



## VDTU2A-404

### 4x GbE LAN Extender

The VDTU2A-404 VDSL2 LAN Extender is a high-speed Ethernet Extender designed for applications under harsh environment. It is equipped with 4 Gigabit Ethernet Ports (RJ-45 connector) and one VDSL port (RJ-45 connector) in metal enclosure for easy installation in harden environment. It is a bridge mode modem, well accommodating VDSL2 (Very-high-data-rate Digital Subscriber Loop) technology to extend Ethernet service over single-pair phone line. It is compliant to ITU-T G.993.2 standard and supports VDSL2 30a profile that features 100Mbps of symmetric data rate over the existing copper wires. Supporting both symmetric and asymmetric transmission, it can reach up to 190/110Mbps bandwidth (line rate) within 300M. By providing ultra-high speed, the VDTU2A-404 VDSL2 LAN Extender makes your telephone line achieve its best performance than before. It has the advantage of minimum installation time (simply as plug-n-play) and minimum expense by allowing video streaming and data to share the same telephone pair without interference.

The VDTU2A-404 VDSL2 LAN Extender delivers everything needed to quickly deploy a high-speed IP-based network for providing high-speed Internet access, video-on demand services and voice services. The resulting compact, cost-effective form factor offers Systems Integrators, small business owners an attractive Long Reach Ethernet solution.

### Feature

- Metal enclosure for easy installation in Utility applications
- Cost effective bridge function to connect two Ethernet LAN
- IEEE 802.1Q VLAN tag transparent
- Easy installation via simple plug-and-play
- Supports VDSL2 Profile 30a High Throughput mode
- Supports VDSL2 Profile 17a long Reach mode

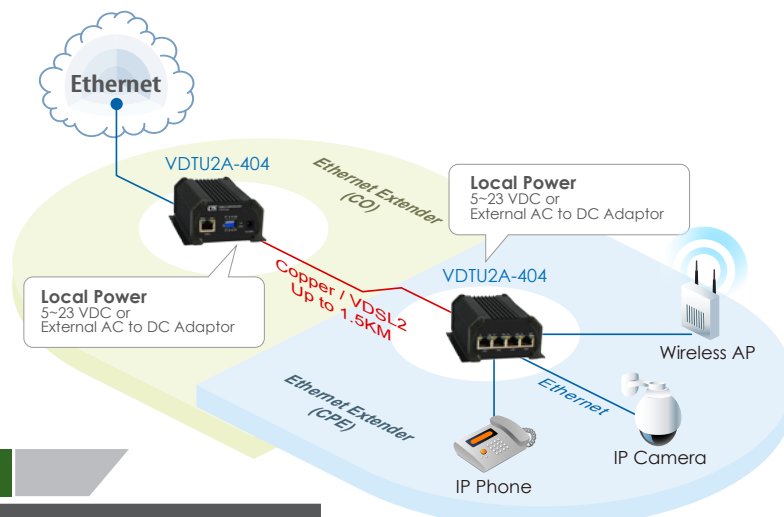
### Specifications

|                              |   |
|------------------------------|---|
| <b>VDSL Interface</b>        | RJ-45 connector<br>DMT Encoding<br>Complying with ITU-T G993.1/993.2/G.997.1<br>On-board surge protection   |
| <b>LAN Interface</b>         | 4 x RJ-45 connectors<br>10/100/1000 Base-T; Auto-Negotiation, Auto-MDI/MDI-X.<br>Complying with IEEE 802.3/802.3u/802.3z                              |
| <b>4-position DIP Switch</b> | Selectable CO or CPE mode<br>Selectable Fast or interleave mode<br>Selectable 30a or 17a (VDSL2 Profile)<br>Selectable target SNR margin (6dB or 9dB) |
| <b>LED</b>                   | Power: On/Off<br>LAN: Fast Ethernet/Gigabit Ethernet<br>VDSL2: Mode - CO/CPE Link - Idle/Trained/Link   |
| <b>Power supply</b>          | External 12V/1A Power Adaptor   |
| <b>Power Consumption</b>     | 4.5 Watts maximum   |
| <b>Dimension</b>             | 110.7 x 88 x 40mm (DxWxH)   |
| <b>Operating Temperature</b> | 0°C ~50°C (Adapter), -40 ~ 70°C (LAN Extender)  |
| <b>Humidity</b>              | 0%~95%RH (non-condensing)   |

