

Data Sheet

MICROSENS

Entry Line

Industrial Gigabit Ethernet VDSL2 Extender



Description

The Industrial Gigabit Ethernet VDSL2 Extender MS657023X allows the transmission of Gigabit Ethernet data over simple twisted-pair lines. Therefore Ethernet signals are converted into VDSL2 signals and vice versa. The extender is used per pair. One device has to be configured as master, the other one as remote unit. The data rate depends on the transmission distance and the quality of the cable.

The device is intended for DIN-rail mounting. For wall mounting the DIN-rail adapter at the rear side must be removed. A 12-24 VDC power interface with screw terminal is placed on the top side. All data connectors, the DIP switch and LED indicators are placed on the bottom side. RJ-45 connectors are used for the 10/100/100Base-T Gigabit Ethernet (GBE) port and the VDSL2 interface.

To simplify the cabling at the VDSL2 interface a RJ-45 adapter with screw terminal is available.

Features

- High speed Ethernet extension over existing copper cables (UTP, CAT 5e/6/7 and two-wire lines)
- Support ITU-T G.993.5 G.vectoring and G.INP
- Selectable 8 different profile settings via DIP switch (G.INP/Interleaved, target SNR 6/8/12/24 dB, symmetric/asymmetric modes)
- Compatible with third-party VDSL2 IP DSLAM when operates in in CPE(RT) mode
- Wide operating temperature range from -20° to 65° C
- Cost effective bridge function to connect two Ethernet LANs
- IEEE 802.1Q VLAN tag transparent
- Power: 12-24 VDC
- Easy installation via simple plug-and-play

Technical Specifications

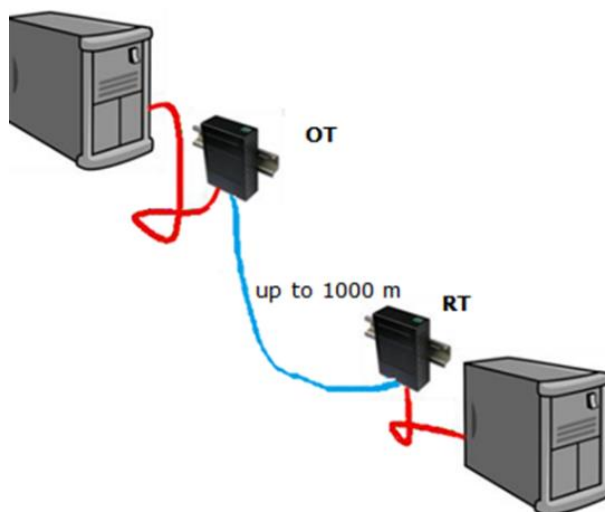
Type	Industrial Gigabit Ethernet VDSL2 Extender	
LAN Interface	Number	1
	Type	10/100/1000Base-T Gigabit Ethernet
	Connector	RJ-45
	Pin-out	Auto-crossing
	Standards	IEEE 802.3, 802.3u and 802.3z
VDSL2 Interface	Number	1
	Type	VDSL2
	Connector	RJ-45
	Pin-out	Wire 4 and 5 are used only
	Cabling	Cat. 5e, 6, 7; ISTY (2-wire)
	Standards	Complying with ITU-T G993.1-2-5/ G.997.1/G.998, DMT encoding, G.INP
Power Supply	Nominal Input Voltage	12-24 VDC
	Input Voltage Range	7.5-30 VDC
	Power Consumption	Max. 4.5 W
	Connector	1x pluggable screw terminal
	Wiring	Cross-sectional area: 0.7 to 2.5 mm ² Max wire length: 3m (9.84 ft)
LEDs	Power	On / off
	Ethernet	Link, speed and activity
	VDSL Mode	RT or OT
	Sync	Link, idle or training
Mechanic	Installation	DIN-rail (EN 550022) or wall-mounting
	Dimensions	96.2 x 22.8 x 73.4 mm ³]
Environmental Conditions	Operating Temperature	-20...+65° C
	Rel. Humidity	0...95 % (non-condensing)
EMC	Emission	EN 55032 A
	Immunity	EN 55024
Safety		EN 62368-1
CE	Low Voltage Directive	2014/35/EU
	EMC	2014/30/EU
	RoHS	2011/65/EU and 2015/863/EU

