Networks

IE-iMcV-VDSL2-LANextender

10/100Base-T, Ethernet over VDSL

Extend Ethernet services to remote locations or between buildings with Ethernet over Second Generation VDSL.

Features and Benefits

Flexible Solution

- Media and protocol converter - converts 10/100BaseT to VDSL
- Operates over existing CAT3 or other telephone cabling
- Supports VDSL2 for Band Plan 997/998, symmetrical and asymmetrical transmission per ITU-T G.993.2 standard
- Extended operating temperature of -40° C to +85° C

Easy to configure and manage with GUI-based iView²

- Automatically adjusts to reach best bandwidth performance for the physical line in use
- Monitor and control all connections
- Displays maximum VDSL bandwidth
- User selectable Trap on VDSL bandwidth level

Eases Troubleshooting

- Features Flow Control, Link Loss, Link Fault Pass-Through (LFPT) & Remote Alarm Indication (RAI)
- Link Quality LED displays maximum supported bandwidth
- Overflow LED to display congestion on the VDSL line

VDSL Ethernet LAN Extenders enable LAN and campus network managers and service providers to use an existing phone-grade wiring plant to extend 10 Mbps and 100 Mbps Ethernet twisted pair interfaces by using Ethernet over VDSL; the 100 meter distance limitation of twisted pair data cabling is no longer a challenge.

Designed with Second Generation VDSL (Very high-bit-rate Digital Subscriber Line) technology, the IE-iMcV-VDSL2-LANextender allows the transmission of data over sub-standard CAT3 and other telephone cabling to achieve higher data rates than comparable VDSL converters at short distances (less than 100 meters), while supporting asymmetrical data rates on substantially longer lines (greater than 2 km).

IE-iMcV-VDSL2-LANextender modules include:

- One VDSL port with an RJ-11 connector
- One 10/100 twisted pair Ethernet port with a RJ-45 connector
- Auto MDI/MDIX, Auto Negotiation and Selective Advertising with Flow Control on the 10/100 port

Technical Specifications

The IE-iMcV-VDSL2-LANextender has been designed to provide the greatest possible transport data rate over a single pair of unshielded copper wire (CAT3). It allows the user to select either Symmetrical or Asymmetrical data rates on a short line of less than 2,000 feet. Either selection downgrades to an Asymmetrical data rate on longer lines and can operate beyond 5,000 feet depending on the condition of the line and the electrical noise environment. At all times, the four "Quality" LEDs provide an indication of the MAX downstream bandwidth provided by the VDSL line. This also indirectly indicates the line length and noise on the line in use.

VDSL2

- Operates over existing telephone twisted pair cabling (CAT3)
- IEEE 802.3 10Base-T; IEEE 802.3u 100Base-TX
- Asymmetric/symmetric data rates (Band Plan 997/998)
- IEEE 802.3x Flow Control
- Auto Negotiation of speed and duplex (HDX/FDX) on Ethernet port
- Includes Link Fault Propagate
- Supports packets up to 1536 bytes
- Installs in any iMediaChassis or MediaChassis
- Supports GUI-Based iView[2]
- Connectors: RJ-45 and RJ-11
- Includes diagnostic LEDs
- Include hot-swappable architecture

Regulatory Approvals:

- FCC Class B
- UL/cUL, CSA, CE

Operating Temperature:

-40° to 185° F (-40° to +85° C)

Storage Temperature:

-67° to 257° F (-55° to +125° C)

Humidity:

5% to 95% (non-condensing), 0 – 10,000 ft. altitude

| Distance	Upstream Data Rate*	Downstream Data Rate*	Upstream Data Rate*	Downstream Data Rate*
	Asymmetrical		Symmetrical	
300 ft.	58 Mbps	100 Mbps	84 Mbps	98 Mbps
1,000 ft.	43 Mbps	85 Mbps	61 Mbps	63 Mbps
2,000 ft.	14 Mbps	50 Mbps	25 Mbps	37 Mbps
5,000 ft.	0.3 Mbps	16 Mbps	0.3 Mbps	16 Mbps

Distances and speeds are approximate; actual distances depend on wiring quality and gauge. The distances are less than or equal to the values listed.
The actual Ethernet speeds are lower than the speeds listed above due to VDSL overhead.

Ordering Information

PART NUMBER	DESCRIPTION	DISTANCE
IE-iMcV-VDSL2-LANextender Module		
851-18200	IE-iMcV-VDSL2-LANextender	Refer to Matrix

Application Example

In this application the IE-iMcV-VDSL2-LANextender provides data transmission using existing phone-grade wiring such as sub-standard CAT3 or other telephone cabling at a distance greater than 100 m when fiber is either too expensive or unavailable. By utilizing existing cabling to transmit data between floors and with the unit's built-in auto adjusting link quality (throughput), and improved fault isolation with Remote Alarm Indicator, Flow Control, and Link Fault Pass-Through, the unit ensures the connection is maintained as well as the ability to quickly troubleshoot when problems do arise.
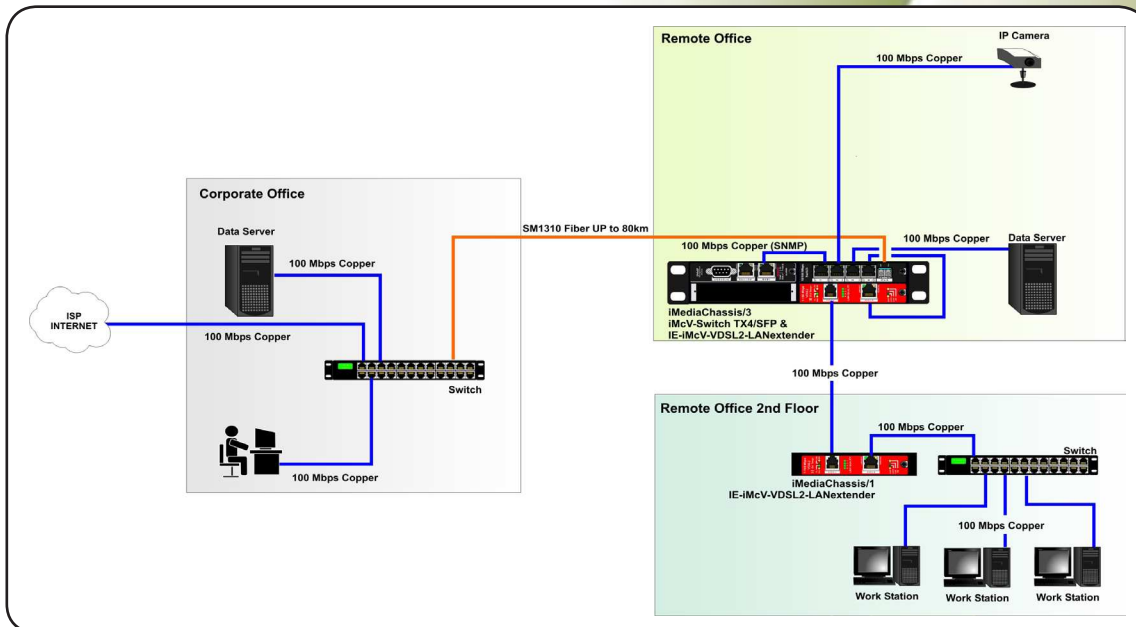
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