

JetCon 2502

Industrial Ethernet over VDSL2 Extender



CE FC  RoHS

- IEEE 802.3u 100Base-TX Fast Ethernet Extender
- IEEE 802.3x flow control & Back-pressure
- ITU-T G.993.2 VDSL2 standard
- 2 x RJ-11 connectors for POTS/ISDN and VDSL
- One RJ-45 10/100Mbps Fast Ethernet Port
- Build-in POTS/ISDN Splitter
- Extend Voice and Ethernet to 1KM far
- Transparent 1792 bytes packet size
- Broadcast Packet filtering
- Power input by DC jack & terminal block
- -40~70°C Hazardous environment application

Ideal Ethernet /Voice Extender

JetCon 2502 is an Ethernet/POTS to VDSL2 (Very High-Rate Digital Subscribe Loop -2) extender and is compliance with ITU-T G.993.2 standard. It allows carriers to deliver Ethernet data up to 100Mbps in both upstream and downstream over existing twisted copper. The Ethernet/POTS (Plain Old Telephone

Service) converter features Discrete Multi-Tone modulator/ de-modulator and VDSL Analog Front End (AFE) technology; it is an ideal solution to carry POTS signal and Ethernet Data stream to 3000 feet to extend local LAN and voice on the same line.

Economic and simply connection

To deploy VDSL2 access with the telephone network, the VDSL2 converter should follow the line impedance of telephone network. Therefore, each region will adopt different line splitter to provide best communication quality.

As a result, users need additional wiring and splitter, but mostly make a jumble at home and office. To solve this problem, the JetCon 2502 has implement splitter for each region to save your installation time and make it more easily to connect.

Central and Discrete Internet Access

For the network infrastructuel, JetCon 2502 is the best choice for planning centralized internet access through the existing POTS wiring system

for hotels, dormitories or where need to extend LAN over 100m over a single pair of copper path.

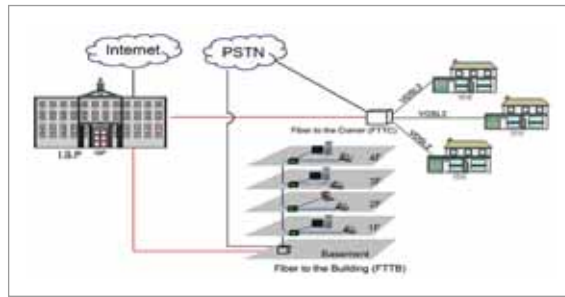
Triple Play – HDTV, Data Access, Video conference

JetCon 2502 allows users to compete with wireless and satellite providers by offering outstanding service, such as Video conference, HDTV or Video chatting over a existing telephone copper cable without any configuration, just plug and play to enlarge infrastructure for your applications.



Internet last mile access

The VDSL2 technology also deployed at the last mile of internet access. The ISP uses the fiber cable as backbone uplink to the basement of building (FTTB) or corner of streets (FTTC) and uses the exist 1 pair twisted cable of POTS system to carry voice and Ethernet data stream to users via VDSL2 signal.



Intelligent Traffic System application

In the Intelligent Traffic system (ITS), the VDSL2 technology could be applied in the long distance data transmission for the traffic signal control or traffic information signboard. The JetCon 2502 can save the fiber cost by using the twisted cable up to 3000 feet at DS/US data rate 35Mbps / 8Mbps for low speed data transmission but over the Ethernet link distance.



