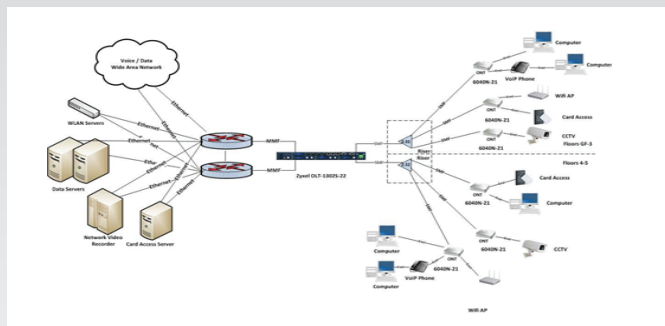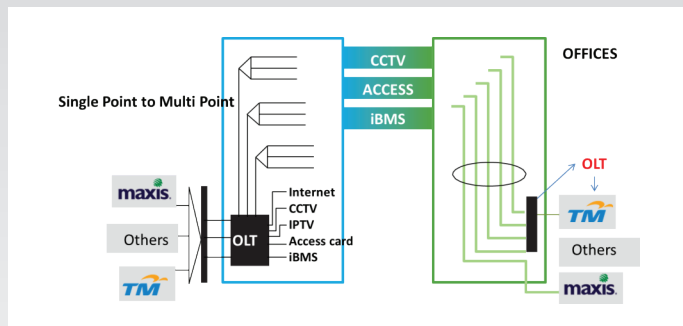**GEPON or EPON** (Ethernet PON) is an IEEE standard that uses Ethernet for sending data packets. In current there are 15 million EPON ports installed. GEPON uses 1 gigabit per second upstream and downstream rates.

GEPON or EPON is a fast Ethernet over passive optical networks which are point to multi-point to the premises (FTTP) or fiber to the home (FTTH) architecture in which single optical fiber is used to serve multiple premises or users.
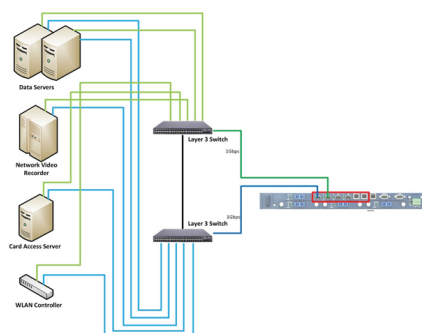

Advantages of Gepon:

✓ Service flexibility: The GEPON does lots of services and it is of very flexible type.

✓ Easy, modular planning and rollout: The GEPON is the easiest mechanism and there is modular planning and roll out that is attached with the GEPON which adds lots of benefits to the GEPON differentiating from the GPON which has more security and supports higher rates of usage.

✓ Highest density and availability.

✓ Price. GEPON solutions at the time of writing are more cost effective

✓ Much more easy configuration - easier to use, almost plug and play technology

Connection to Core Services

The switch modules of the OLT connect to the layer-3 core switch/router. The IP- PBX and controllers for services such as CCTV and WiFi connect into the core switch. WAN connections from the telecom service provider also terminate on the core, via a firewall.

Optical network terminals (ONT's)

An Optical Network Terminal mounted to the outside of a building, with the cover open.

In fiber-to-the-premises systems, the signal is transmitted to the customer premises using fiber optic technologies. Unlike many conventional telephone technologies, this does not provide power for premises equipment, nor is it suitable for direct connection to customer equipment.

An ONT (optical network terminal) is used to terminate the fiber optic line, demultiplex the signal into its component parts (voice telephone, television, and Internet), and provide power to customer telephones. As the ONT must derive its power from the customer premises electrical supply, many ONTs have the option for a battery backup, to maintain service in the event of a power outage.