Newtec

MDM2500
IP 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.**

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.

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

Terminal Configurations

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

	Ku		Ka		C	
	1 m	1.2 m	1 m	1.2 m	1.8 m	2.4 m
2 W BUC					✔	
3 W BUC	✔		✔			
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 easy-installation 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®**

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

POINT&PLAY
POINTING BECOMES CHILDPLAY

- 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: F
- Impedance: 75 Ohm
- Frequency: 950 – 1850 MHz
- TX Level: -55 to +5 dBm
- BUC Power Supply: 24 VDC, 2.5A
- Ref signal: 10 MHz

RF INPUT (LNB INTERFACE)

- Connector: F
- Impedance: 75 Ohm
- Frequency: 950 – 2150 MHz
- RX Level: -65 to -25 dBm
- LNB power supply: 13/18 VDC, 500 mA

LOCAL AREA CONNECTION (LAN)   1 x 10/100 TX (RJ-45)
USB   USB 2.0 (future use)
MASS STORAGE   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 802.1Q: VLANs

Newtec

SHAPING THE FUTURE OF SATELLITE COMMUNICATIONS

Europe	North America	South America	Asia-Pacific	China	MENA
Tel: +32 3 780 65 00	Tel: +1 203 323-0042	Tel: +55 11 2092 6220	Tel: +65 6777 22 08	Tel: +86 10-823 18 730	Tel: +971 4 443 60 58
Fax: +32 3 780 65 49	Fax: +1 203 323-8406	Fax: +55 11 2093 3756	Fax: +65 6777 08 87	Fax: +86 10-823 18 731	Fax: +971 4 368 67 68