Application Note

MileGate 2042 G.fast DPU for high-speed broadband in apartment buildings

MileGate 2042 offers:

- Very high transmission rates via existing copper wire pairs in the building
- Data rates of almost 2 Gbps per home
- Supports 8 G.fast ports with 212 MHz/106 MHz profiles
- Simple, fast wall-mounted assembly
- Integrated locking system
- Optional CATV module

G.fast 212 MHz – Fibre like speed at copper access conditions

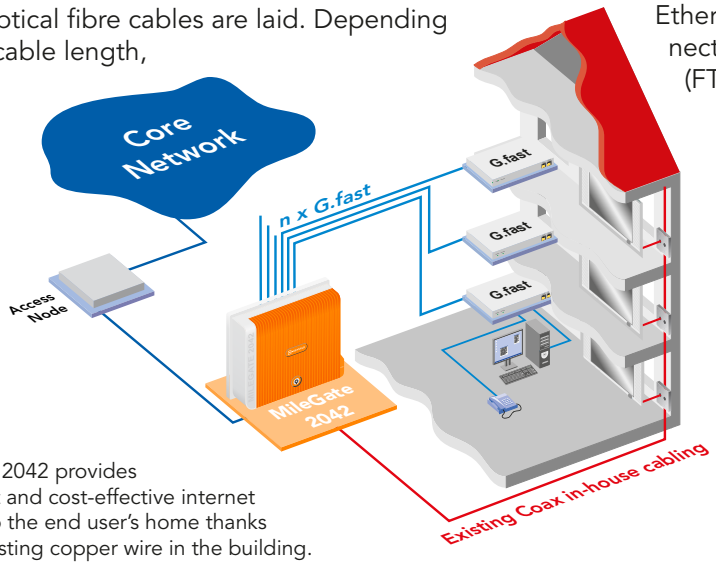
Network operators would often like to lay optical fibre directly to the end customer's home, where they can go only as far as to the basement. Laying optical fibre from the basement to the end customer's home isn't always possible or commercially feasible. The MileGate 2042 Distribution Point Unit (DPU) with a 212 MHz/106 MHz G.fast profile is a simple and affordable solution to this problem. For the first time, G.fast transmission technology can deliver data rates via copper wire that can only elseways be achieved via optical fibre – at a fraction of the cost otherwise incurred when optical fibre cables are laid. Depending on the cable length,

MileGate 2042 can reach data transmission rates of almost 2 Gbps per subscriber. The existing copper wire pairs or coax cable in the building is adequate. As a result, network operators can create an end-to-end network with gigabit bandwidths from the service provider to the end customer.

The units come with 8 ports and can be combined with one another in order to serve fluctuating numbers of subscribers. In spring 2020, there will be a version with 4 ports, with 16-port units to follow from mid-2020.

With an optional CATV module, MileGate 2042 can also offer broadband cable TV via coaxial cables already in place.

Ten gigabit Ethernet or one gigabit Ethernet or GPON provide the connection to the optical fibre network (FTTH).



MileGate 2042 provides super-fast and cost-effective internet speeds to the end user's home thanks to the existing copper wire in the building.

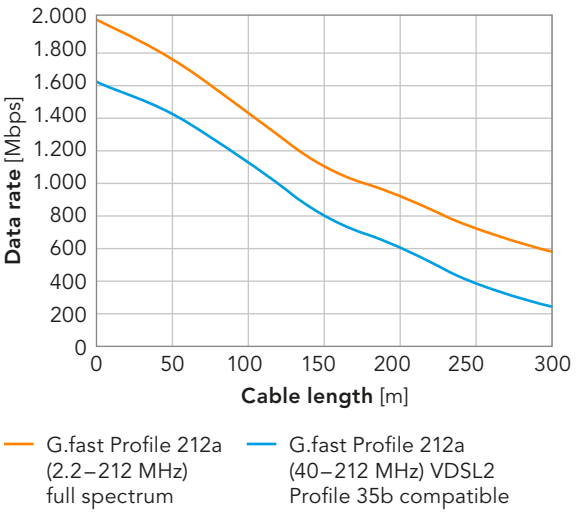
Carrier-grade and flexible

The G.fast DPU has port insulation to meet carriers' needs. It supports G.fast with 212 MHz but also with 106 MHz profiles. This can be adapted per port.

