MDM5010
Satellite Modem

ST Engineering

The Dialog modem series consist of two-way, high throughput DVB-S2X modems that meet any application across a broad array of markets. The modems share a wide range of key features and can be easily mixed in a single satellite network on the multi-service Dialog platform. The series is extremely flexible as it can leverage Dialog's three return waveform technologies: MF-TDMA, high-rate SCPC and Mx-DMA which seamlessly combines MF-TDMA flexibility with on-demand variable bandwidth allocation of SCPC while guaranteeing the highest efficiency and availability. This series also supports wideband operations up to 500 Msps in the forward channel, enabling service providers to set-up almost any type and size of network on any available type of satellite.

VSAT Mode

The MDM5010 Satellite modem is the very high throughput modem capable of handling traffic up to 1.2 Gbps. The high spectral efficiency, high packet and bit rate capability makes the MDM5010 ideal for the most demanding customers with bandwidth-intensive services in the enterprise, backhauling, offshore and maritime markets. Service Providers can have a business model with maximum flexibility in supported applications, responsiveness to new market opportunities and Service Level Agreement (SLA) schemes that fit customers' needs. Dual Tx/Rx ports enable operation on any satellite constellation with make-before-break handover between satellite passes.

SCPC Mode

The MDM5010 (HW-02) can also operate as a standalone SCPC modem capable of up to 1.6 Gbps/740 kPPS of throughput. The modem's ease of installation through our web GUI allows services providers to deploy their services quickly, in a cost-effective way.

DIALOG

SCPC MODEMS

iDIRECT

Markets

- Enterprise
- SME
- Trunking
- Cellular Backhaul
- Government / Defense
- Broadcast
- Offshore and Maritime

VSAT Mode Features:

- DVB-S2 (up to 64 Msps) / DVB-S2X (up to 500 Msps) outbound
- Supports a full range of DVB-S2X MODCODS up to 256APSK
- Return max rates 133 Msps (SCPC) and 100 Msps (Mx-DMA MRC)
- Embedded TCP acceleration, GTP acceleration and header compression
- GXT file support for mobility
- Security features with Optional AES encryption

SCPC Mode Features: (HW-02)

- Point-to-Point SCPC mode
- SCPC forward and return max 220 Msps when operating in SCPC P2P mode
- Bandwidth cancellation up to 113 Msps

Additional Features:

- OpenAMIP

Network Configuration

Network Topology	RX	TX			
VSAT mode	DVB-S2/DVB-S2X	MF-TDMA	Mx-DMA HRC	Mx-DMA MRC	SCPC
Modulation	QPSK, 8PSK, 16APSK, 32APSK, 64APSK, 128APSK, 256APSK	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	32 ksps to 68 Msps	up to 100 Msps	1 Msps to 133 Msps
SCPC P2P mode	SCPC	SCPC			
Modulation	QPSK, 8PSK, 16APSK, 32APSK, 64APSK, 128APSK, 256APSK	QPSK, 8PSK, 16APSK, 32APSK, 64APSK, 128APSK, 256APSK			
Symbol Rates	1 Msps to 220 Msps	1 Msps to 220 Msps			

Modem Interfaces

Tx Interface

Connector	N-Type 50 Ohm
Frequency range L-band	950-2400 MHz
TX level	-55 dBm to +5 dBm
BUC power supply	24 VDC or 48 VDC option (@ 4 Amps)
BUC reference	10/50 MHz (BNC)

Rx Interface

Frequency	950-2150 MHz
Connector	N-Type 50 Ohm*
LNB pwr supply	13/18VDC, 500mA
LNB LO selection	22 kHz on/off
LNB reference	10 MHz
Dual Tx/Rx ports	

Data Interface

LAN: Six 10/100/1000 Mbps Ethernet, auto MDI/MDIX
　　Two optical Ethernet interfaces (SFP)

Management Interface

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

Future Use

USB	USB 2.0
MicroSD card	Mass storage option

Management

Protocols Supported

Terminal Authentication, UDP, IP, IPv6, ICMP, TCP, ARP, FTP, DHCP, BGP, NAT, IP forwarding, Diffserv, DNS, IGMPv1/2,

Multilingual Web GUI

Manage web GUI via configurable management IP address

Mechanical and Environmental

Housing	Height: 1RU, width: 19", depth 44.5 cm (17.52 in)
Weight	8.0 kg (17.637 lbs)
Temperature:	
Operating	0° to +50°C (32° to +122°F)
Storage	-10° to +60°C (14° to +140°F)
Humidity:	
Operating	5 - 95% non-condensing

Power Supply

Input Voltage	AC, 50Hz\220-260 V, 60Hz\100-130 V -48VDC (Range: -38 to -58 VDC)

*Optional external B type to F type lossless converters are orderable

Specifications subject to change without notice