The Viasat Commercial Broadband Modem 400 (CBM-400) is the most adaptable SATCOM modem platform, delivering more bandwidth efficiency, interoperability, and security to mobile, on-the-pause, and fixed communications.

The Viasat CBM-400 is a software-defined modem platform that combines the power of high-speed connectivity with the flexibility of waveform switching to meet the needs of any mission and application. Multiple form factors offer flexibility to arm your SATCOM terminal with the most versatile networking capability for your mission today and tomorrow.

With speeds up to 400 Mbps, the WGS certified Viasat CBM-400 is powerful enough for the most intensive enterprise missions and flexible enough for highly tactical integrations into any micro-sat, half or full ATR chassis, or enclosure. The Viasat CBM-400 delivers satellite broadband performance whether at-the-halt or on-the-move (COTM). Mobile users can pair the modem with an ultra-compact antenna on ground vehicles or aircraft to send and receive true HD video, voice, and data networking.

Benefiting from a software-defined architecture, the Viasat CBM-400 platform is ready for any mission, network, or topology. One hardware platform with waveforms for every satellite networking challenge or operational environment: star and full-mesh networking with the LinkWay™ waveform; point-to-point networking with EBEM; airborne mobility with ArcLight® waveforms; and two integrated high performance DVB-S2 receivers/decoders with resources for additional waveforms. Choose the waveform that suits your mission today, and have the ability to adapt tomorrow or whenever your requirements change. With this flexibility, the Viasat CBM-400 significantly reduces the complexity and cost associated with deploying, operating, maintaining, and upgrading a network. The Viasat CBM-400 is interoperable with today's networks while also providing users with a path toward network convergence.

The Viasat CBM-400 delivers operational and capital savings by minimizing the expense of procurement and integrated logistics support (ILS) for modem hardware. Use of a single hardware platform across applications reduces the complexity of integration by collapsing hardware variants. A single Viasat CBM-400 solution significantly reduces total lifecycle costs, all while allocating the most efficient use of bandwidth with the right waveform for every application.
SPECIFICATIONS
CAPABILITIES
Waveform Options LinkWay™ and EBM with simultaneous DVB-S2 Rx, ArcLight™1, ArcLight™2, and Viasat high-capacity internet service
Network Control and Management Embedded LinkWay™ Network Control Center (eNCC) hosted on CBM-400 modem
TRANSEC FIPS 140-2 Level 2 certified AES 256-bit bulk encryption of user data plane and network control plane; Key load via front panel or Ethernet port; Compatible with Simplex and Full-Duplex links

VERSATILE FAST-HOPPING TRANSMITTER AND RECEIVER
Symbol (Chip) Rates Up to 30 Msps/Mcps MF-TDMA, up to 60 Msps/Mcps FDM/CDMA; 1x to 23x spreading
Modulations BPSK, BPSK π/2, QPSK, OQPSK, 8PSK, 16APSK, GMSK
Turbo codes DVB-RCS, 3GPP, EBM, DVB-S2
Performance Code rates 1/5 to 9/10; Ec/No: –17 to +15 dB
Modes MF-TDMA, FDM, CDMA/CRMA, Adaptive power, modulation, code rate, and spread factor control, based on waveform
IF interface
» Transmit 950 to 2050 MHz
» Receive 900 to 2050 MHz
Transmit Output Carrier –35 to +10 dBm
Receive Noise Density –90 to –140 dBm/Hz

DUAL INTEGRATED HIGH-EFFICIENCY RECEIVERS
Symbol (Chip) Rates 1 to 52 Msps (Mcps); 1x to 23x spreading
Demodulations BPSK, BPSK π/2, QPSK, 8PSK, 16APSK
Performance DVB-S2 code rates 1/4 to 9/10; Ec/No: –17 to +15 dB
Modes FDMA with adaptive spreading, coding, and modulation
IF interface 900 to 2150 MHz
Receive Noise Density –140 to –90 dBm/Hz

INTERFACES
IF Interfaces TNC or SMA; VSWR 2:1
Reference to BUC, LNB 10 MHz, –5 to 0 dBm output on IF interfaces
DC Power BUC up to 2.5A @ 24 VDC (rack mount) or up to 4A @ external 18 to 52 VDC input; LNB up to 500 mA @ 13, 18, or 21 VDC
Ethernet 4x RJ-45 10/100/1000: Data, Control, Expansion
USB Up to 2x USB 2.0 compatible, USB-A Female
Timing Reference 50-Ohm, dual 5 MHz, 10 MHz or 1PPS
ARINC 429 4-channel receiver, DE-9 interface
Miscellaneous RJ-45 with dual RS-232 or one RS-422 for ACU control, GPS NMEA-183 receiver

ENCLOSURES AND ENVIRONMENTAL
Rack Mount Enclosure 100 to 240 VAC, 47 to 63 Hz
» Dimensions (W x H x D) 17.0 x 1.75 x 14.0 in; 43.2 x 4.5 x 35.6 cm
» Weight <9 lb; convection cooled
» Temperature –40° to 60°C Operational, –40° to 70°C Storage
» Humidity Up to 95%, non-condensing
Card Set 22 to 30 VDC
» Dimensions (W x H x D) 6 x 1 x 9.5 in; 15.2 x 2.5 x 24.1 cm
» Digital Card 6 x 0.9 x 9.5 in; 15.2 x 2.2 x 24.1 cm
» Analog Card 6 x 2.5 x 9.5 in; 15.2 x 6.4 x 24.1 cm
» Digital & Analog Stacked <3 lb card set; <4.5 lb with optional metal frame, conduction cooled
» Temperature –40° to 60°C Operational, –40° to 70°C Storage
» Humidity Up to 95%, non-condensing
1/2ATR 26 to 30 VDC
» Dimensions (W x H x D) 4.88 x 7.62 x 13.5 in; 12.4 x 19.4 x 34.3 cm
» Weight <19 lb; conduction cooled
» Temperature –40° to 60°C Operational, –54° to 70°C Storage
» Ruggedization MIL-STD-810G, MIL-STD-461F sealed chassis
Ruggedized Outdoor Enclosure 10 to 36 VDC
» Dimensions (W x H x D) 8.90 x 3.25 x 13.80 in; 22.6 x 8.3 x 35.1 cm
» Weight <13.5 lb; conduction cooled
» Temperature –40° to 60°C Operational, –40° to 70°C Storage