L3HARRIS®
FAST. FORWARD.

CBSP ULV

Commercial Broadband Satellite Program Unit Level Variant Terminal

Bringing Bandwidth to the Fleet

The Commercial Broadband Satellite Program (CBSP) Unit Level Variant (ULV) terminal provides high data rate communications to small naval combatants and support ships. The terminals provide tri-band operations including X- and Ka-band over military satellites and Ku and Ka band over commercial satellites. The CBSP ULV is a commercial SATCOM system expanding upon the U.S. Navy's successful AN/WSC-6(V)9 terminal. These L3Harris terminals have demonstrated fleet availability of 99 percent while supporting bandwidth on-demand networks. The CBSP ULV terminal supports multiple missions including quality of life and MILSATCOM resiliency.

The CBSP ULV terminal supports full duplex communications at data rates up to 21.4 Mbps using Single Channel Per Carrier (SCPC) modems and dynamic bandwidth modems. The system uses interchangeable single-band feeds to support X-band, Ku-band and military/commercial Ka-band operations.

Satellite Communications

KEY BENEFITS

- **Single antenna supports multi-band operations with inter-changeable feeds**
- **Fully military qualified to withstand harsh shipboard environment**
- **3-axis positioner eliminates keyhole outages**
- **Certified for operation on Wideband Global SATCOM or Allied satellites**
- **Dual antenna capability mitigates superstructure blockage**

CBSP ULV

The antennas provide IESS-601 Standard G and MIL-STD-188-164A compliant beam patterns using a 1.32m reflector mounted on a high dynamics three-axis positioner enclosed within a protective radome. The positioner provides continuous azimuth axis rotation and incorporates inertial elements for stabilization. The below deck communications equipment is housed in a single shock/vibration isolated, RFI shielded cabinet which contains modems, a beacon receiver, terminal controller antenna control unit, power conditioning, and supporting equipment with cables. The terminal is unique containing two different types of modems–the MD-1366 Enhanced Bandwidth Efficient Modem (EBEM) for static SCPC operation and the SLM-5650A dSCPCmodem for dynamic operation.

All equipment is hardened to the naval environment and all control is provided over a LAN via PC-based Graphical User Interface.

PERFORMANCE				
Bands of Operation	**Military X-band**	**Commercial Ku-band**	**Commercial Ka-band**	**Military Ka-band**
Transmit Frequency (GHz)	7.90 to 8.40	13.75 to 14.5	29.0 to 30.0	30.0 to 31.0
Receive Frequency (GHz)	7.25 to 7.75	10.95 to 12.75	19.2 to 20.2	20.2 to 21.2
EIRP (dBW) min.	56.8	58.8	56.9	
G/T (dBi/K) min.	14.9	19.4	20.3	
Polarization (Tx/Rx)	RHC/LHC or LHC/RHC	H/V or V/H	RHC/LHC or LHC/RHC	
OOB Rejection (dB)	90	90	80	
Coverage	Full Hemispheric			
Acquisition/Reacquisition Time (Min.)	<5/<5			
Throughput	MD-1366A/U (64Kbps-16 Mbps), SLM-5650A/B (64Kbps-21.4 Mbps)			
PHYSICAL				
Reflector Diameter (m)	1.32			
Radome Height/Diameter (m)	1.83/1.83			
Weight Above/Below Deck (lbs)	625/750			
ENVIRONMENTAL				
Shock	Per MIL-STD-901D, Grade B, Type I			
Vibration (Hz) Above/Below Deck	Per MIL-STD-167-1; AD 4-25/BD 4-33			
Operating Temperature (C)	Above Deck: -28 to + 50 degrees Below Deck: +10 to +50 degrees			
Non-operating Temperature (C)	-40 to +70 degrees			
EMI/EMC	Per MIL-STD-461 Shipboard; RE102, RE103			
Power	Per MIL-STD-1399-300A; 440 VAC, 3-Phase Delta, 60 Hz, <5kW			
Wind (Knots)	Operating: 75 Continuous, 130 Gust Survival: 100 Continuous, 155 Gust			
RMA				
Reliability (Hours)	Mean Time Between Operational Mission Failures >4300			
Maintainability (Hours)	Mean Corrective Maintenance Time Operational Mission Failures <2.5			
System Availability	>0.94			
OPTIONS				
Single or Dual Antenna Configurations				
Reduced Radar Cross Section Per NAVSEA letter 05T1/C07-009, 14 March 2007				
SAASM GPS Receiver				
Uninterruptible Power Supply				
Customer Specific Modems				
Spectrum Analyzer				

FEATURES

Supports the quality-of-life mission providing access to:

- **E-mail**
- **Web browsing**
- **Chat rooms**
- **File transfers**
- **Voice-over-IP Telephone**

Supports the SHF MILSATCOM resiliency mission with:

- **NIPRNet**
- **SIPRNet**
- **Secure telephones**
- **Afloat personal telecommunications**
- **Video teleconferencing**
- **Video tele-training**
- **Tele-medicine/medical imagery**
- **National primary imagery dissemination**
- **Intelligence database/tactical imagery**

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L3Harris is the Trusted Disruptor in defense tech. With customers' mission-critical needs always in mind, our employees deliver end-to-end technology solutions connecting the space, air, land, sea and cyber domains in the interest of national security. Visit L3Harris.com for more information.

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