

ASM-61

2-Wire Symmetrical VDSL-Based Modem



- Two versions of the modem are available:
 - ASM-61/CO, for installation at the central office; generates internal clock
 - ASM-61/CPE, for installation at the customer premises; receives the clock from the central unit.
- The Ethernet/Fast Ethernet DTE interface operation complies with IEEE 802.3 and 802.3q requirements, including VLAN support.
- ASM-61 operates with preset timing modes at a constant line rate. The modem does not require any user configuration.

FEATURES

- 2-wire VDSL-based modem, enabling symmetrical full-duplex data transmission
- Range of up to 1.0 km (0.6 mile) at 10 Mbps line rate over 24 AWG line
- Employs VDSL QAM line coding for better bandwidth utilization
- Ideal for LAN extension applications
- Dedicated carrier-class unit fully interoperable with third-party equipment
- Complies with IEEE 802.3 and 802.3q requirements
- Plug-and-play operation

DESCRIPTION

- ASM-61, a VDSL-based modem, operates in full-duplex mode over 2-wire 19–26 AWG lines.
- Transmitting data at 10 Mbps, ASM-61 can be used in LAN extension applications. In these applications the modem achieves a typical range of up to 1.0 km (0.6 miles).

Note: The typical range is based on error-free real line lab tests without noise.
- The VDSL QAM technology is used to improve the bandwidth utilization and ensure efficient transmission, even over poor quality lines.

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SPECIFICATIONS

LINE INTERFACE

- **Type**
2-wire, unconditioned dedicated lines (twisted pair)
- **Line Coding**
QAM-based
- **Line Rate**
10 Mbps
- **Range**
Up to 1 km (0.6 miles) over 24 AWG cable
- **Line Attenuation**
See Table 1
- **Transmit Level**
11 dBm
- **Impedance**
100Ω
- **Return Loss**
More than 15 dB
- **Carrier**
Constantly On

10/100BASE-T INTERFACE

- **Type**
Ethernet/Fast Ethernet with VLAN support

- **Standard**
IEEE 802.3, 802.3q
- **Autonegotiation**
Always ON
Note: If a DTE attached to an ASM-61 modem does not support autonegotiation, the modem automatically switches to half-duplex mode at 10 Mbps or 100 Mbps.
- **Latency**
2.5 msec for 1518-byte packet (end-to-end)
- **Connector**
RJ-45

GENERAL

- **Timing**
ASM-61/CO: Internal
ASM-61/CPE: Receive
- **Indicators**
Front Panel:
PWR (green) – Power on
SYNC (green/red) – Line sync status
LAN (yellow) – Ethernet traffic status
Rear Panel:
ACT (yellow) – LAN activity status
LINK (green) – LAN integrity status
- **Power**
Combined AC/DC power supply:
100 to 240 VAC, 7VA
–48 VDC, 7W

- **Power Consumption**
4.6W
- **Physical**
Height: 4.4 cm (1.7 in)
Width: 23.7 cm (9.3 in)
Depth: 17.0 cm (6.7 in)
Weight 0.58 kg (1.4 lb)
- **Environment**
Temperature: 0°–50°C (32°–122°F)
Humidity: Up to 90%, non-condensing

ORDERING

ASM-61/AC/CO

2-wire symmetrical VDSL-based modem for central office installation

ASM-61/AC/CPE

2-wire symmetrical VDSL-based modem for customer premises installation

SUPPLIED ACCESSORIES

AC/DC power cord

OPTIONAL ACCESSORIES

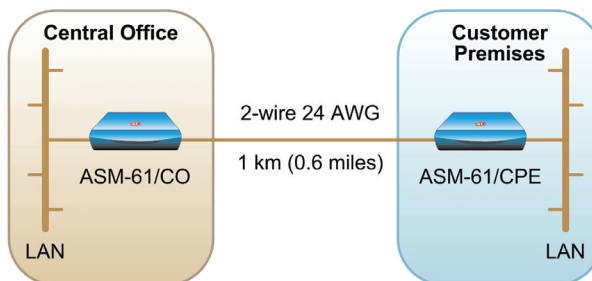
RM-33-2

Hardware kit for mounting one or two ASM-61 units into a 19-inch rack

Table 1. Line Attenuation for 1 km at 6.05 MHz

Cable Type	Attenuation [dB]
PIC 0.4 mm/26 AWG	-66.0
PIC 0.5 mm/24 AWG	-53.0
PE 0.4 mm/26 AWG	-64.2
PE 0.5 mm/24 AWG	-50.0
PE 0.63 mm/22 AWG	-41.4
PE 0.9 mm/19 AWG	-29.1
FP 1.14 mm	-49.7
CAT-3	-71.5
CAT-5	-50.0

APPLICATION



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