Allied Telesis ™

AT-MC606
Fast Ethernet VDSL over Coax Network Extender

AT-MC606
Subscriber/provider unit

Extended Ethernet Operation
Used as a pair, the AT-MC606 provides up to 100Mbps of data transfer over a Coax 50 or 75 ohm cable via a BNC connector. Standard Ethernet operation is preserved end to-end, retaining VLAN tags, and Ethernet MAC information across the link, while higher layer protocols are passed transparently. Cable length of up to 2km can be supported by the AT-MC606.

Standalone and Rack-mount
The AT-MC606 provider unit is available as a compact standalone unit for installation at the central office, or alternatively, it can be rack-mounted in the standard AT-MCR12 chassis from Allied Telesis, capable of housing up to twelve units in one compact chassis with a redundant power supply, simplifying wiring and minimizing space requirements.

Plug and Play Operation
Simply connect to the RJ-45 Ethernet port and the unit will automatically auto-sense and configure for 10T or 10/100TX, as well as full or half-duplex Ethernet operation.

Cable length up to 2km		
Length	Synchronous	Asynchronous
200m	>85Mbps	>100Mbps / 60Mbps
2km	~20Mbps	~30Mbps / 9Mbps

The async mode is useful for IP surveillance modes, as it allows downstream information to be sent to the camera (zoom etc) – which required minimal bandwidth, whilst giving the maximum bandwidth to the upstream channel for video being sent to the servers. With this amount of bandwidth, a single existing coax cable can support multiple IP cameras, if they are connected via a switch to the AT-MC606.

Applications
The AT-MC606 is a perfect fit for the IP surveillance market. Many already installed analog cameras use a coax cable to connect cameras back to the control center or encoder. (At the encoder, the analog signal is converted to digital for backhaul transmission.)

When these cameras need replacing – they are now increasingly being replaced by digital cameras. Digital cameras do not allow connectivity over coax cables, so either the camera and cable needs to be upgraded, or the existing cable can be used if an AT-MC606 is installed at either end of the cable, saving the cost of running all new cabling.

The AT-MC606 can also be used in legacy 10Base2 (ThinNet) style applications, only if two AT-MC606 devices are connected, and provided they are at the end of the cable runs.

Advantages of IP Cameras (Digital) over Analog

- Cameras can provide higher quality images up to multi-mega pixel HD type formats.

- As the data is sent in a digital format, there is no signal quality degradation in transmission.

- Installation is easier, as the camera can use PoE to power the camera, instead of having to use a separate power cable. Also, analog PZT cameras also need additional cabling (even if they have audio), with each function being carried on a separate cable. With IP camera, all info is carried on a single Ethernet cable.

Key Features

- Up to 100Mbps, throughput
- Up to 2km coax cable
- Support 50 and 75 ohm coax cable
- BNC connector
- Asynchronous and synchronous operation
- Unmanaged
- Simple setup via DIP switches
- Same product operates as both provider and subscriber
- Traffic shaping upstream and downstream
- 10/100 Ethernet port
- Auto MDI/MDI-X
- Power, Ethernet activity and link LEDs
- Fully configurable using front panel dipswitch
- Standalone and rack-mountable
- Can be used in AT-MCR1, AT-MCR12, AT-TRAY1, AT-TRAY4
- Wall-mountable using optional AT-WLMT bracket
- Compact form factor
- Metal chassis
- Energy Star compliant external power adapter
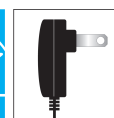
Powered by an ENERGY STAR® qualified adapter for a better environment

Technical Specifications
Speed/Distance

Tables show information for a product configured as a provider. For suscriber, reverse DownSteam (DS) and UpSteam (US) parameter.

unit=kbps

Coax Cable Distance Symmetrical 6dB		
Loop simulator	Real cable 5C2V	
CPE setting	BNC	
	SNR margin 6dB	
	Fast mode	
	Symmetric	
Loop length	Linerate (DS)	Linerate (US)
0m	86944	95136
200m	91840	97344
400m	87008	89088
600m	80544	83264
800m	70528	70176
1000m	62848	57376
1200m	50464	40160
1400m	40512	36736
1600m	34112	25152
1800m	22720	22176
2000m	20896	18400

Coax Cable Distance Symmetrical 9dB		
Loop simulator	Real cable 5C2V	
CPE setting	BNC	
	SNR margin 9dB	
	Fast mode	
	Symmetric	
Loop length	Linerate (DS)	Linerate (US)
0m	82112	88000
200m	86880	91200
400m	79328	82688
600m	74496	75840
800m	65824	63040
1000m	56512	50624
1200m	44064	34752
1400m	34642	31200
1600m	29120	21600
1800m	26560	19616
2000m	19168	16064

Coax Cable Distance Asymmetrical 6dB		
Loop simulator	Real cable 5C2V	
CPE setting	BNC	
	SNR margin 6dB	
	Fast mode	
	Asymmetric	
Loop length	Linerate (DS)	Linerate (US)
0m	101024	58208
200m	108928	61568
400m	107584	60128
600m	104224	55648
800m	92576	46272
1000m	82816	38720
1200m	70016	29120
1400m	60480	19968
1600m	52256	14208
1800m	44640	11136
2000m	31552	9024

Coax Cable Distance Asymmetrical 9dB		
Loop simulator	Real cable 5C2V	
CPE setting	BNC	
	SNR margin 9dB	
	Fast mode	
	Asymmetric	
Loop length	Linerate (DS)	Linerate (US)
0m	96608	55744
200m	99168	55872
400m	98880	54816
600m	97120	50752
800m	85728	42720
1000m	74784	34336
1200m	63488	24864
1400m	54592	15488
1600m	46784	11072
1800m	39232	9920
2000m	28992	7648

Technical Specifications (cont...)

Product Specifications

Datarate up to 100Mbps
4M flash
Half/full-duplex
Auto-negotiation
Auto MDI/MDI-X

Interface Connections

Ethernet interface Coax BNC-1
Management   4-pin DIP switch

Front Panel Indicators

System power
Ethernet link
Ethernet activity
Coax BNC link
Coax BNC rate

Provider/Subscriber

SNR   6dB / 9dB
Async/sync
Fast/intl   <1ms / <6ms latency

Reliability

MTBF   700,000 hours

Physical Characteristics

Dimensions   9.5cm x 10.9cm x 2.5cm
(W x D x H)
Weight   300g
Mounting   Tabletop and rack-mountable*
* requires AT-MCR12 chassis

Environmental Specifications

Operating temp.   0°C – 40°C (32°F – 104°F)
Storage temp.   -25°C to 70°C (-13°F to 158°F)

Relative humidity 5% to 95%, non-condensing

Operating altitude up to 10,000ft

Power Characteristics

External power supply 120V AC, 60Hz (US model)
                      240V AC, 50Hz
                      (European models)
Input supply voltage 12vDC
Max current   500mA
Power consumption   4W
Energy Star compliant

Country of Origin

China

Approvals

UL 1950
FCC class B
CSA
EN 55022 class B
EN 60950 (TUV)
EN 50082-1

Ordering Information

AT-MC606-60
RJ-45 to Coax BNC media converter with Energy Star.

Product supplied with multi-region external power adapter for US, EU, UK, AU.

Connecting The (IP) World

Allied Telesis