Newtec

MDM3100
IP SATELLITE MODEM

Sat3Play

MDM3100 on the Sat3Play® Platform

The Newtec MDM3100 IP Satellite Modem is a two-way, high throughput modem supporting a wide range of IP Services like internet/intranet access, VoIP, enterprise connectivity and multi-casting services. Its **ease of installation and high performance modulation techniques** enable network operators to offer bandwidth intensive IP broadband services in a cost-effective way. It is perfectly suited for Small and Medium Enterprises (SME) as well as large enterprises or organizations.

The MDM3100 easily operates with the MDM2200 IP Satellite Modem on the same platform sharing the forward carrier and management system.

Easy Install with Optimal Installation Guarantee

The IP Satellite Modem is available with unique Point&Play® easy-installation technology, supporting the installation of the complete terminal without any specific qualification or expensive tooling needed. 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 at Minimal Cost

For a true broadband experience, the IP Satellite Modem incorporates the most efficient technologies available, such as DVB-S2 Adaptive Coding Modulation (ACM) in the forward link, an adaptive return link with advanced 4CPM modulation and 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		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

- High throughput receive and transmit capabilities
- Low initial investment per service point thanks to unique Point&Play easy-installation capability
- Easy to use 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
- Full flexibility in the use of different antenna sizes, frequency bands and output power
- 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

MDM3100
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Key Features

- High performance service rates upto 45/5 Mbps
- 4 Gigabit Ethernet LAN ports
- Robust design with 19" rack mount kit option
- DVB-S2 ACM Forward
- 4CPM MF-TDMA Adaptive Return Link
- Compatible with Standard BUC and LNB
- Embedded TCP acceleration and encryption
- Multi-level Quality of Service
- Versatile IP routing and addressing
- Low jitter for real time applications
- DNS Cache/Relay and HTTP pre-fetching
- Support of IPv4 and IPv6
- USB interface (future use)
- Internal MicroSD card for mass storage (future use)
- Terminal locking
- Modem settings protection
- Dual satellite configuration settings

Markets

- SME
- Government
- Education
- Enterprise

Applications

- Internet / intranet access
- Streaming video and audio with TV quality
- VoIP telephony (SIP, H.323, G.729, …)
- Content distribution and management
- Enterprise connectivity
- Banking

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.

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 (up to 47 MBaud for 16APSK, up to 38 MBaud for 32APSK with 5/6)

RETURN CARRIER (TX)

- Modulation: 4CPM (Quaternary Continuous Phase Modulation) with 6 different modcods, with adaptive return link
- Access Scheme: MF-TDMA (Multi Frequency Timed Division Multiple Access)
- Channel bandwidth: 128 kHz to 4 MHz

Performance

- Max RX Rate TCP: upto 45 Mbps
- Max RX Rate UDP: upto 40 Mbps (unicast) / 80 Mbps (multicast)
- Max TX Rate TCP: upto 5 Mbps
- Max TX Rate UDP: upto 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, 3.5A
- 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 4 x GbE (RJ-45)
USB USB 2.0 (future use)

Mechanical & Environment

- Housing (W x H x D): 220 x 40 x 220 mm
- Weight: 1.7 kg
- Operating temperature: 0 to 50°C
- Humidity: 5% - 95% non-condensing
- Storage Temperature: -30 to 60°C

Power Supply

- DC Power supply: 24 V
- Mains adaptor input: mains AC, 50 Hz\210-260 V and 60 Hz\100-130 V
- Mains Power consumption: <120 Watt (depends on BUC type)
- Modem Power consumption: <20 Watt

IP Features

- Protocols: UDP, IPv4 & IPv6, ICMP, IGMPv2, TCP, ARP, DHCP, DNS, DiffServ Marking

Management Interfaces

- Web GUI
- Over-the-air software & configuration updates
- Over-the-air monitoring, self-test and diagnostics

Software Release

- Specifications valid for Sat3Play software release 2.2

Standards

- EN 302307: DVB-S2
- EN 301428: Ku-band VSAT spectrum usage
- EN 301433: C-band VSAT spectrum usage
- EN 301459: Ka-band VSAT spectrum usage
- IEEE 802.3: 10T Ethernet
- IEEE 802.3u: 100TX Ethernet
- IEEE802.ab: 1000TX Ethernet

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