



IEEE 802.3CK 100 Gb/s PER ELECTRICAL LANE OBJECTIVES

ADOPTED BY STUDY GROUP MAR 2018



OBJECTIVES (1 OF 2)

- Support a MAC data rate of 100 Gb/s, 200 Gb/s and 400 Gb/s
- Support full-duplex operation only
- Preserve the Ethernet frame format utilizing the Ethernet MAC
- Preserve minimum and maximum FrameSize of current IEEE 802.3 standard
- Support the existing bit error ratios (BERs) at the MAC/PLS service interface (or the frame loss ratio equivalent) for 100 Gb/s, 200 Gb/s and 400 Gb/s Ethernet

- Define a single-lane 100 Gb/s Attachment Unit interface (AUI) for chip-to-module applications, compatible with PMDs based on 100 Gb/s per lane optical signaling
- Define a single-lane 100 Gb/s Attachment Unit Interface (AUI) for chip-to-chip applications
- Define a single-lane 100 Gb/s PHY for operation over electrical backplanes supporting an insertion loss ≤ 28 dB at 26.56 GHz.
- Define a single-lane 100 Gb/s PHY for operation over twin-axial copper cables with lengths up to at least 2 m.

OBJECTIVES (2 OF 2)

- Define a two-lane 200 Gb/s Attachment Unit interface (AUI) for chip-to-module applications, compatible with PMDs based on 100 Gb/s per lane optical signaling.
- Define a two-lane 200 Gb/s Attachment Unit Interface (AUI) for chip-to-chip applications.
- Define a two-lane 200 Gb/s PHY for operation over electrical backplanes supporting an insertion loss ≤ 28 dB at 26.56 GHz.
- Define a two-lane 200 Gb/s PHY for operation over twin-axial copper cables with lengths up to at least 2 m.

- Define a four-lane 400 Gb/s Attachment Unit interface (AUI) for chip-to-module applications, compatible with PMDs based on 100 Gb/s per lane optical signaling.
- Define a four-lane 400 Gb/s Attachment Unit Interface (AUI) for chip-to-chip applications.
- Define a four-lane 400 Gb/s PHY for operation over electrical backplanes supporting an insertion loss ≤ 28 dB at 26.56 GHz.
- Define a four-lane 400 Gb/s PHY for operation over twin-axial copper cables with lengths up to at least 2 m.