

SpaceBridge entry level satellite modem/router for high performance L2/L3 multipurpose multiservice networking applications.

U7720 is a high performance networking satellite modem/router capable of supporting IP speeds of 100Mbps download and up to 15Mbps upload. U7720 supports industry standard OpenAMIP, which when coupled with ASAT™ maritime multi-beam support and beam switching technology, provides a very effective, robust and secure maritime/mobility communication solution.

The U7720 is available in the following formats :

- U7720-60: rackmount low power (<40W RF/BUC power)
- U7720-120: rackmount mid power (<100W RF/BUC power) + Quad GigE
- U7720-ODU: IP67 enclosed low power
- U7720-SA: stand-alone board level

Application and uses

- Small and Medium Businesses (SMB)
- Maritime/Mobility Applications
- Cellular Backhaul for thin rural routes
- Available as standalone board for terminal integration

Features and Benefits

- DVB-S2X forward link. Highest spectral efficiency via highly granular MODCODs, low roll off rates and Adaptive Coding and Modulation (ACM)
- DVB-RCS2 return channels supporting QPSK-16QAM and up to 5% rolloffs.
- Internet-traffic optimization (Performance Enhancement Proxy) and QoS, enhancing user experience and conserving satellite bandwidth
- OpenAMIP and/or dedicated serial port to connect to ODU.
- Operates with most COTS BUC/LNBs or transceivers
- Optional : IPSec mode 256AES encryption



Specifications

Forward Link

Waveform Technology	DVB-S2/S2X ACM, QPSK to 256APSK, all coding and roll off rates
Encapsulation Modes	MPE and/or GSE Encapsulation
Symbol Rate	From 256Ksps to 125Msps (optional 250Msps or 500Msps)
Channel Roll-off and Spacing	5%, 10%, 15%, 20%, 25%
Terminal IF RX Interface	F-type 75 Ohm, 950~2150MHz satellite/band independent, off/13/18VDC off/22KHz selectable matching COTS ODU and wideband LNBs

Return Link

Waveform Technology	MF-TDMA (combined free and demand-assigned multiple access), QPSK, 8PSK, 16QAM
Encapsulation Modes	ATM1/2/4, MPE, and/or RLE Encapsulation
Symbol Rate	From 128Ksps to 6680Ksps,
Channel Roll-off and Spacing	5%, 10%, 15%, 20%, 25%
Link Variation Mitigation	Terminal built-in Uplink Power Control (ULPC) and Return Link ACM/DRA supporting Ka, Ku and C-band
Tx Power	-30dBm to 0dBm
Terminal IFL TX Interface	F-type 75 Ohm, 950~2400MHz satellite /band independent, off/10MHz/50MHz reference, off/24V DC selectable, matching COTS ODU.

Traffic ports and performance

Interfaces	U7720-60/SA/ODU: 1 User 1000BaseT/ 1 MGMT 1000BaseT Ethernet U7720-120: 4xUser 1000BaseT/ 1 MGMT 1000BaseT Ethernet
Download speed	Up to 120Mbps
Upload Speed	Up to 15Mbps
Packet Processing	15kpps with full QOS and PEP enabled
Network Services	- Support Layer-2 and layer-3 traffic modes at same time - Layer 2 VLAN and bridging - Layer 3 NAT, DHCP server/relay, IP Routing

QOS and PEP

QOS	Up to 8 flows QOS, based on TOS/DSCP, IP addresses, protocol and ports
Application Optimization	SpaceBridge proprietary L3 Performance Enhancement Protocol (PEP) which accelerates IP TCP flows, compresses streams and significantly reduces return link TCP ACK (improves return link utilization and saves up to >50% return link ACK related bandwidth)
Multimedia	Programmable VoIP, video-over-IP /video-conferencing detection and guaranteed QOS behavior
Security	Optional: Encryption up to AES256 (export controlled)

Environmental and Mechanical

Form factor/Dimensions	Indoor rack mount: 17.125 x 1.75 (1 RU) x 10.7 inches (435 x 45 x 272 mm) Outdoor IP-67 enclosure: 5 x 9 x 7 inches (WxHxD) (127 x 229 x 178 mm)
Weight	<7.5 lbs (3.4kg)
Power	- U7720-60: 60W AC Power Supply (40W to power RF/BUC) - U7720-120: 120W AC Power Supply (100W to RF/BUC) - U7720-SA: external 24 VDC up to 60W (40W to power RF/BUC)
Operating Conditions	Indoor rack: 32°F-122°F (0°C-50°C) Outdoor encl: 0°F-140°F (-18°C-60°C) Standalone : -22°F-140°F (-30°C to 60°C) 10% to 90% humidity, non-condensing
Certifications	CE, FCC, ROHS

U7720 board (standalone)

