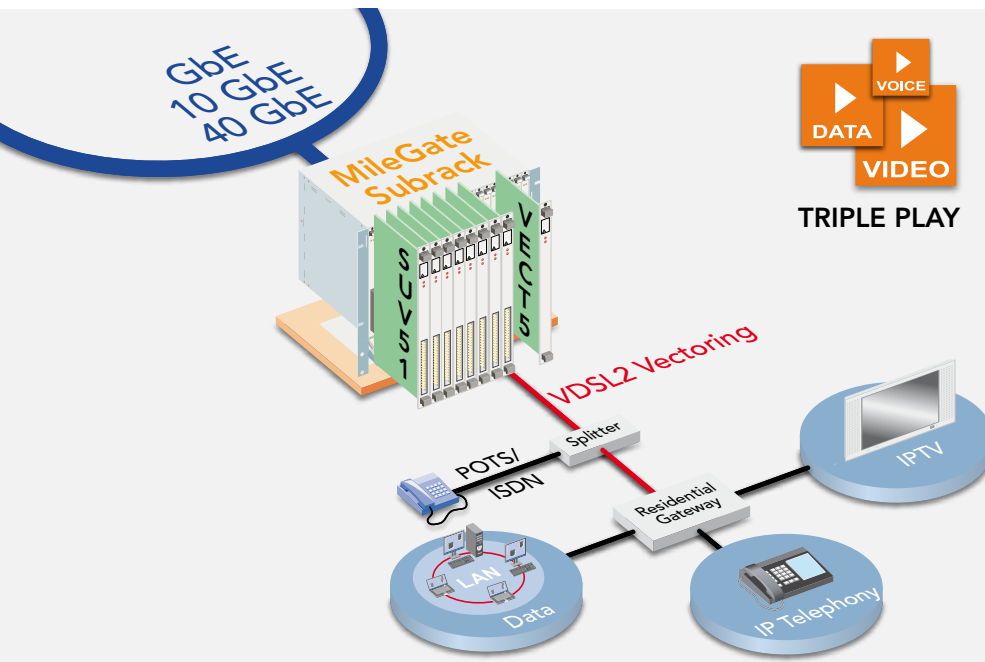


# MileGate SUV51

48-port VDSL2 line card supporting data rates of up to 100 Mbps



- + 48-ports VDSL2 over POTS/ISDN
- + VDSL2 8, 12 and 17 MHz profiles are supported
- + Supports board level vectoring of the 48 ports
- + Supports system level vectoring with up to 384 ports (together with VECT5)
- + Highest port-density and low power consumption
- + For all MileGate subracks
- + Designed for street cabinet deployment
- + All functions out of one network management system

Eight MileGate SUV51 and one MileGate VECT5 for up to 384 vectoring enhanced VDSL2 connections

The MileGate VDSL2 line card SUV51 from KEYMILE brings high-speed Triple Play services up to 100 Mbps to the end customers. The line card offers 48 VDSL2 ports with 8, 12, or 17 MHz profiles, which can be used with or without Vectoring.

With the onboard vectoring engine Board Level Vectoring of all 48 ports is supported. In a combination with one VECT5 Vectoring unit and up to eight SUV51 units, System Level Vectoring of up to 384 VDSL2 ports can be achieved.

## VDSL2 with SUV51

The SUV51 line card allows modern data services such as broadband Internet, Video-on-Demand, HD IPTV and VoIP with up to 100 Mbps. VDSL2 profiles with 8, 12, and 17 MHz are supported. Depending on the start frequency band VDSL over POTS or VDSL over ISDN can be used.

## Vectoring

For up to 48 lines in a cable binder the built-in Board Level Vectoring of the SUV51 alone can be used. If the cable binder

includes more lines than 48, System Level Vectoring can be used for up to 384 lines. For System Level Vectoring up to eight SUV51 line cards can be used together with the Vectoring unit VECT5.

The Vectoring identifies the crosstalk ratios between the VDSL2 signals on the transmission paths, in accordance with the procedures outlined in ITU-T G.993.5. The resulting matrix outlines the crosstalk behavior 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 subject to the Vectoring process.

### MELT

The SUV51 line card comes with in-built MELT (Metallic Line Test) functionality, which allows to easily test the transmission line. The MELT function determines external voltages, resistances and capacities. In case of an error, the source of interference can be identified and documented.

### Installation

The SUV51 is optimized for the operation in street cabinets in FTTC network architectures. A high-density SUV51 configuration in a MileGate 2510 allows to serve up to 960 VDSL2 interfaces (depending on the used configuration and Vectoring group size). For SUV51 installations in low density areas a MileGate 2310 can be used for up to 336 subscribers, or a MileGate 2200 for up to 144 subscribers.

### 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 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 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 384 VDSL2 lines (using eight SUV51 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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