pulse

City of Loveland

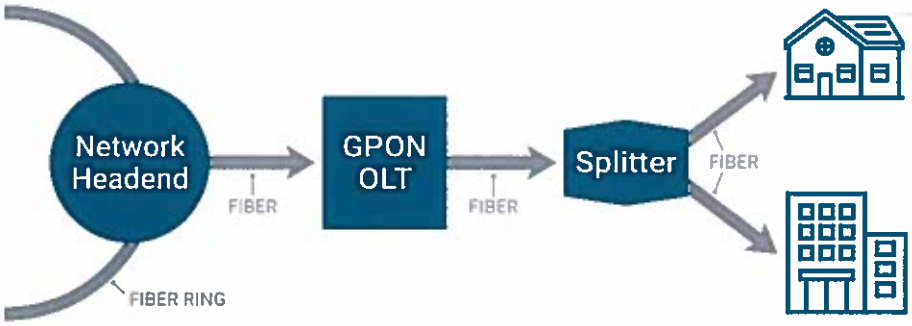
NETWORK DIFFERENCES

Speed & Performance

How an internet network is built makes all the difference. What do communities, businesses and consumers need to work, live and play? Over time, technology advancements have changed how communication networks are made.

Here is a look at four different communication network designs and how their technology and speed compare:

Loveland Pulse's 100% Fiber-Optic Network

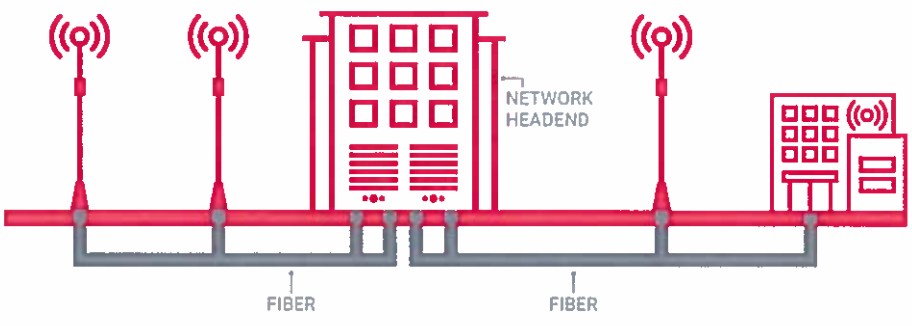


FIBER-OPTIC NETWORK
Throughput Maximum:

- **Upstream:** 1 to 10 Gbps
- **Downstream:** 1 to 10 Gbps

A 100% FIBER GPON (gigabit passive optical network) uses fiber from start to finish. The synchronous connection begins at the headend, head to a midpoint "optical line terminal" and then runs through a splitter before coming to your home or business.

Wireless Network



WIRELESS
Throughput Maximum:

- **Upstream:** 5 Mbps
- **Downstream:** 65 Mbps

ALL WIRELESS NETWORKS start with an underground network connection from the headend that transmits data to cell towers and antennas. A fiber-optic network and more evenly spaced cell towers and antennas are needed to support today's 4G speeds and the potential speeds of 5G and beyond.

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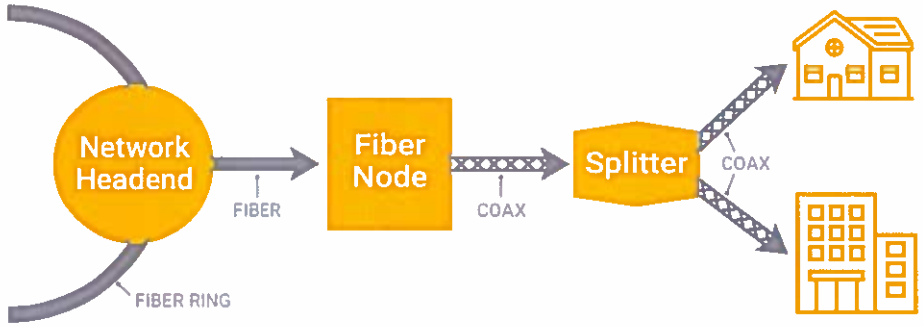
Cable HFC Network

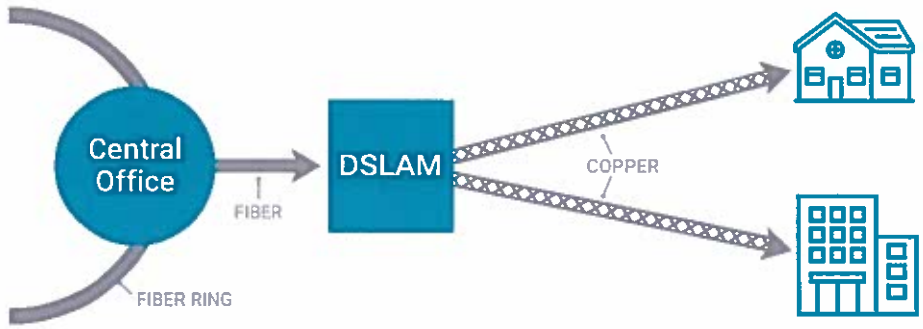


CABLE HFC
Throughput Maximum:

- **Upstream:** 40 Mbps
- **Downstream:** 1 Gbps

WITH A CABLE HFC (hybrid fiber-coaxial) network, a fiber optic connection runs from the cable network's headend on a fiber ring to a fiber node. That node then sends the signal on to multiple locations over a coax, which is tapped to reach each individual customer.

Telephone DSL Network



TELEPHONE DSL
Throughput Maximum:

- **Upstream:** 20 Mbps
- **Downstream:** 40 Mbps

A TELEPHONE DSL (digital subscriber line) network often has fiber connections running from its central office, to a network crossroads, a device referred to as a DSLAM (digital subscriber line access multiplexer.) The DSLAM connects multiple customers to a single channel through a copper telephone line.

FOR MORE INFORMATION, VISIT:

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