Newtec

MDM3100
IP SATELLITE MODEM

Description

The Newtec MDM3100 IP Satellite Modem is a 2-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 fitted to Small and Medium Enterprises (SME) as well as large enterprises or organisations.

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 by installers without any specific qualification or expensive tooling. Point & Play® provides correct satellite identification and facilitates pointing with an audio feedback.

After installation, the integrated certification assures correct installation. It gives instant link quality approval and guarantees that each terminal works at maximum efficiency and there is no 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
	1m	1.2m	1m	1.2m	2.4m
3W BUC	✔	✔	✔	✔	
4W BUC	✔	✔	✔	✔	
5W BUC					✔

Contact your sales representative for available combinations (sales@newtec.eu).

Main Advantages

- High throughput up and download 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®

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)
- Over-the-air software upgradeability
- Over-the-air monitoring and diagnostics tools

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

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	3.6 - 63 Mbaud (up to 47Mbaud for 16APSK, up to 38Mbaud 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 FrequencyTimed Division Multiple Access)
•	Channel bandwidth	128kHz to 4MHz

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.

POINT & PLAY
POINTING BECOMES CHILDPLAY

Performance

- Max upload rate TCP   up to 5 Mbps IP-rate
- Max upload rate UDP   up to 5 Mbps IP-rate
- Max download rate TCP   up to 45 Mbps total IP-rate
- Max download rate UDP   up to 40 Mbps total IP-rate
  (unicast or multicast)

Modem Interfaces

RF OUTPUT (BUC INTERFACE):

- Connector: F
- Impedance: 75 Ohm
- Frequency: 950 – 1750Mhz
- Tx Level: -55 to +5dBm
- BUC Power Supply: 24VDC, 3.5A
- Ref signal: 10Mhz

RF INPUT (LNB INTERFACE)

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

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 220mm
- Weight   1.7 kg
- Operating temperature   0 to 50°C
- Humidity   5% - 95% non-condensing
- Storage Temperature   -10 to 60°C

Power supply

- DC Power supply   24V
- Mains adaptor input   mains AC, 50Hz\210-260V and 60Hz\100-130V
- 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
- Dual satellite configuration settings

Software release

- Specifications valid for Sat3Play© software release 2.2

Standards

•	EN 302307	DVB-S2
•	EN 300421	DVB-S
•	EN 50478	SATMODE
•	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

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Remote Satellite Systems
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TOLL FREE 1-888-989-8199

1455 N. Dutton Suite A, Santa Rosa, CA 95401
FAX 707-546-8198 • info@remotesatellite.com
www.remotesatellite.com