Newtec

MDM2500IP SATELLITE MODEM



Newtec

Dialog

Description

The Newtec MDM2500 IP Satellite Modem is a two-way, high throughput modem supporting a wide range of IP services like internet/intranet access, VoIP and multicasting services. Its ease of installation and high performance modulation techniques enable network operators to offer IP broadband services in a cost effective way.

It is perfectly suited for service home users, Small Office and Home Office (SOHO), Small and Medium Enterprises (SME) as well as supporting applications like telemetry networks, Point of Sale (POS) or banking.

Cost Effective Service Offerings

The MDM2500 incorporates **the most efficient modulation technologies available,** such as DVB-S2 Adaptive Coding Modulation (ACM) in the forward link and Adaptive Return Link with 4CPM modulation.

Thanks to the modem's unique compact design, the cost is kept minimal. The modem is available with unique Point&Play® easy-installation technology, supporting the installation of the complete terminal without any specific qualification or expensive tooling. Point&Play provides correct satellite identification and facilitates pointing with audio feedback.

After mounting and positioning, the integrated certification assures correct installation by giving instant link quality approval. It guarantees

that each terminal works at maximum efficiency without any interference risk.

The MDM2500 offers cost-effective broadband connectivity on the Newtec Dialog® platform.

True Broadband Experience

For a true broadband experience, the Newtec MDM2500 IP Satellite Modem incorporates IP traffic enhancement software for TCP acceleration, pre-fetching, compression and encryption.

Terminal Configurations

The IP Satellite Modem is offered as modem only or in combination with different antenna sizes and BUC combinations

	Ku		Ka		С	
	1 m	1.2 m	1 m	1.2 m	1.8 m	2.4 m
2 W BUC					✓	
3 W BUC	✓		1			
4 W BUC	~					
5 W BUC					✓	

Contact your sales representative for other ODU configurations (sales@newtec.eu)

Main advantages of the MDM2500

- Full flexibility in the use of different antenna sizes and types, frequency bands and output power
- Low initial investment per service point, thanks to a very low modem cost and unique Point&Play easyinstallation capability
- Easy to use the multilingual web GUI for installation, diagnostics and troubleshooting
- Adaptive return link based on different 4CPM modulations/coding and multiple channel bandwidths
- High service satisfaction ensured through true broadband experience
- Optimal availability and efficiency of DVB-S2 transmission thanks to Newtec's technologies FlexACM® and ThiMM
- Efficiency improvement of 10 to 15% with Newtec's Clean Channel Technology®

SPECIFICATIONS



Key Features

- Small size, table top or wall mounted
- DVB-S2 ACM Outbound
- 4CPM MF-TDMA Adaptive Return Link
- Embedded TCP acceleration and encryption
- Multi-level Quality of Service with seven classes
- Layer 2 and Layer 3 support with versatile IP routing and addressing
- Low jitter for real time applications
- Multiple virtual networks behind the modem
- DNS Cache/Relay and HTTP pre-fetching
- Support of IPv4 and IPv6
- MicroSD card and USB interface (future use)
- Over-the-air software upgradeability
- Over-the-air monitoring and diagnostics tools

Markets

- Consumer
- SOHO
- SME
- Government
- Education
- Enterprise

Applications

- Internet / intranet access
- Streaming video and audio with TV quality
- VoIP telephony (SIP, H.323, ...)
- Content Distribution and management
- Telemetry (SCADA)
- Point of Sale terminals
- Banking

Satellite Link Interface

FORWARD CARRIER (RX)

Standard: DVB-S2 ACM

Modulation: QPSK, 8PSK, 16APSK, 32APSK

• Coding: 1/4, 1/3, 2/5, 1/2,3/5, 2/3,3/4,4/5, 5/6, 8/9, 9/10

Roll-off: 5, 10, 15, 20, 25 and 35%

• Symbol rate: 1 - 63 Mbaud (upto 47 Mbaud for 16APSK,

upto 38 Mbaud for 32APSK)

RETURN CARRIER (TX)

 Modulation: 4CPM (Quaternary Continuous Phase Modulation) with 6 different modcods with Adaptive Return Link

Access Scheme: Multi Frequency TDMA (Timed Division Multiple

Access)

• Channel bandwidth: 128 kHz to 4 MHz

POINT&PLAY Antenna Pointing



- The Point&Play tool provides pointing assistance during antenna installation.
 The small device uses audio feedback to indicate correct satellite identification and to signal accurate pointing.
- With Point&Play a terminal is easy to install, while the integrated terminal certification assures correct installation.

Performance

Max RX rate TCP: up to 22 Mbps

Max RX rate UDP: up to 20 Mbps / 80 Mbps (unicast / multicast)

Max TX rate TCP: up to 5 Mbps
Max TX rate UDP: up to 5 Mbps

Modem Interfaces

RF OUTPUT (BUC INTERFACE)

Connector:
 Impedance:
 Frequency:
 TX Level:
 BUC Power Supply:
 Ref signal:
 Fond
 Fond
 Fond
 Fond
 TX Level:
 155 to +5 dBm
 24 VDC, 2.5A
 Ref signal:
 MHz

RF INPUT (LNB INTERFACE)

Connector:
 Impedance:
 Foliampedance:
 Frequency:
 RX Level:
 LNB power supply:
LOCAL AREA CONNECTION (LAN)
USB
MASS STORAGE
 Foliampedance:
 75 Ohm
950 - 2150 MHz
-65 to -25 dBm
13/18 VDC, 500 mA
US 12/10/100 TX (RJ-45)
USB 2.0 (future use)
MicroSD card (future use)

Mechanical & Environment

Housing: 170x150x32 mm
 Weight: 450 g
 Operating temperature: 0 to 40°C

• Humidity: 5% - 95% non-condensing

Power Supply

DC Power supply: 24V

Mains adaptor input: mains AC, 50 Hz\210-260 V and

60 Hz\100-130 V

Mains Power consumption: <70 Watt (depends on BUC type)

Modem Power Consumption: <10 Watt

IP Features

Protocols: UDP, IPv4 & IPv6, ICMP, IGMPv2, TCP, ARP, FTP, DHCP, DNS, DiffServ Marking, NTP
 Networking: Static routes, Terminal VLAN VRF

Management Interfaces

- Multilingual web GUI
- Over-the-air software & configuration updates
- Over-the-air monitoring, self-test and diagnostics
- Dual satellite configuration settings
- SNMP v2c

Software Release

• Specifications valid for Newtec Dialog release 1.3

Standards

• EN 302307: DVB-S2

EN 301428: Ku VSAT spectrum usage
 EN 301459: Ka VSAT spectrum usage
 EN 301443: C VSAT spectrum usage
 IEEE 802.3: 10T Ethernet
 IEEE 802.3u: 100TX Ethernet

IEEE 802.3u: 100TX €
 IEEE 802.1Q: VLANs



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