Table 1. Cabling element distances versus 10 Gb/s application space

Cable Element	Customer Premises	Data Center (Internet)	Central Office	Equipment Room
Backbone + Equipment Cable	≤300 meters	≤100 meters	≤100 meters	NA
Equipment Cable	< 30 meters	< 30 meters	< 30 meters	< 30 meters
Equipment-to-Equipment	< 30 meters	< 30 meters	< 30 meters	< 30 meters
Equipment-to-patch panel	< 30 meters	< 30 meters	< 30 meters	< 30 meters

– Backbone (cabling between patch panels) – facilitating cabling management for "longer reach" equipment connections – switches-to-router, switches-to-(server, and other data storage devices)

– Equipment-to-Equipment (cabling between equipment in equipment racks, e.g., aggregation of data switches)

– Equipment-to-Patch panel (equipment interconnection to backbone cabling)

The 30 meter distance is based on the ISO/IEC 11801 recommendation that the lengths of the equipment cable[1] used in the building distributor (BD) or campus distributor (CD) be less than 30 meters in length. Although the rationale for the ISO/IEC 30 meter distance limit is based largely on the transmission performance of the cable it provides some guidance on acceptable length usage.

Other possible equipment cable length references.

1. 1000BASE-CX PMD - minimum operating range of 0.1 to 25 meters
2. Task group end-user input: - 20 meters

[1] Please Note: ISO/IEC 11801 recognizes that equipment cable lengths are application specific and their length should be identified in the context of their usage.