Industrial
PoE Switch

IP67/68
Ethernet Switch

Rackmount
Managed
Switch

Gigabit Switch

Redundant
Switch

Entry-Level
Switch

Networking
Computer

Communication
Computer

Ethernet
I/O Server

Serial Device
Server

Media
Converter

Multiport
Serial Card

SFP Module

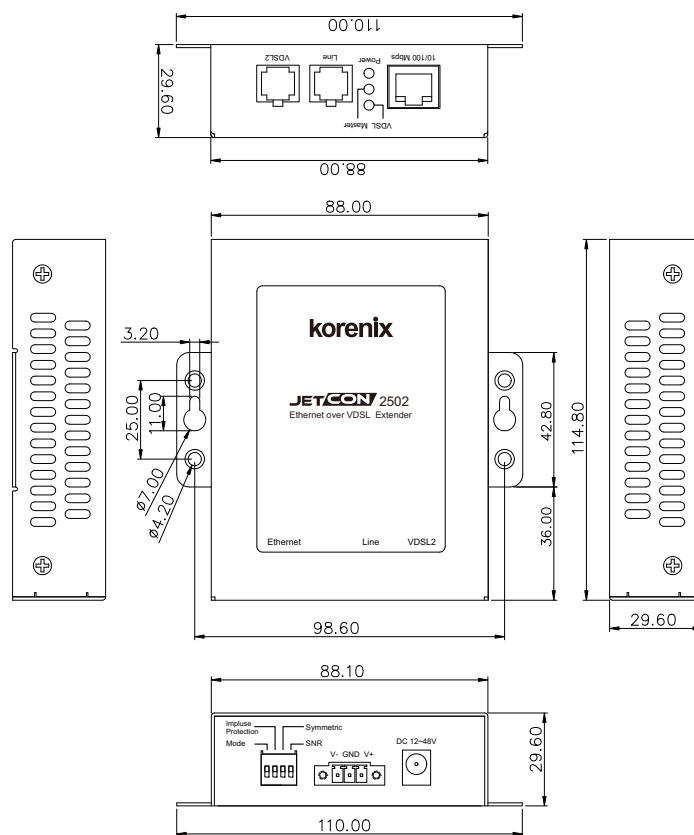
Din Rail
Power Supply

Subway & Railway System application

JetCon 2502 can also be applied in the subway and railway system to offer a long distance transmission with low data traffic, such as the Fire Alarm System (FAS) and Passenger Information Direction System

(PIDS) with the VDSL2 technology to communicate between outdoor device and Control Room to replace the fiber cable and save more costs.

Dimensions (Unit –mm)



Specification

Technology

Standard:

IEEE 802.3 10 Base-T
 IEEE 802.3u 100 Base-TX
 IEEE 802.1p Class of Service
 IEEE 802.1Q Quality of Service
 ITU-T G.993.2 VDSL2

Performance

Forwarding Technology: Store and Forward technology with 64 ~1792 bytes packet forwarding ability

Switch Packet Buffer: 384Kbits

Mac Table: 2K with 300 Sec agent time

Class of Service: 4 Packet forwarding queues with 1 (Lowest):4 (Low):8 (High):15 (Highest) WRR (weighted round robin) forwarding schematics

Quality of Service: VLAN tag priority, IPv4 packet precedence and IPv6 ToS.

Broadcast filtering: Fast Ethernet: 200 packet / per sec. @ 100Mbps; 20 packet / per sec. @ 10Mbps

Interface

Number of Ports: 1x 10/100Mbps Fast Ethernet port with Auto MDI/MDI-X function

Auto-Negotiation

1x Line for ISDN/POTS

1x VDSL2

Connectors: 10/100 Base-TX: RJ-45 with auto MDI/MDI-X, Auto-Negotiation

ISDN/POTS: RJ-11

VDSL2: RJ-11

Cables: RJ-45 Fast Ethernet port: Cat.4,5, 2 pairs UTP cable, up to 100 meters

VDSL2: 1pairs of UTP cable, up to 3000 feet.

Line: Integrated ISDN/POTS

Configuration DIP Switch:

DIP-1 (Mode selection): On (Master) / Off (Slave)

DIP-2 (Impulse protection): On (Interleave)/ Off (Fast) ; Interleave mode with less than 250ms forwarding latency, Fast mode is less than 2ms forwarding latency.

DIP-3 (Rate Control): On (Non-Symmetric)/Off (Symmetric)

DIP-4 (SNR Control): On (6dB)/ Off (9dB)

300bps to 921.6Kbps

Diagnostic LED:

Ssystem Power: Power on (Green on)

Fast Ethernet Port: Speed (100 Mbps: Yellow On), Link/

Activity(Green)(On:10 or 100 Mbps Link up, Blinking:

Packet is on transmitting)

Master (Green On): Device operating under Master Mode

VDSL Link/ Negotiation (Green): On/ Link, Blinking/ Negotiation

Power Requirements

System Power:

DC Jack: 12~48V, 3-pin, Ø 2mm Center Pin

Terminal block: DC 12~48V, 3-Pin terminal block with earth ground. Power input with polarity reverse protection.

Power Consumption: 5Watts @DC 24V(Maximum)

Mechanical

Installation: Wall Mount or DIN-Rail mount

Casing: Aluminum metal case

Dimensions: 29mm (H) x 88mm(W) x 114mm (L)

Environmental

Operating Temperature: -40 ~70°C

Operating Humidity: 0% ~ 95% (non-condensing)

Storage Temperature: -40 ~ 80°C

Storage Humidity: 0%~ 95% (non-condensing)

Regulatory Approvals

Hi-Pot: Ethernet port AC 1.5KV for port to power

EMI: FCC Class A; CE/EN55022 class A

EMC Immunity Interface:

IEC 61000-4-2, IEC61000-4-3, IEC61000-4-4,

IEC61000-4-5, IEC61000-4-6, IEC61000-4-8

Shock: IEC60068-2-27

Vibration: IEC60068-2-6

Free Fall: IEC60068-2-32

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Converter

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Serial Card

SFP Module

Din Rail
Power Supply

Ordering Information

JetCon 2502 Industrial Ethernet over VDSL2 converter, 600 Ohm

Includes:

- JetCon 2502
- DIN rail kit
- Quick Installation Guide