|                              |  |
|------------------------------|--|
| <b>Installation</b>          | Wall Mounting or Magnet Kit (optional) |
| <b>Regulatory Compliance</b> | CE, FCC Part 15 Class A, EN60950       |

| Performance                        |                           |                             |
|------------------------------------|---------------------------|-----------------------------|
| UTP, 24AWG                         |                           |                             |
| Profile 30a : High Throughput Mode |                           |                             |
| Distance (Feet)                    | Upstream Line Rate (Mbps) | Downstream Line Rate (Mbps) |
| 500                                | 97                        | 183                         |
| 1000                               | 59                        | 136                         |
| 1500                               | 40                        | 96                          |
| 2000                               | 24                        | 64                          |
| 2500                               | 10                        | 56                          |
| 3000                               | 6                         | 43                          |
| UTP, 24AWG                         |                           |                             |
| Profile 17a : Long Reach Mode      |                           |                             |
| Distance (Feet)                    | Upstream Line Rate (Mbps) | Downstream Line Rate (Mbps) |
| 500                                | 54                        | 129                         |
| 1000                               | 49                        | 112                         |
| 1500                               | 39                        | 84                          |
| 2000                               | 23                        | 60                          |
| 2500                               | 11                        | 45                          |
| 3000                               | 6                         | 40                          |
| 4000                               | 1                         | 31                          |
| 6000                               | 0.64                      | 14                          |
| 9000                               | 0.36                      | 4                           |

### Application



### Ordering Information

| Model Name | Description                           |
|------------|---------------------------------------|
| VDTU2A-404 | 4-Port 10/100/1000Base-T LAN Extender |



## VDTU2A-304

### 4x 10/100Base-TX LAN Extender

The VDTU2A-304 LAN Extender is a long reach Ethernet extender with four Ethernet ports and two phone jacks, in which one is for VDSL2 connection and the other is for POTS (Plain Old Telephone Service) connection. It has built-in POTS splitter to share the existing phone line with POTS eliminating the need for replacing the existing copper wiring. It is ideal for use as an Ethernet extender to an existing Ethernet network. While accommodating VDSL2 (Very-high-data-rate Digital Subscriber Loop) technology to extend Ethernet service over single-pair phone line, VDTU2A-304 can reach up to 100/75 Mbps bandwidth (line rate) within 300M or 40/10 Mbps bandwidth (line rate) for 1 Km long-range connections. By providing ultra-high speed, VDTU2A-304 LAN Extender makes your telephone line achieve its best performance ever. It has the advantage of minimum installation time (simple as plug-n-play) and minimum expense by allowing video streaming and data to share the same telephone pair without interference. VDTU2A-304 delivers everything needed to quickly deploy a high-speed IP-based network for providing high-speed Internet access, video-on demand services and voice services. The resulting compact, cost-effective form factor offers systems integrators and small business owners an attractive long reach Ethernet solution.