In the case of G.fast, upstream and downstream are separated based on time by Time Division Duplexing (TDD). Both transmission directions alternately use the whole frequency range. The major advantage of this process is that network operators can decide for themselves what the ratio between upstream and downstream per port and subscriber should be. For instance, a fast downstream rate of 1 Gbps and a slower upstream rate of 600 Mbps would be typical of an assumed aggregated total data rate of 1.6 Gbps. But other combinations are also possible.

MileGate 2042 offers VDSL2 fallback, enabling easy migration of existing VDSL2 broadband connections without replacing the terminal equipment.

MileGate 2042 G.fast data rates



Data rates: Upstream and downstream aggregated over 0.5 mm copper wire pairs

MileGate 2042 provides quick and user-friendly configuration of the ports

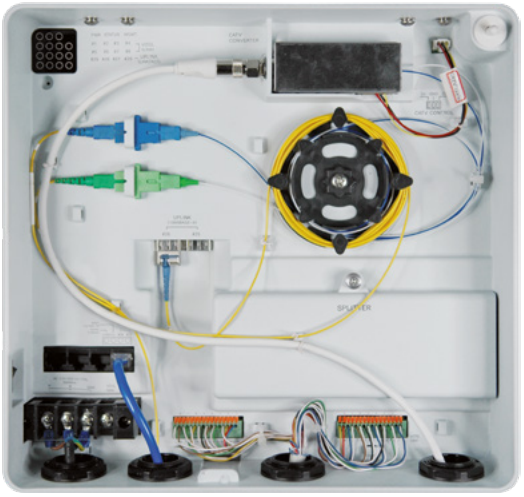
User-friendly management

Ports are usually configured quickly and in a user-friendly way through profiles, which define parameters such as the ratio between upstream and downstream or data packet priorities. The higher the priority, the greater the level of performance and convenience with which customers can use the services they want. Network operators can divide their customers into the different premium, medium and regular user groups, create a dedicated, configured profile for each group and then simply assign a new customer to a group. Consequently, new customers can be connected to the network very quickly.

Operators have various ways of managing MileGate 2042. A command line interface (CLI) offers the full range of operations. An easy-to-use, web-based GUI is the right choice for occasional and quick configuration changes. SNMP is a network protocol that allows MileGate 2042 to be integrated into overarching management systems. From 2020, Netconf/Yang will enable DPU management in software-defined network structures.

Ideal for apartment buildings and maintenance free

MileGate 2042 was developed for apartment buildings. The MileGate 2042 housing is quick and easy to assemble. It can be locked, is sealable and protected from unauthorised access by an alarm. The DPU is operated at standard 230 volt alternating current and the passive cooling system extracts the heat silently. Once assembled, the unit can be connected to the mains immediately, requires no extra power unit and needs virtually no maintenance due to its lack of moving parts. All the electronics are enclosed in the housing, ruling out any damage due to improper handling during assembly for example.



MileGate 2042 is easy to mount, cooled passively, operates silently and requires virtually no maintenance.

MileGate 2042: flexible, simple and maintenance free

MileGate 2042 gives network operators a cost-effective, maintenance-free and flexible network node that delivers fibre like speed at copper access deployment conditions. To facilitate migration, the DPU also supports VDSL2 and can be operated at 212 MHz or 106 MHz using G.fast copper transmission technology, depending on the customer's requirements. The housing is quick to mount, theft proof and the unit operates silently thanks to a passive cooling system. The MileGate 2042 can be configured remotely via a user-friendly, web-based GUI which is accessible via an internet browser.

DZS Americas
Regional Headquarters
Oakland CA, USA
info@dasanzhone.com
www.dzsi.com/contact-us/

DZS Korea-APAC
Regional Headquarters
Seongnam-si, Gyeonggi-do, South Korea
info@dasanzhone.com
www.dzsi.com/contact-us/

DZS-KEYMILE EMEA
Regional Headquarters
Hanover, Germany
info@keymile.com
www.keymile.com/en/contact_sales