



## Features & Benefits

- **Modular System:** Integrated CDL terminal with high-gain antenna
- **Maximum Dislocation:** 7km dislocation from Control Group
- **Edge Compute and Video:** Combined CDL Data Link UI, Networking, and FMV feed management
- **Man-Portable Networking:** Provides secure networking with onboard router, switch, and server
- **Simplified UX:** Easily view, manage, and understand massive amounts of real-time or archived video
- **Data Link Interoperability:** CDL specification compliant (Standard and Bandwidth Efficient)

## Mantis II GDT + Vine Module

Cubic's Mantis II GDT + Vine Module Ground Data Terminal (GDT) is a high-performance data terminal that supports long range, high data rate communications with airborne platforms equipped with a multitude of DoD standard Common Data Link (CDL) waveforms. Cubic has combined the Mantis II GDT antenna group with its Video Interface Network Execution (VINE) module to create a powerful Data Link terminal capable of operating in the harshest environments to provide valuable real time data and video. Any Mantis II GDT + Vine Module can be deployed in less than 10 minutes providing ground forces with secure expeditionary communications. The onboard GPS and compass provide precise positioning and alignment allowing the Mantis II GDT + Vine Module to perform automatic calibration, making remote set-up easy.

The VINE is Integrated with Cubic's M3-SE networking platform and Unified Video, which powers metadata rich FMV processing, storage, and dissemination in real-time from anywhere in the world. With its suite of robust tools, Unified Video provides intelligence analysts with the abilities to 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 thousands of concurrent videos and users around the globe. The M3-SE networking platform provides a small, fully ruggedized solution that has been proven repeatedly in expeditionary environments. The platform includes a switch/router, two video decoders, and a server.

Mantis II GDT + Vine Module supports data transfers from Ku-band CDL-equipped aircraft, including Predator, Reaper, Sky Warrior, Fire Scout, LITENING targeting pod and others.



# Mantis II GDT + Vine Module

## Specifications

Programable Waveform Support	
<b>Waveform</b>	
Standard CDL	
Bandwidth Efficient CDL (Legacy and Modern FEC)	
466 ER <sup>1</sup>	
Vortex Native Waveform (VNW) <sup>1</sup>	

<sup>1</sup> TBS waveforms are available upon request

RF Band	
<b>Data Rates</b>	
Full duplex 200 kbps - 44.73 Mbps	

Antenna	
Frequency Range	14.4 – 15.35 GHz
Antenna Gain	≈ 41 dBi
-3 dB Beamwidth	≈ 1.2° (Nominal)
Max EIRP	77 dBm

Encryption	
NSA Type-1	
Commercial AES-256	

Video Decompression	
MPEG-2	
H.264/MPEG-4	
Analog RS-170 monochrome or color image data	

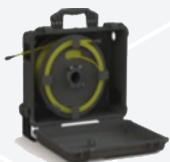
Certifications	
Information Assurance	DoDI 8510.01   DODIIS DS-2610-142-01
Environmental	MIL-STD-810G
EMI/EMC	MIL-STD-461F
Operating Temperature	-30°C to +60°C (Antenna Group) 18°C to +29°C (VINE)

- STD-CDL
- BE-CDL Rev A / Rev B
- Tactical 1.6, 3.2, 6.4 and
- 466ER available

MANTIS II Terminal



Fiber Optic



Cubic's Video Interface Network Execution (VINE) module



Data Interfaces	
<b>User Interface Group</b>	
Ethernet: 10/100 BASE-T Ethernet Interfaces	
Fiber Optical : cable lengths of 1 km, 7km max dislocation	
DS-101/DS-102 Key Fil interface	
Analog RS-170	

Router Interface (ME-SE3)	
11 x FE Ports	2 x SFP Switch Ports (Shared with GE Ports)
(2 x Router, 9 x Switch, 4 x PoE+)	2 x DC I/O Ports (1 x Front, 1 x Side)
2 x GE Switch Ports	

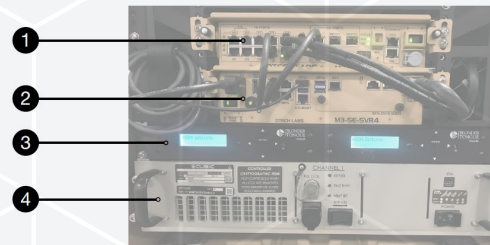
Server Interface (M3-SE-SVR4)	
USB Ports	2 x USB 3.0 Port 2 x USB 2.0 Port
Ethernet Ports	2x 10GbE 4 x GE Ports 1 x MGMT 1 x CON
Display Ports	2x

Antenna Group	
Size	1.2m dish on 45" tripod
Weight	170 lbs
Power	475W (110-220V) at full TX Power

Video Interface Network Execution (VINE) module	
Weight	106.5 lbs
Power	188 W MAX, 100-240 VAC, 50/60Hz, 20A

Transit Cases	Size	Weight
VINE   Weight	22.5" W x 29.0" L x 16.3" H	106.5 lbs
Receiver Transit Case   Weight	47.3" D x 24.3" W x 24" H	125 lbs
Pedestal Transit Case   Weight	39" D x 23" W x 17.3" H	128 lbs
Reflector Transit Case   Weight	31" D x 25.3" W x 26.5" H	75 lbs
GDT Power Supply   Weight	12" D x 8" W x 11.2" H	33 lbs

## Product Components



1. High-Speed Router Switch
2. Intel Powered Server
3. Video Decoder
4. Cubic User Interface Group