

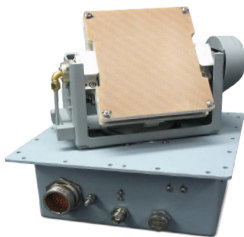
# Common Data Link (CDL) exportable radio system



Standard directional antenna



Omni antenna



Compact directional antenna



RF electronics



Transceiver

BAE Systems' CDL family offers modular terminal, RF, and antenna components that provide flexible common data link solutions for a range of applications.

## Description

BAE Systems' CDL family is interoperable with legacy standard CDL systems and has been integrated on manned and unmanned aircraft, OTM ground vehicles, and surface ships.

The CDL exportable radio system is offered for applications that do not require type 1 crypto-graphic and TEMPEST emissions security. The system is exportable and can be provided with embedded AES-128/256 transmission security (TRANSEC) for overhead and control channel protection and bulk data encryption.

## Applications

- Manned and unmanned aircraft
- On-the-move and fixed ground stations
- Surface ships
- BLOS wideband SATCOM (terminal)
- Ground robotic vehicles

## Features

- AES-128/256 TRANSEC available
- Standard-CDL Rev. G compliant waveforms up to 45 Mbps
- Configurable for air or ground operation
- Transceiver capable of operating in any RF band (e.g. C, X, Ku, K, Ka)
- Upgradeable waveform software runs on powerful, programmable devices (GPP, FPGAs, network switches)
- Proven antenna pointing, tracking, and scanning software
- Easy to use, customer designed command/control GUI
- Wideband, tunable transceiver with superior channel isolation and spectral emissions
- Compact, low profile, high slew antennas, with 2-dim (AZ/EL) steering
- Programmable transceiver can be configured for CDL and SATCOM (ITU, WGS) spectral masks
- Ethernet (annex B) interface
- Comprehensive system BIT performs card level fault isolation, with digital, IF, RF loop-back capability

## Specifications

### Standard capabilities

Standard CDL compliant waveforms

Symmetric/asymmetric data rates – 200 Kbps, 2 Mbps, 10.71 Mbps, 44.73 Mbps

Ethernet (annex B) transport format

Ku-Band

14.4 – 14.83 GHz RL

15.15 – 15.35 GHz FL

IF tuning in 5 MHz steps

Interfaces

10/100/1000 base-T ethernet

RS-170 video (optional)

Analog audio (optional)

802.1D layer 2 switching

System MTBF exceeds 2000 hrs

### Optional capabilities

AES-128/256 TRANSEC

MPEG-2/MPEG-4/H.264 video & video metadata

SATCOM spectral masks (ITU, WGS)

Analog audio

### Physical characteristics

Transceiver

Size: 2.3 in. x 7.0 in. x 9.9 in.

Weight: 6 lbs.

Power: 40W @ 28 Vdc

Humidity: 0-95%, non-condensing

Vibration per Mil-STD-810F

Operating temperature: -40°C to +70°C

MIL-STD-704E +28 VDC input power

## Antenna/positioner options

Type	Steering	Gain (dBi)	Size (in)	Wt (lb)	Power (W)
Omni	n/a	5	3 dia. x 2 H	<0.5	0
Compact directional	2-dim	23	9 x 6 H	8	10
Standard directional	2-dim	28	17 dia. x 8.5 H	14	10

## Ku-Band RF electronics options

SSPA	Size (in)	Wt (lb)	Power (W)
1W	3.2 x 7 x 9.9	3.5	25
5W	3.2 x 7 x 9.9	4	55
15W	9 x 8.5 x 4	5	150
25W	9 x 8.5 x 7	8	240

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