



## Application Note

### Ethernet Cable Choices and Link Distances

IEEE 802.3 * Standard	Data Rate (Mbps)	Cable Type	IEEE Max. Distance	IEEE 802.3 Ref.	Non-Std Distance
10Base-T	10	Category 3, 4, 5, UTP	100 m	Table 13-2	
10Base-FL	10	Multimode: 850 nm: 62.5/125 $\mu$ m	2 km	Table 13-2	
		Single-mode: 1300 nm: 8/125 $\mu$ m			14 km
100Base-TX	100	Category 5 UTP	100 m	Table 29-5	
100Base-FX	100	Multimode: 1300 nm: 62.5/125 $\mu$ m or 50/125 $\mu$ m	2 km	Table 29-5	
		Single-mode: 1300 nm: 8/125 $\mu$ m			15 km 40 km
1000Base-T	1000	Category 5 UTP	100 m	Table 42-1	
1000Base-SX	1000	Multimode: 850 nm: 62.5/125 $\mu$ m	220 m	Table 38-5	
		Multimode: 850 nm: 50/125 $\mu$ m	500 m		
		Multimode: 850 nm: 50/125 $\mu$ m (e.g. Corning "InfiniCor-SX+" fiber)			1000 m
1000Base-LX	1000	Multimode: 1300 nm: 62.5/125 $\mu$ m or 50/125 $\mu$ m	550 m	Table 38-9	
		Single-mode: 1300 nm: 8/125 $\mu$ m	5 km		10 km
1000Base-__	1000	Single-mode: 1550 nm: 8/125 $\mu$ m			30 km 50 km

\* IEEE Standard 802.3 is the standard for all Ethernet equipment. All Ethernet equipment, which is compliant with 802.3, will work with all other, compatible, Ethernet equipment. Note: to be compatible, the equipment must "talk" at the same speed (e.g. 100Base) and must use the same *media* (e.g. 1300-nm on multimode fiber).

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