SPACEBRIDGE
ALL THINGS CONNECTED

The SBM-90X high throughput SCPC modem with 1.47Gbps aggregated throughput.

Overview

The SBM-90x is SpaceBridge's Advanced Ethernet L2 Trunking Modem offerings with wide band symbol rates (up to 125Msys). The SBM90x was designed with minimal implementation loss to provide near theoretical performance DVB-S2X (EN 302 307-2) across the full range of available high efficiency MODCOD selections. The SBM90x can prioritize traffic based on IP DSCP markings which, in conjunction with SBM90x two-way Adaptive Coding Modulation (ACM), ensuring your high priority traffic is delivered in the most robust and efficient manner.

Applications and Uses

- Satisfies low to high bandwidth trunks with ACM enabled S2X carriers.
- Ideal for broadband Internet trunks
- Community Internet Access Distribution
- 3G/4G/LTE/5G aggregation cellular backhaul
- Mission-critical backup or disaster recovery inks.
- Surveillance, government, defense and military.

Features

- Up to 1.47 Gbps aggregate throughput (Symmetric 723Mbs)
- Ethernet Jumbo frame support
- Over 1 million packets per second symmetric (2M pps total)
- Software Defined Network support
- Indoor 19" rack-mountable
- LCD Active Front panel for easy configuration
- Layer-2 transparent support
- L3 DSCP Quality of Service (QoS) support within L2 stream

UNIT CHARACTERISTICS

Installation	• Indoor 19" Rack mountable • Matching variety of outdoor / RF options: C-band, X-band, Ku-band and Ka-band.
Typical Applications	• Telecomm: Trunking , community Internet distribution, 3G/4G/LTE/5G cellular backhaul • Professional: Mobile applications, video contribution • Surveillance, government, defense and military • Point-to-point

FORWARD LINK / RX

Technology	DVB-S2X (EN 302 307-2) compliant link.
Channel Rate	500 ksps to 125 Msps Data rate to 738Mbps.
Waveform	DVB-S2X ACM, QPSK up to 256APSK LDPC/BCH
Channel Spacing	5%, 10%, 20%, 25% or 35% channel spacing (roll-off factor)
Encapsulation	GSE Encapsulation
Link variation mitigation	Terminal built-in Uplink Power Control (ULPC) with ACM supporting Ka, Ku and C-band
Terminal IFL Input	• 50 Ohm N type • L-band 950 – 2150MHz (satellite band independent) • ODU LNB Power: OFF/13Vdc/18Vdc • 10MHz RX reference: ON/OFF • 22 kHz tone: ON/OFF

ENVIRONMENTAL AND MECHANICAL

Dimensions	435 x 45 (1RU) x 292 mm (W x H x D)
Weight	~5Kg
Power Input	150W AC

RETURN LINK / TX

Technology	DVB-S2X (EN 302 307-2) compliant link
Channel Rate	500 ksps to 125 Msps Data rate to 738Mbps.
Waveform	DVB-S2X ACM, QPSK up to 256APSK LDPC/BCH
Channel Spacing	5%, 10%, 20%, 25% or 35% channel spacing (roll-off factor)
Encapsulation	GSE Encapsulation
Link variation mitigation	Terminal built-in Uplink Power Control (ULPC) with ACM supporting Ka, Ku and C-band
Terminal IFL Output	• 50 Ohm N type • L-band 950 – 2150MHz (satellite band independent) • BUC 10MHz reference ON/OFF • Power to BUC: None (requires external BUC power)

L2 SERVICES AND QOS

Interfaces	2 x 1GbT user data Eth RJ-45 ports, 1x out-of-band modem management Eth port
Download Speed	Up to 738 Mbps
Upload Speed	Up to 738 Mbps
Connectivity	Layer-2 transparent between two end-points.
QoS	Support for IP DSCP markings within the Layer-2 transport stream to prioritize access to satellite bandwidth when link is congested or during ACM.
Packet Handling	2,000,000 pps (1,000,000 pps in each direction)