

NetMCR #2

@net_mcr

hello@netmcr.uk

Thanks to 57 Thomas Street

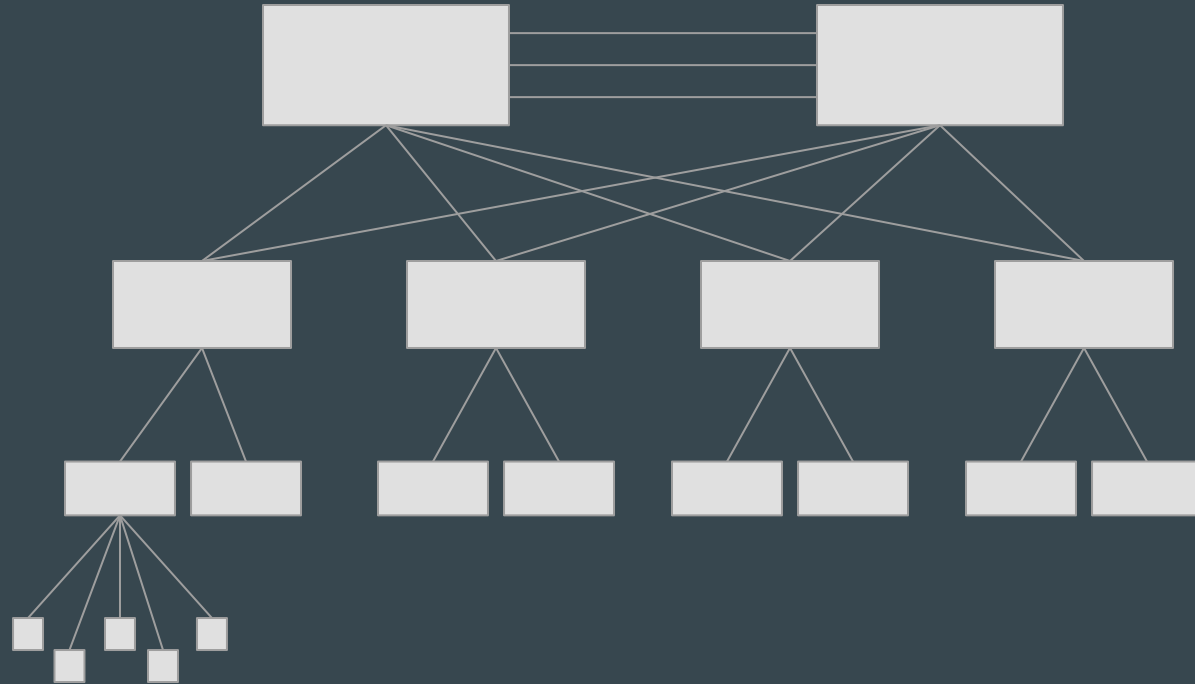
GPON for Fun & Profit



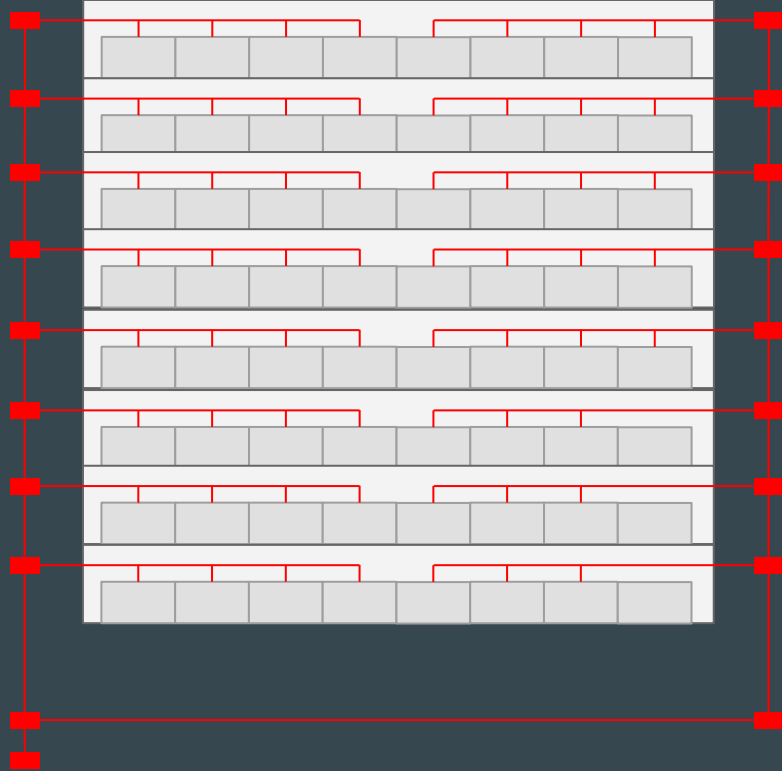
@ThomSeddon - @TelcomUK

Hello

Point to Point



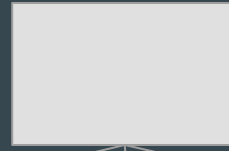
Point to Point



PON = Passive Optical Network

PON

OLT (Optical Line Terminal)