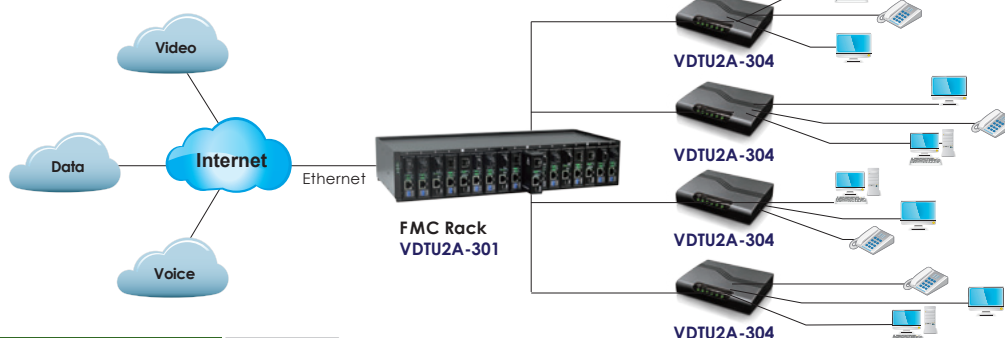
### Feature

- Cost effective bridge function to connect two Ethernet LAN
- Easy installation via simple plug-and-play
- Selectable CPE and CO mode : Two working modes are built in the same unit, which keep the flexibility of installation and easy provision of service but lower inventory of service provider.
- Selectable fast and interleaved mode: Fast mode guarantees a minimum end to end latency less than 1 mS. Interleaved mode provides impulse noises protection for any impulse noise with duration less than 250uS. Interleaved mode has a maximum end to end latency of 10mS.
- Selectable target band plan : VDSL2 defines multiple band plans and configuration modes to allow asymmetric and symmetric services in same binder for data transmission.
- Asymmetric is selected that provides better downstream performance. Symmetric is selected that provides better upstream performance.
- Selectable target SNR margin: It has the ability to select fixed SNR margin value on 9 dB or 6db. The systems will maintain the SNR margin at their value across all usable loop length. The higher SNR value gets better line quality, but lower performance.

### Specifications

|                   |   |                          |  |
|-------------------|---|--------------------------|--|
| <b>Standards</b>  | Compliant with ITU VDSL2 standard G.993.2 Annex A, Annex B and Annex C<br>Supports VDSL2 profile : 8a, 8b, 8c, 8d, 12a, 12b and 17a<br>Band plan profile: symmetric (Plan 997) and asymmetric (Plan 998)<br>Supports fast and interleaved mode<br>Target SNR Margin : Selectable<br>Built-in POTS splitter to share voice and data (Optional) | <b>Interfaces</b>        | Ethernet : 4x RJ-45 connectors for Ethernet 10/100Mbps ports with Auto-MDI/MDIX<br>VDSL : 1x RJ-11 connector for VDSL2 port<br>Phone : 1x RJ-11 connector for POTS Splitter (Optional)<br>General : PWR and SYS<br>WAN (VDSL2) : CO, CPE, LINK and ALM<br>LAN (Ethernet) : 1, 2, 3, 4 LNK/ ACT |
| <b>Management</b> | Web-based GUI for quick setup, configuration and management<br>Firmware upgradable from Web   | <b>Indicators</b>        | General : PWR and SYS<br>WAN (VDSL2) : CO, CPE, LINK and ALM<br>LAN (Ethernet) : 1, 2, 3, 4 LNK/ ACT   |
| <b>LAN</b>        | Filtering functions for MAC/IP/Port<br>QoS for Port/VLAN/DSCP/TCP-UDP Port number<br>Port Based VLAN & IEEE 802.1q VLAN Tagging<br>Port configuration for Bandwidth/Duplex/Speed/Flow control/Broadcast storm   | <b>Power</b>             | Input : AC 90~240V/50 ~ 60Hz ; Output : DC 12V/1A  |
|                   |   | <b>Power consumption</b> | 9 watts maximum  |
|                   |   | <b>Environment</b>       | Temperature : 0 ~ 45°C<br>Humidity : 0% ~ 95% (non-condensing)   |
|                   |   | <b>Dimensions</b>        | 131.5 x 180 x 36.5 mm (D x W x H)  |
|                   |   | <b>Weight</b>            | 300g   |

### Application



### Ordering Information

| Model Name    | Description   |
|---------------|---|
| VDTU2A-304/US | 4-port 10/100Base-TX LAN Extender with splitter 600 ohm |



## VDTU2A-301

### 10/100Base-TX LAN Extender

The VDTU2A-301 is our lowest cost LAN extension solution using the G993.1/993.2 VDSL2 technology and providing up to 100Mbps throughput with only a single copper wire pair. A LAN extender is a device that forwards traffic between LANs transparently to higher network-layer protocols over distances that far exceed the distance limitations of standard Ethernet. A LAN is a high-speed data network (usually employing Ethernet technology) that connects computer workstations, printers, servers, and other devices. Designed specifically for LAN to LAN extension and supporting both symmetrical and asymmetrical transmission at up to 100/75Mbps within 300 meters or 10/10Mbps rate at 1000 meters, this is a perfect solution to extend a LAN to an adjacent building, garage or any location outside of the 100 meter reach of Ethernet UTP.

