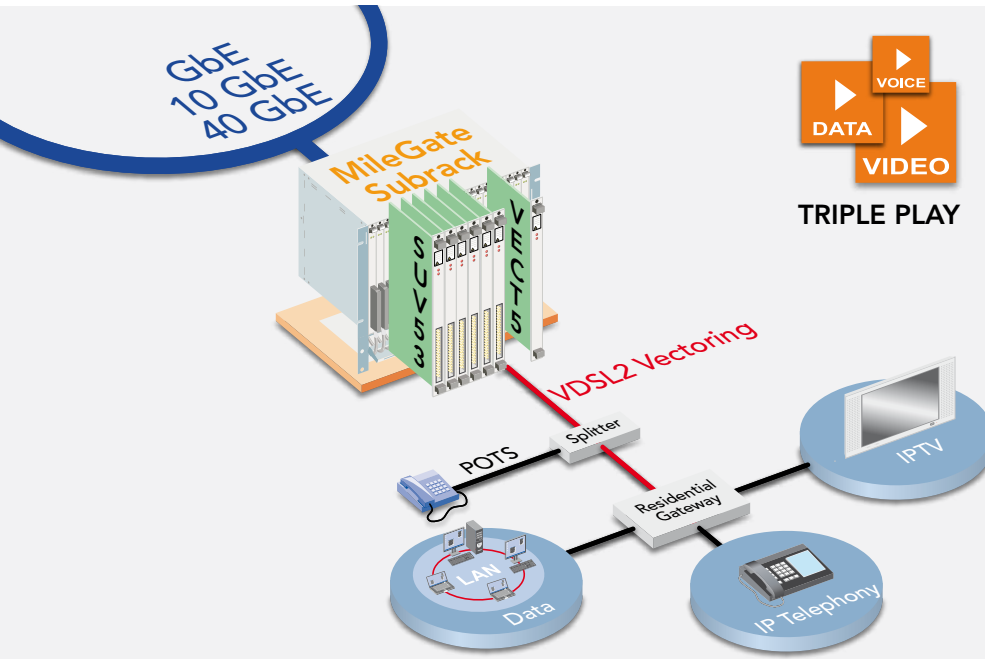


MileGate SUV53

48-port VDSL2 line card supporting data rates of up to 300 Mbps



- + Supports board level vectoring of the 48 ports
- + Supports system level vectoring with up to 288 ports (together with VECT5)
- + 8, 12, 17 and 35 MHz profiles are supported
- + Highest port-density and low power consumption
- + VDSL2 over POTS/ISDN
- + For all MileGate subracks
- + Designed for street cabinet deployment
- + All functions out of one network management system

Six MileGate SUV53 and one MileGate VECT5 for up to 288 vectoring enhanced VDSL2 35b connections

The MileGate VDSL2 line card SUV53 from KEYMILE brings high-speed Triple Play services to the end customer. The line card offers highest data rates of up to 300Mbps thanks to VDSL2 with profile 35b. It provides 48 ports with 8/12/17/35 MHz profiles. With the onboard vectoring engine it compensates the crosstalk (FEXT, Far End Crosstalk) almost completely on all connected subscriber lines. This gives a significant boost to the achievable data rate.

SUV53 is optimized for the operation in street cabinets in FTTC network architectures.

VDSL2 with SUV53

Using SUV53 in MileGate, modern services as VoIP, broadband Internet, Video-on-Demand and HD IPTV can be provided. With SUV53 VDSL over POTS or VDSL over ISDN can be offered with only one line card.

Vectoring unit

In accordance with the procedures outlined in ITU-T G.993.5, the onboard vectoring unit identifies the crosstalk ratios between the VDSL2 signals on the transmission paths.

The resulting matrix outlines the crosstalk behaviour from each VDSL2 line to every other VDSL2 line on the cable. This information is used to continuously correct all VDSL2 signals in real time, allowing to compensate the negative effect of FEXT.

It is important that all VDSL2 signals within a cable are subjected to the vectoring process. For up to 48 lines in a cable binder the board level vectoring of the SUV53 alone can be used.



For up to 288 lines in a cable binder the system level vectoring approach can be used, where up to six SUV53 line cards are used together with the vectoring unit VECT5.

MELT

With MELT (Metallic Line Test) the transmission line can easily be tested via the management. The function determines external voltages, resistances and capacities. In case of an error, the source of interference can be identified with this data.

Installation

Per MileGate 2510 with SUV53 up to 960 VDSL2 interfaces without Vectoring can be provided, and up to 816 VDSL2 interfaces with vectoring (vectoring group sizes up to 288 lines). For installation in low density areas up to 288 subscribers can be connected via a MileGate 2310, or up to 144 subscribers via the subrack MileGate 2200.

Management

All services are managed centrally via the management system (UNEM) or via local management access (CLI, XML, SNMP).

Technical Data

Operational Modes	
FTTC (8/12/17/35 MHz profiles)	48 ports VDSL2 over POTS or ISDN
Interfaces	
VDSL2 mode	ITU-T G.993.2, Annex A/B, Europe Bandplans 997, 998 and extensions 8/12/17/35 MHz profiles Automatic selection of predefined sets of bandplan, profile, PSD mask Bit swapping, virtual noise, seamless rate adaption
Transmission mode	Selection during start-up (depending on the connected CPE): VDSL2 with vectoring, VDSL2-friendly, VDSL2
VDSL2 vectoring	Board level vectoring according to ITU-T G.993.5, up to 48 VDSL2 lines System level vectoring according to ITU-T G.993.5, up to 288 VDSL2 lines (using six SUV53 and one VECT5) Full cancellation: All disturbers will be eliminated against every connected transmission line
PSD shaping	DPBO/UPBO (Downstream/Upstream Power Back-Off), custom PSD
Handshake	According to ITU-T G.994.1
Line testing	MELT (Metallic Line Test), DELT (Double Ended Line Test), SELT (Single Ended Line Test)
Ethernet backplane access	1 Gbps and 10 Gbps
Ethernet Functionality	
Supported protocols	PPPoE with Intermediate Agent acc. to Broadband Forum TR-101, and IETF RFC 2516 IPoE with DHCP option 82 according to IETF RFC 2131, RFC 3046
Multicasting	IGMPv2/v3, supporting IGMPv3 snooping with proxy reporting and message suppression
VLAN	VLAN according to 802.1Q, Double Tag VLANs (Q-in-Q) according to 802.1ad
General	Broadband Forum TR-101, 1:1 mode, n:1 mode for residential customers, TLS (Transparent LAN Service) or PLS (Private LAN Service) for business customers
Management	
MCST	For local management
UNEM	For central management
Power Supply	
Input voltage nominal (min/max)	-48/-60VDC (-39.5VDC ... -72VDC)
Operation Environment	
Temperature range and humidity	According to MileGate environmental specifications

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