

# P802.3bq 25G/40GBASE-T Objectives

- Support full duplex operation only
- Preserve the 802.3 / Ethernet frame format utilizing the 802.3 MAC
- Preserve minimum and maximum Frame Size of current 802.3 standard
- Support a BER better than or equal to  $10^{-12}$  at the MAC/PLS service interface
- Support Auto-Negotiation (Clause 28)
- Support Energy Efficient Ethernet (Clause 78)
- Support local area networks using point-to-point links over structured cabling topologies, including directly connected link segments
- Do not preclude meeting FCC and CISPR EMC requirements
- Support a data rate of 40 Gb/s at the MAC/PLS Service Interface
- Support a data rate of 25 Gb/s at the MAC/PLS Service Interface
- Define a link segment based upon copper media specified by ISO/IEC JTC1/SC25/WG3 and TIA TR42.7 meeting the following characteristics:
  - 4-pair, balanced twisted-pair copper cabling
  - up to 2 connectors
  - up to at least 30 m
- Define a single 40 Gb/s PHY supporting operation on the link segment
- Define a single 25 Gb/s PHY supporting operation on the link segment