### Feature

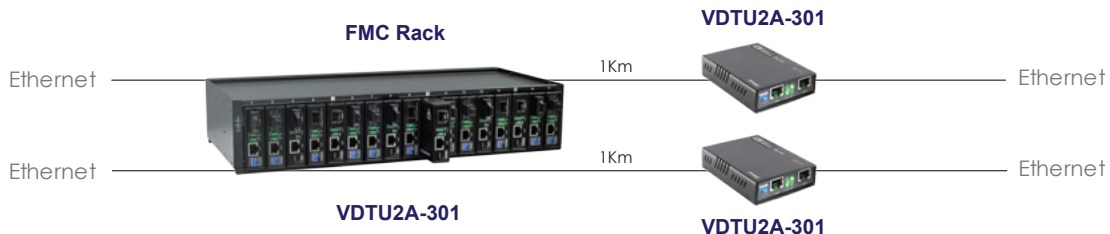
- Cost effective bridge function to connect two Ethernet LANs
- 100/75Mbps @ 300m (980 Ft)
- 10/10Mbps @ 1km (3300 Ft)
- Supports flow control via Pause frame or back pressure
- 802.1Q VLAN tag transparent
- Selectable CPE and CO mode via DIP switch
- Selectable fast and interleaved mode
- Selectable target band plan
- Selectable target SNR margin 9dB or 6dB

### Specifications

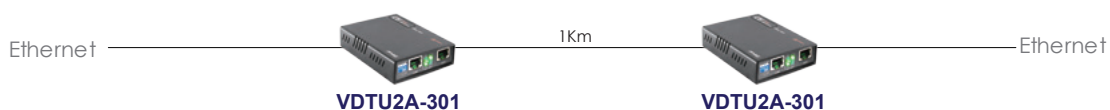
|                              |  |                          |  |
|------------------------------|--|--------------------------|--|
| <b>LAN Interface</b>         | Complies with IEEE 802.3 10Base-T and 802.3u 100Base-TX<br>Connector : RJ45<br>MTU : 1536 Bytes  | <b>Power Consumption</b> | 4.2W   |
| <b>VDSL2 Interface</b>       | Complies with ITU-T G993.1/993.2/ G997.1<br>Connector : RJ45<br>DMT encoding<br>On-board surge protection  | <b>Dimensions</b>        | 97 x 73 x 23mm (D x W x H)   |
| <b>4-position DIP Switch</b> | Selectable CO or CPE mode<br>Selectable fast or interleave mode ( Impulse noise protection)<br>Selectable Band plan (Symmetric or Asymmetric)<br>Selectable target SNR margin (6dB or 9dB) | <b>Weight</b>            | 80g  |
| <b>Indicator</b>             | LAN : Act/Link, 10/100Mbps, Half/Full duplex<br>VDSL : CO/CPE, Idle/Trained/Link, Power  | <b>Temperature</b>       | 0 ~ 50°C (Operating), -10 ~ 70°C (Storage)   |
| <b>Standard</b>              | ITU-T G.993.1, 993.2, IEEE802.3, 802.3u  | <b>Humidity</b>          | 10 ~ 90% non-condensing  |
| <b>Power</b>                 | DC 12V via AC switching adapter  | <b>Certification</b>     | CE, FCC, RoHS compliant  |
|                              |  | <b>MTBF</b>              | 50,000 hrs   |
|                              |  | <b>Emission</b>          | EN 55022: 2006 + A1:2007, Class B<br>AS/NZS CISPR 22: 2006, Class B<br>EN 61000-3-2: 2006 + A1: 2009 + A2: 2009, Class A<br>EN 61000-3-3: 2008   |
|                              |  | <b>Immunity</b>          | EN 55024: 1998 + A1: 2001 + A2:2003<br>IEC 61000-4-2: 2008 ED.2.0<br>IEC 61000-4-3: 2006+A1: 2007 ED.3.0<br>IEC 61000-4-4: 2004+A1: 2010 ED.2.0<br>IEC 61000-4-5: 2005 ED.2.0<br>IEC 61000-4-6: 2008 ED.3.0<br>IEC 61000-4-8: 2009 ED.2.0<br>IEC 61000-4-11: 2004 ED.2.0 |

### Application

#### Rack to Standalone Solution



#### Standalone to Standalone Solution



### Ordering Information

| Model Name        | Description   |
|-------------------|---|
| VDTU2A-301        | 1x 10/100Base-TX LAN Extender                             |
| FMC-CH17-AC/DC/AD | 2U, 17-slot FMC converter Chassis with AC, DC or AD Power |

VDTU2A -   
 Example: VDTU2A - 301

Chassis Power Type  
 FMC-CH17 -   
 Example: FMC-CH17 - AD