# G.9711 MGfast: Multi-Gigabit fast access to subscriber terminals

- Up to 8 Gbit/s aggregate bit rates over telephone wiring and coaxial cable.
- Combining the best aspects of fibre and DSL to enable cost-savings and improved customer experience.
- No rewiring with Fibre to the Extension Point (FTTep) architecture and customer self-install.

- Ultra-low latency for interactive applications.
- Support of up to four simultaneous Quality of Service (QoS) classes.
- Point-to-Multipoint operation for better coverage within premises.
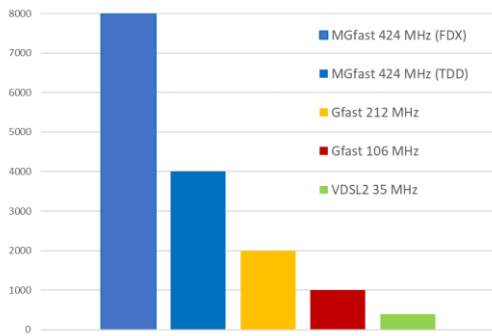
Maximum aggregate (DS+US) bit rate (Mbit/s)
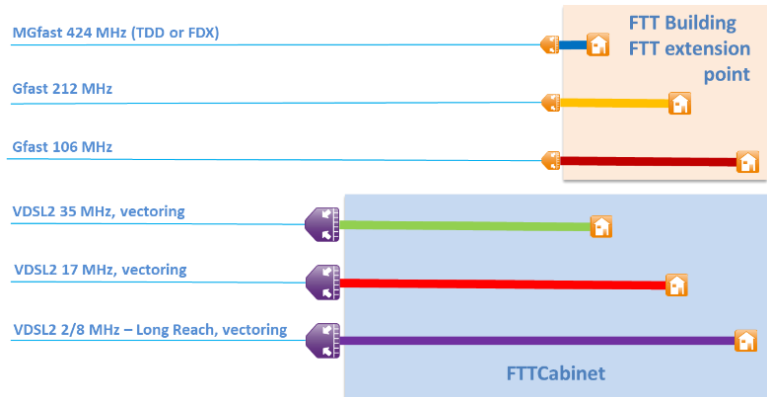
Typical reach
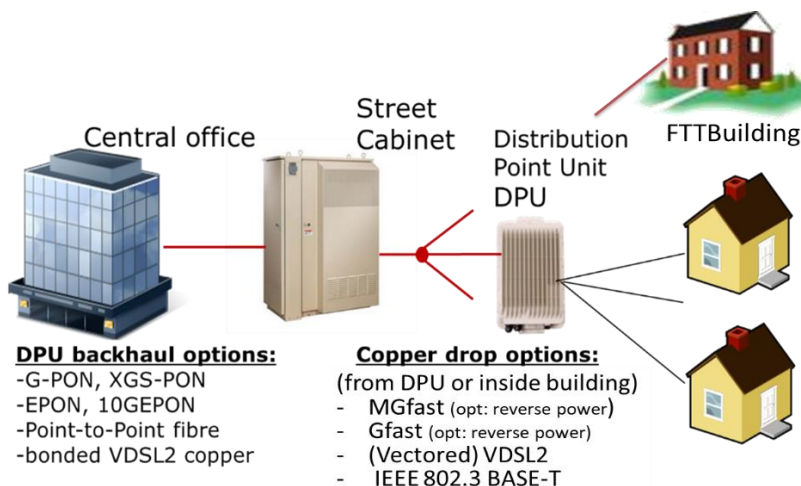
MGfast key application features:

- Customer self-install. No rewiring. No technician visit to the customer premises.
- Coexistence with ADSL2, VDSL2 and Gfast on adjacent wire-pairs.
- Vectoring (self-crosstalk cancellation) for increased net data rates on wire-pairs that experience FEXT from other wire-pairs.
- Echo-cancellation and near-end crosstalk cancellation/mitigation for increased net data rates on wire-pairs which are operated in Full Duplex (FDX) mode, i.e., using the same frequency spectrum for simultaneous transmission in both directions.
- Support of ultra-low latency services in FDX mode with improved retransmission.
- Point-to-multipoint (P2MP) operation for multiple units of customer premises

equipment to be connected to the same physical wire and port of network equipment.

- Support of up to four Quality of Service (QoS) classes in upstream and downstream direction by the transceivers.
- Improved noise immunity through advanced forward error correction based on LDPC.
- Power saving by dynamic control of the time and frequency band (using DTFO) available for data transmission depending on user traffic demand.
- Dynamic control of the upstream vs downstream transmission scheme (using DTA) to adapt bit rate to user traffic demand.
- Network timing reference (NTR) and time-of-day (ToD) transport for network

frequency and time synchronization between network and customer premises equipment.

- Showtime reconfiguration (SREC) to reconfigure a line with a specified set of configuration parameters, applied during showtime without requiring a service interruption.
- Configuration of spectrum use, including configuration of the transmit power spectral density (PSD) limitations and notches to meet electromagnetic compatibility (EMC) requirements.