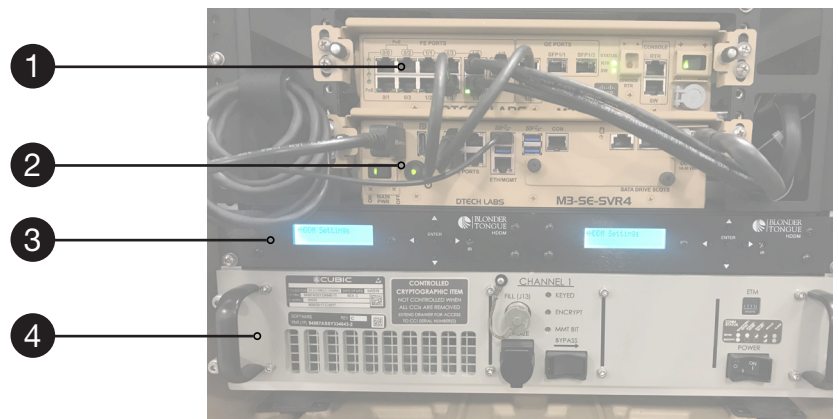2. Cubic M3-SE Switch
3. Blonder Tounge Decoder
4. Cubic UI

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