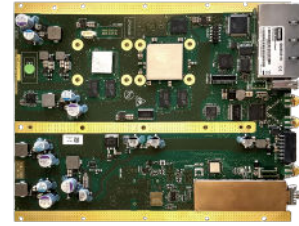# SMB3315 Board Satellite Modem

The SMB3315 Satellite Modem Board is supported on multiple platforms to cover the widest range of markets and applications. The modem shares a wide range of key features and can be easily mixed in a single satellite network on either Evolution, Velocity or Dialog platform. The modem is extremely flexible as it can leverage several different return waveform technologies across mutiple platforms*: ATDMA, MF-TDMA, high-rate SCPC and Mx-DMA MRC which seamlessly combines MF-TDMA flexibility with on-demand variable bandwidth allocation of SCPC while guaranteeing the highest efficiency and availability. The SMB3315 also supports wideband operations up to 500 Msps in the forward channel, enabling service providers to set-up any type and size of network on HTS/VTS.

The SMB3315 Board is suitable for integration into highly compact COTM terminals for the government and defense, broadcast and mobility markets. It offers unprecedented performance in a modem board, supports a broad array of mobility capabilities and is fully equipped to operate on HTS spot beams satellites.

The SMB3315 is also available in a desktop form factor, the MDM3315.

Markets

Mobility
Enterprise
Cellular backhaul
Maritime
Government

Main Features:

- DVB-S2 (up to 45Msps) / DVB-S2X* (up to 500 Msps) outbound
- Supports DVB-S2X MODCODS up to 64APSK
- Return max rates up to 29 Msps (ATDMA), 64 Msps (SCPC), 25 Msps (Mx-DMA MRC)
- Ideal for both fixed and mobility applications with throughput rates up to 120/48 Mbps
- OpenAMIP and GXT file support for mobility
- Security features with Optional *AES 256 encryption
- ATMEL chip for authentication
- Embedded TCP acceleration, GTP acceleration and header compression

EVOLUTION

VELOCITY
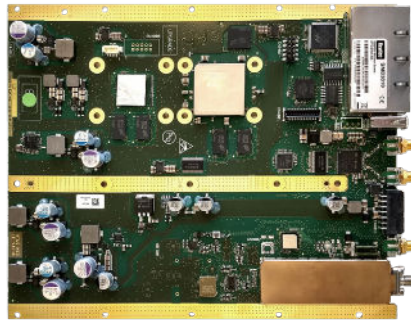
DIALOG

Network Configuration

Network Topology	Rx	Tx			
Dialog	DVB-S2/DVB-S2X*	MF-TDMA	Mx-DMA HRC	Mx-DMA MRC	SCPC
Modulation	QPSK, 8PSK, 16APSK, 32APSK, 64APSK (Annex-M)	4CPM	QPSK, 8PSK 16APSK, 32APSK	QPSK, 8PSK, 16APSK, 32APSK, 64APSK	QPSK, 8PSK, 16APSK, 32APSK, 64APSK
Symbol Rates	1 Msps to 480 Msps	Up to 7.6 Msps	Up to 20 Msps	Up to 25 Msps	1 Msps to 64 Msps
Velocity	DVB-S2	Adaptive TDMA			
Modulation	QPSK, 8PSK, 16APSK, 32APSK	BSPK, QSPK, 8PSK			
Symbol Rate	1 Msps to 45Msps	Up to 7.5 Msps			
Evolution	DVB-S2/DVB-S2X	Adaptive TDMA			
Modulation	QPSK, 8PSK, 16APSK, 32APSK, 64APSK	BSPK, QSPK, 8PSK, 16APSK, 32APSK, 64APSK, 16QAM			
Symbol Rate	1 Msps to 64 Msps	1 Msps to 29 Msps			

Modem Interfaces

Tx Interface

Connector	SMA 50 Ohm
Frequency range	950-2400 MHz
TX level	-55 dBm to +5 dBm (Dialog) -45 dBm to + 5 dBm (Velocity)
BUC power supply	24V / 4 Amps
BUC reference	10/50 MHz
BUC reference level	+3 dBm

Rx Interface

Connector	SMA 50 Ohm
Frequency	950-2150 MHz
LNB power supply	13/18VDC 500mA
LNB band selection	13/18V or 22kHz tone, programmable
LNB polarization selection	13/18 or 22 kHz tone, programmable

Data Interface

LAN: Four 10/100/1000 Mbps Ethernet, auto MDI/MDIX

Management Interface

I/O header, 20 pin connector (includes reset function)

Power & Status signaing connector (14 pin)

Platform and release dependent

Management

Protocols Supported

UDP, IPv4 & IPv6, ICMP, TCP, IGMPv1, IGMPv2, ARP, DHCP, DNS, NTP, BGP, NAT, Diffserv Marking

Multilingual Web GUI

*Manage web GUI via configurable management IP address

Mechanical and Environmental

Dimensions	W 18.2 cm x D 23.5cm x H 2.0 cm (W 7.2 in x D 9.2 in x H 0.79 in)
Weight	0.4 kg (0.88 lbs)
Temp.: Operating	-25° to +55°C (-13° to +131°F) (subject to adequate heatsinking)
Storage	-40° to +60°C (-40° to +140°F)
Operating humidity:	5 - 95% non-condensing

Power Supply

Input Voltage	24 VDC
Power Consumption	<30W

Development Kit

CAD drawings & Thermal & Mechanical design guidelines

Electrical interface specification & API description