

# VDSL2

*The last mile broadband solution*

## General Features

### Transmission modes

|                           |                                               |
|---------------------------|-----------------------------------------------|
| VDSL2 profiles            | 8a, 8b, 8c, 8d, 12a, 12b, 17a, 30a            |
| Data rate                 | Up to 100 Mbps upstream / 100 Mbps downstream |
| Band-plans                | Conforms to NA, EUR & Swedish band-plans      |
| Annex                     | A/B/C                                         |
| Parameter configurability | 997.1 Compliant                               |

### Advanced Features from ITU

|     |                                                                     |
|-----|---------------------------------------------------------------------|
| OLR | Supports bit swapping, SRA and dynamic interleaver depth (D) change |
| US0 | Supported                                                           |
| PBO | Both UPBO and DPBO supported                                        |

### Unique Features

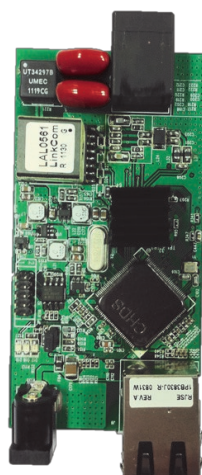
|                      |                                                                                       |
|----------------------|---------------------------------------------------------------------------------------|
| QoS                  | Flexible packet sorting based on EtherType, VLAN ID or VLAN priority (supports QinQ). |
| Legacy compatibility | Compatible with POTS and ISDN                                                         |

### Interfaces

|       |                          |
|-------|--------------------------|
| RJ-11 | RJ-11 VDSL2 connector    |
| RJ-45 | RJ-45 Ethernet connector |

## VDSL2 Ethernet dongle

EVB2301-BL/Eth



## Applications

- VDSL2 dongle
- VDSL2 bridge
- Low cost VDSL2 upgrade for current ADSL gateway with WAN port

This is a reference design for a high performance and low cost Ethernet connected VDSL2 bridge based on the MT2301 DMT chip.

This is a perfect solution for fast VDSL2 deployment and our area efficient design enables attractive casing possibilities. This extremely cost efficient design is a smart choice for operators and service providers looking for a low CAPEX VDSL2 migration path.

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## **Simplicity with Ethernet RJ-45**

This design provides VDSL2 connectivity through Ethernet RJ-45 connection, which is by far the most popular and commonly deployed network connection interface. This enables products based on this design to easily address any connectivity requirements and issues with current installations, which in turn will both simplify and lower the CAPEX of a VDSL2 migration.

## **Fully standard-compliance ensures guaranteed interoperability**

The MT2301 DMT and 3301 AFE fully comply with the ITU-T standards for VDSL2. In addition to compliance, Metanoia has devoted considerable efforts and resources to ensure complete interoperability with other chip vendors to provide a reliable and seamless VDSL2 experience.

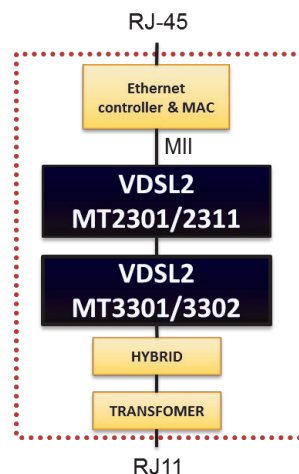
## **Cost-efficiency enables smooth VDSL2 migration**

This extremely cost-efficient design enables a low CAPEX solution for a seamless migration to VDSL2. This can enable a path for operators to upgrade the internet service of existing customers at a very minimal cost.

## **Small size enables user friendly casing**

The small physical form factor of this design enables a customer friendly and attractive casing.

## Block diagram for Ethernet VDSL2 :



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