Typical Applications

Scenario 1: Symmetrical Application

Max. Upstream Speed: 150 MBit/s
 Max. Downstream Speed: 150 MBit/s

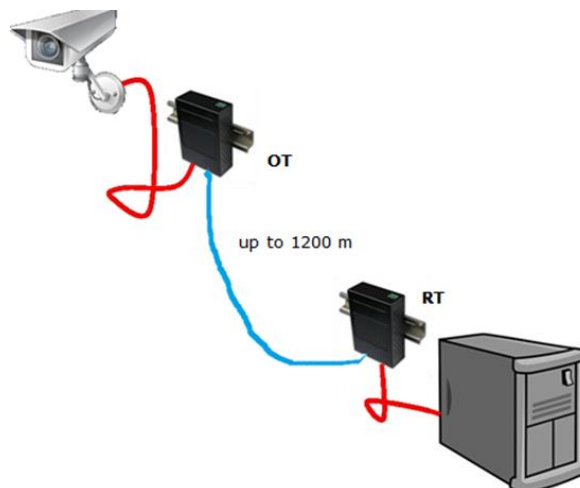
UTP, 26AWG		
Profile Setting 1: Symmetric, SNR 8dB, G.INP		
Distance (Feet)	Upstream Line Rate (Mbps)	Downstream Line Rate (Mbps)
500	155	158
1,000	122	126
1,500	75	80
2,000	48	56
2,500	28	38
3,000	23	28



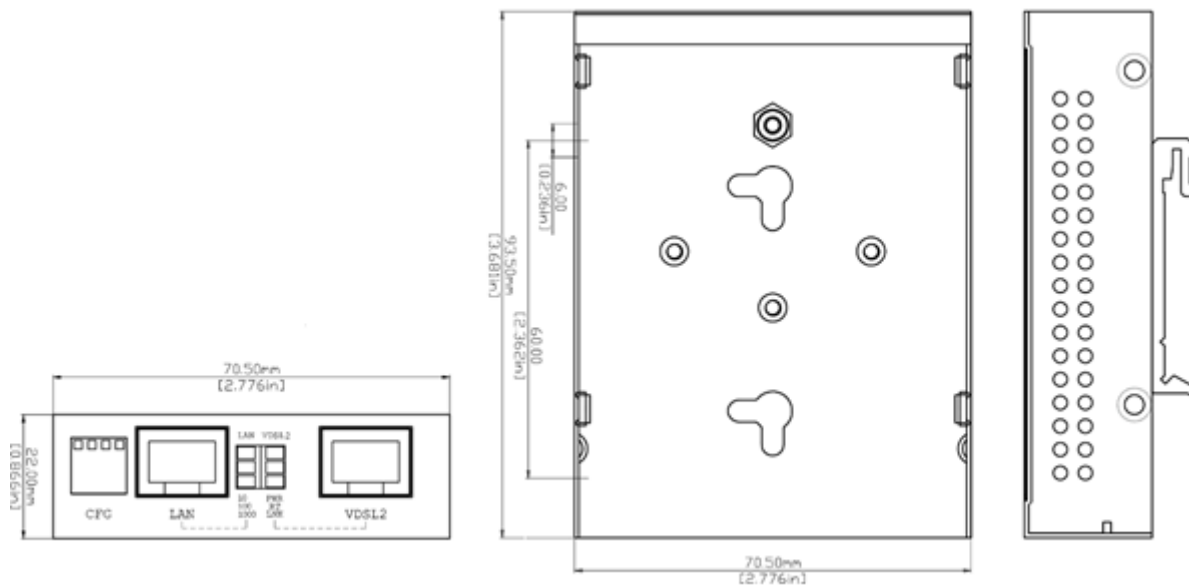
Scenario 2: Asymmetrical Application

Max. Upstream Speed: 100 MBit/s
 Max. Downstream Speed: 200 MBit/s

UTP, 26AWG		
Profile Setting 1: Asymmetric, SNR 8dB, G.INP		
Distance (Feet)	Upstream Line Rate (Mbps)	Downstream Line Rate (Mbps)
500	100	200
1,000	54	129
1,500	49	112
2,000	39	84
2,500	23	60
3,000	11	45
4,000	6	40



Dimensions



Ordering Information

	Description	Art.-No.
	Industrial Gigabit Ethernet VDSL2 Extender	
	Industrial Gigabit Ethernet VDSL2 Extender 1x 10/100/1000Base-T, 1x VDSL2, max. 1200 m, DIN-rail mounting, -20...+65° C, 12-24 VDC	MS657023X

Accessories

	Description	Art.-No.
	RJ-45 to 2-wire adapter for MS657023X (VDSL2 port)	MS180293
	DIN-rail Power Supply 24 VDC / 1.25 A (30 W) Adjustment range 24..28 VDC Wide input range 100-240VAC, 120..375VDC Temperature range -20..+70° C	MS700440

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