

CMDL™ 2e

Next Generation Military and Commercial Data Link

CMDL™ 2e (Compact Multi-band Data Link) is L3Harris' next generation miniaturized, high-performance, wideband data link. Optimized for use in size-constrained military platform or commercial applications, the CMDL 2e provides users with maximum flexibility and performance. CMDL 2e provides all the capabilities of the L3Harris widely deployed CMDL, with added waveforms and Type 1 encryption.

PRODUCT DESCRIPTION

The L3Harris CMDL 2e is a secure, rugged, low-cost, low-SWaP, software-programmable modem product for use in size constrained military or commercial platforms as a video encoder/decoder, networked payload controller, or vehicle command and control data link. The CMDL 2e includes all modem functions and connects to a broad line of Radio Frequency Electronics (RFE) front ends, RF power amplifiers including the popular multiband 20W GaN SSPA, and antennas. CMDL 2e offers KIV 700a Type 1 and AES encryption support and high-definition video¹ encoding capability. It is intended for use on group 3 UAVs, targeting pods and smaller manned aircraft.

CMDL 2e is a member of the L3Harris small form-factor product family, which is based on a common product architecture. This architecture commonality assures complete interoperability between CMDL/CMDL 2 users and other L3Harris radio variants. Additional CMDL 2e enhancements include moving all SSPA I/O to the front panel 15-pin Micro-D connector, changing video ports to more robust HD-BNC connectors and a smaller mounting footprint²



1. To be included in future software release

2. New mounting footprint is compatible with legacy CMDL implementations



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The CMDL family has been deployed on over 1,000 airborne UAV platforms, tactical manned aircraft and targeting pods

KEY FEATURES

- > Full-duplex UHF-, L-, S-, C-, and Ku-Band capable modem
- > Compact with low SWaP—perfect for UAVs, targeting pods and smaller aircraft
- > AES encryption
- > KIV 700a Type 1
- > CMDL 2e offers an expanding list of standard waveforms and data rates, allowing the user to maximize throughput while maintaining interoperability with legacy systems
- > Increased frequency band coverage, lower power, advanced video processing, user interface compatibility and a smaller form factor than original CMDL

SPECIFICATIONS

PHYSICAL CHARACTERISTICS

Waveforms

- > CDL/STANAG (to 44.73 Mbps)
- > BE-CDL (Modes 1–15, 101–105 to 45 Mbps)
- > Tactical 1.6, 3.2, 6.4
- > 466ER
- > Analog FM (transmit only)
- > IW 0.75, 1.5, 3, 6, 12, 24, 42 Mbps

External Interfaces

- > Two Gigabit Ethernet ports
- > Discrete and RS-422 RFE control
- > RS-422 directional antenna control
- > RS-170A (SD) video input/output

Modem SWaP

- > Size: 4.01" (l) x 4.01" (w) x 1.46" (h)
(connectors add 0.54" to length)
- > Weight: 1.7 lb.
- > Power: 30 watts max, 10 to 32 VDC

Environmental

- > Operational altitude: 50,000 ft.
- > Shock/Vibration: per MIL-STD-810
- > Temperature: -40 °C to 71 °C, operating
- > EMI: MIL-STD-461

Encryption

- > KIV 700a Type 1
- > AES Encryption

Control Interfaces

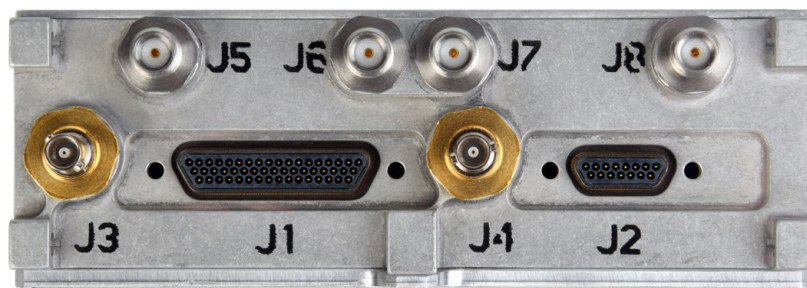
- > SNMPv3
- > KLV
- > Web-based GUI

Video Encode/Decode

- > H.264 SD
- > MPEG-2
- > MPEG-4
- > Future enhancement options:
 - H.264 HD
 - H.265 SD and HD
 - MJPEG

Part Number: 0N852660

FREQUENCY BAND DESCRIPTION	FREQUENCY RANGE	TUNING STEPS	
		BE-CDL	All other waveforms
UHF	225 MHz to 515 MHz	25 kHz	1 kHz
L- and S-Band	950 MHz to 2,500 MHz	250 kHz	1 kHz
C-Band Low	4,400 MHz to 4,990 MHz	1.0 MHz	1 kHz
C-Band High	5,250 MHz to 5,850 MHz	1.0 MHz	1 kHz
Ku-Band Low	14.40 GHz to 14.83 GHz	2.5 MHz	1 kHz
Ku-Band High	15.15 GHz to 15.35 GHz	2.5 MHz	1 kHz



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