Splitter



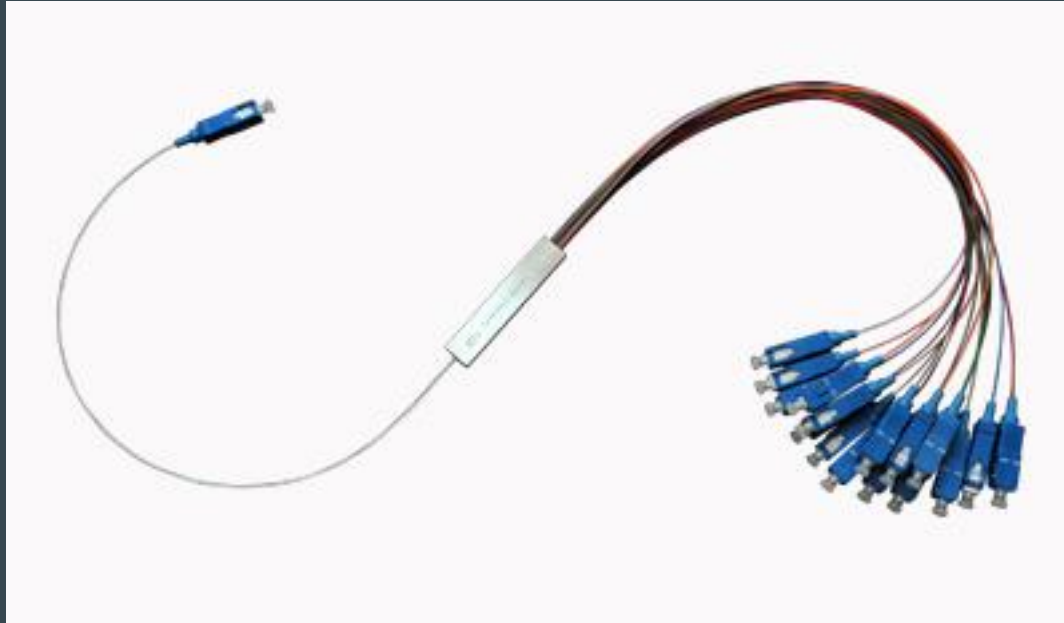
ONT
(Optical Network
Termination)



PON - OLT



PON - Splitter

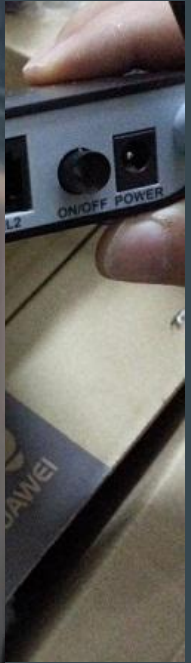


PON - Splitter

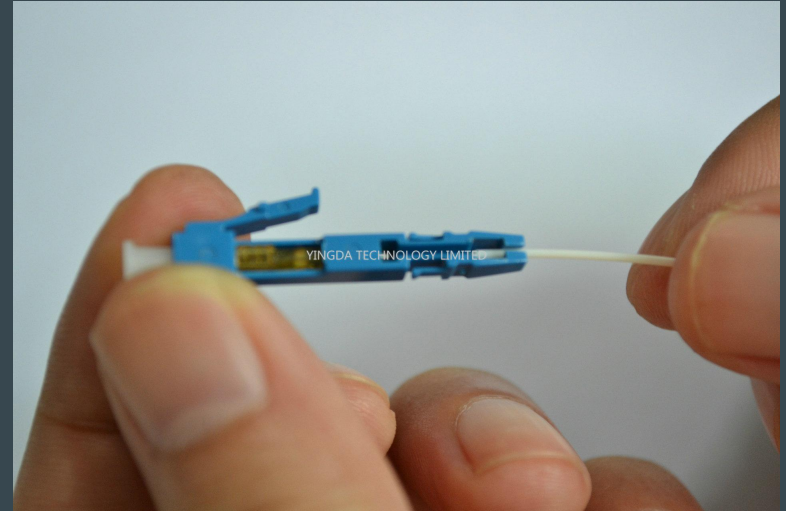
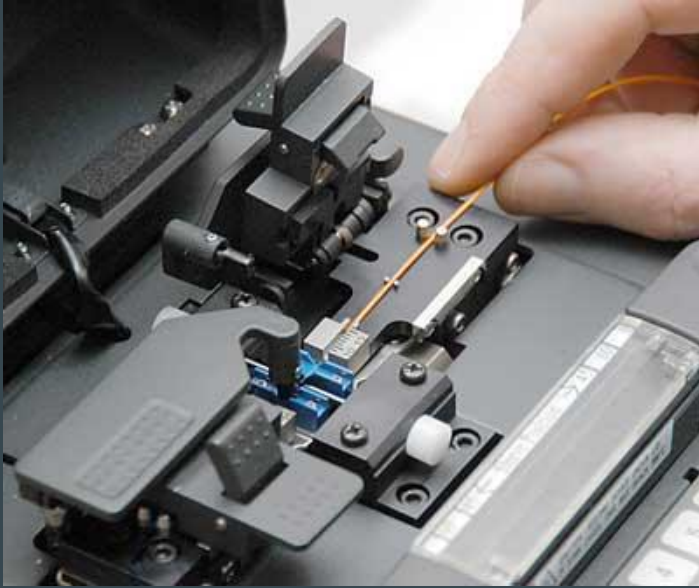


