

# IEEE 802.3 Greater than 10 Gb/s Electrical Automotive Ethernet PHYs (P802.3cy) IEEE 802.3 WG Approved Objectives

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May 21, 2020

# Approved Objectives P802.3cy – May 21, 2020

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Preserve the IEEE 802.3/Ethernet frame format at the MAC client service interface

Preserve minimum and maximum frame size of the current IEEE 802.3 standard

Support full duplex operation only

Define optional startup procedure which enables the time from power\_on=FALSE to a state capable of transmitting and receiving valid data to be less than 100ms

Support a BER better than or equal to  $10^{-12}$  at the MAC/PLS service interface (or the frame loss ratio equivalent)

Support a data rate of 25 Gb/s, 50 Gb/s and 100 Gb/s at the MAC/PLS service interface

Support optional Auto-Negotiation

Support optional Energy Efficient Ethernet optimized for automotive applications

Support operation in automotive environments (e.g., EMC, temperature)

Do not preclude meeting FCC and CISPR EMC requirements

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Define the performance characteristics of an automotive link segment and an electrical PHY to support 25 Gb/s point-to-point operation over this link segment supporting up to 2 inline connectors for at least 11 m on at least one type of automotive cabling

Define the performance characteristics of an automotive link segment and an electrical PHY to support 50 Gb/s point-to-point operation over this link segment supporting up to 2 inline connectors for at least 11 m on at least one type of automotive cabling

Define the performance characteristics of an automotive link segment and an electrical PHY to support 100 Gb/s point-to-point operation over this link segment supporting up to 2 inline connectors for at least 11 m on at least one type of automotive cabling

Support optional Clause 104 power over data lines on appropriate media