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 cryptographic 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)

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

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

Ku-Band RF electronics options

<table>
<thead>
<tr>
<th>SSPA</th>
<th>Size (in)</th>
<th>Wt (lb)</th>
<th>Power (W)</th>
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</thead>
<tbody>
<tr>
<td>1W</td>
<td>3.2 x 7 x 9.9</td>
<td>3.5</td>
<td>25</td>
</tr>
<tr>
<td>5W</td>
<td>3.2 x 7 x 9.9</td>
<td>4</td>
<td>55</td>
</tr>
<tr>
<td>15W</td>
<td>9 x 8.5 x 4</td>
<td>5</td>
<td>150</td>
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<tr>
<td>25W</td>
<td>9 x 8.5 x 7</td>
<td>8</td>
<td>240</td>
</tr>
</tbody>
</table>

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