PON - ONT

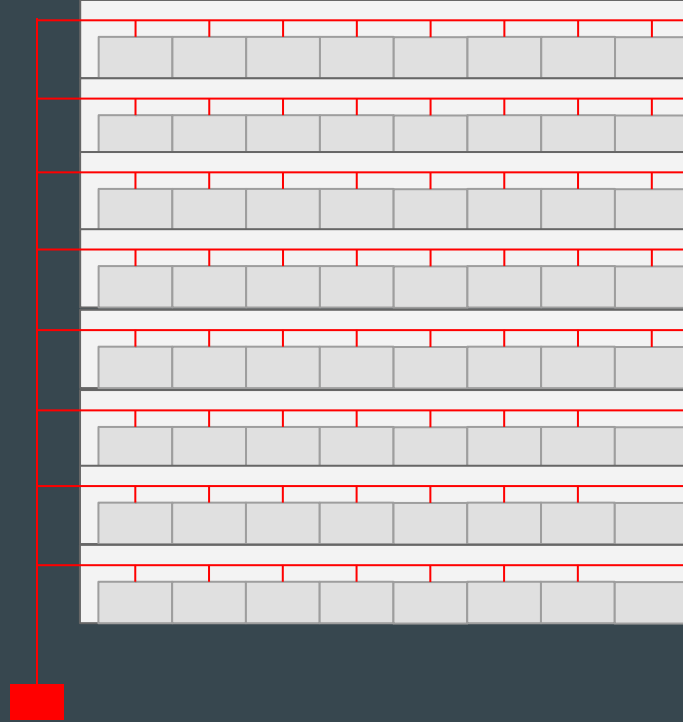
Google Fiber - Bringing Ultra High-Speed Internet to Kansas City



