

CMDL™ 2i

Next Generation Military and Commercial Data Link

The L3Harris CMDL™ 2i (Compact Multi-band Data Link) is the next generation miniaturized, high-performance, wideband data link, which replaces the widely deployed L3Harris CMDL. Optimized for use in size-constrained military platform or commercial applications, the CMDL 2i provides users with maximum flexibility and performance. CMDL 2i is the perfect choice for ISR applications where interoperability, size and security are all critical considerations.

PRODUCT DESCRIPTION

The L3Harris CMDL 2i 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 2i includes all modem functions and connects to a broad line of external amplifiers, RFEs, and antenna, including the popular L3Harris Multi-band GaN SSPA. CMDL 2i is intended for use on group 3 UAVs, targeting pods and smaller manned aircraft while also offering AES encryption support.

CMDL 2i 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 users of other L3Harris radio variants. Physical changes relative to the original CMDL include: all SSPA I/O moved to the front panel 15-pin Micro-D connector, video ports changed to more robust HD-BNC connectors and a smaller mounting footprint.



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The CMDL family has been deployed on over 1000 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
- > CMDL 2i 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 even smaller form factor than original CMDL

SPECIFICATIONS

PHYSICAL CHARACTERISTICS

Waveforms

- > Std-CDL/STANAG-7085 (up to 44.73 Mbps)
- > BE-CDL (Modes 1-15, 101-105 to 44.73 Mbps)
- > Tactical 1.6, 3.2, 6.4
- > 466ER
- > Analog FM (transmit only)
- > IW (0.75, 1.5, 3.0, 6.0, 12.0, 24.0, and 42.0 Mbps)
- > DDL (receive only)

External Interfaces

- > Two Ethernet ports
- > Discrete and RS-422 RFE control
- > RS-422 directional antenna control
- > RS-170A (SD) video input/output
- > Serial RS-232 & RS-422 for sensor input/output

Modem SWaP

- > Size: 4.0" (l) x 4.0" (w) x 1.46" (h) (connectors add 0.53" to length)
- > Weight: 1.7 lb. max
- > 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

- > AES encryption

Control Interfaces

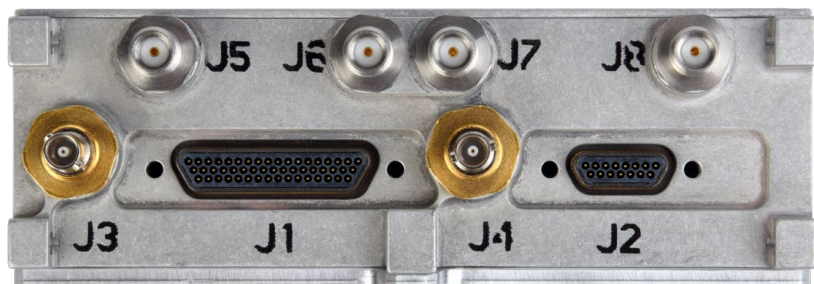
- > KLV
- > SNMPv3
 - Only partial radio control
- > Web-based GUI

Video Encode/Decode

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

FREQUENCY BAND DESCRIPTION	FREQUENCY RANGE	TUNING STEPS ¹
UHF	225 MHz to 512 MHz	1 kHz
L- and S-Band	950 MHz to 2,500 MHz	1 kHz
C-Band Low	4,400 MHz to 4,990 MHz	1 kHz
C-Band High	5,250 MHz to 5,850 MHz	1 kHz
Ku-Band Low	14.40 GHz to 14.83 GHz	1 kHz
Ku-Band High	15.15 GHz to 15.35 GHz	1 kHz

1. BE-CDL and Std-CDL use larger tuning steps



CMDL 2i

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