PON - Connectors



PON



PON - Types

APON - ATM PON

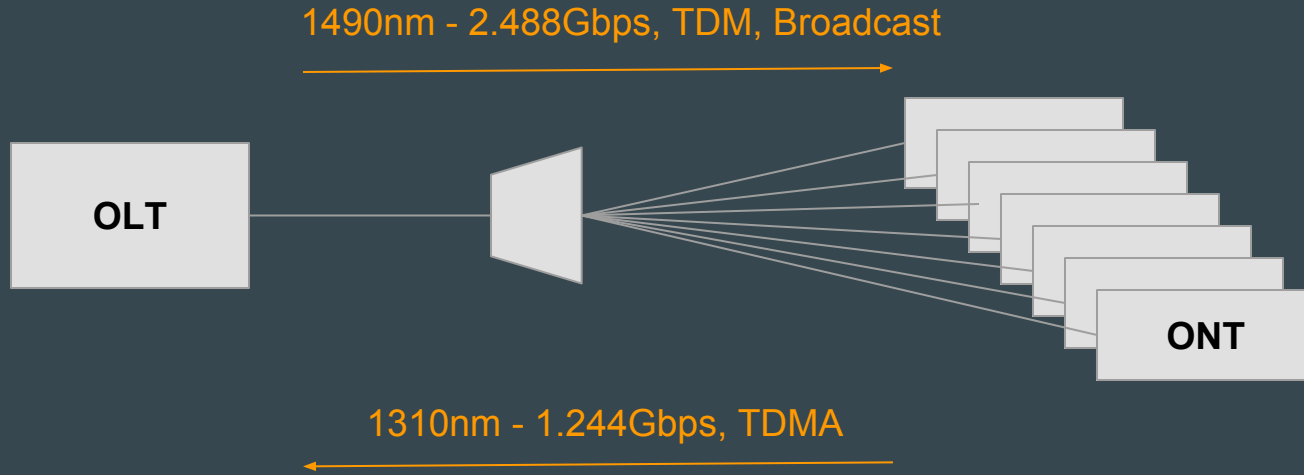
EPON - Ethernet PON

GE-PON - Gigabit Ethernet PON

GPON - Gigabit PON

XGPON - 10 Gb PON

GPON - But how?



PON Design - Budget

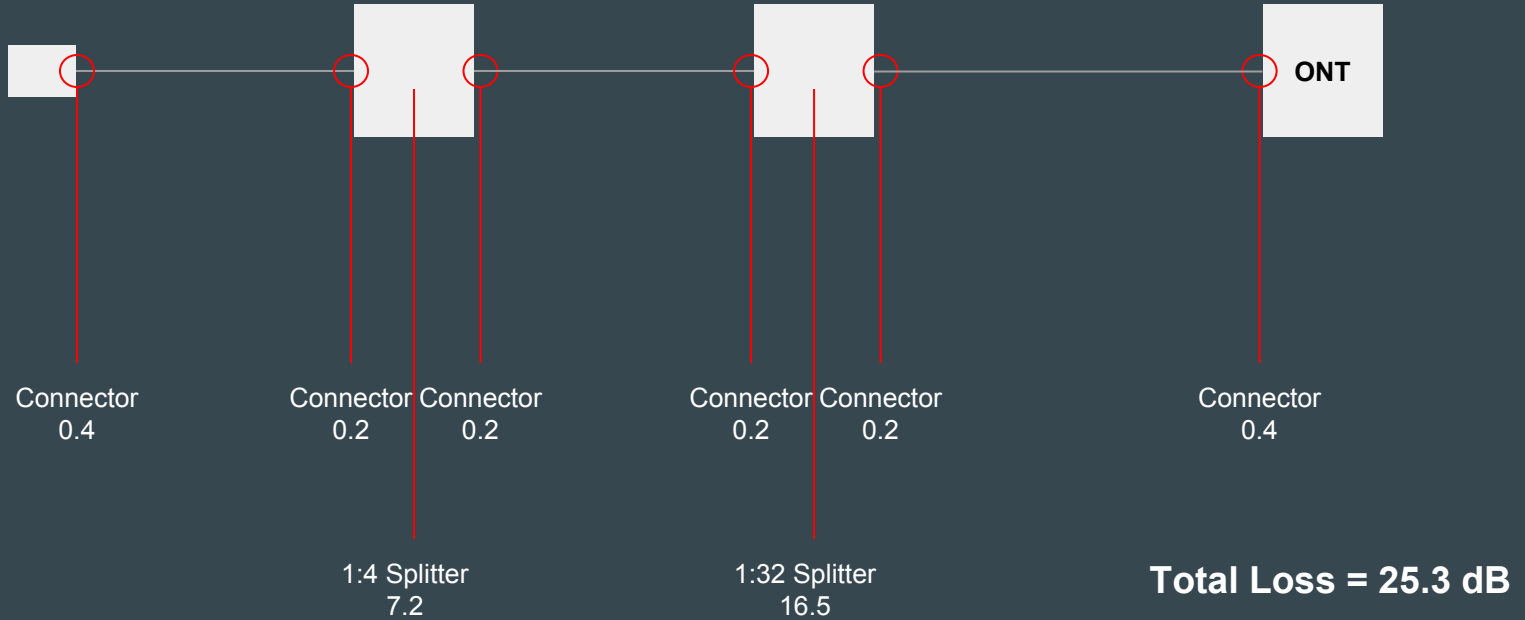


	Class A	Class B	Class B +	Class C
Min Loss	5 dB	10 dB	13 dB	15 dB
Max Loss	20 dB	25 dB	28 dB	30 dB

PON Design - Loss

Element		Loss
Connector		0.2 - 0.4 dB
Fibre		0.4 dB / km
Splitter	1:2	3.2 dB
	1:4	7.2 dB
	1:8	10.5 dB
	1:16	13.5 dB
	1:32	16.5 dB
	1:64	19.7 dB

PON Design - Example



Wrap Up

Pros

- Cheaper
- No Power
- Faster Deployment
- Cool

Cons

- Planning
- Shared Bandwidth
- Fibre
- Suppliers

Questions?

Thanks