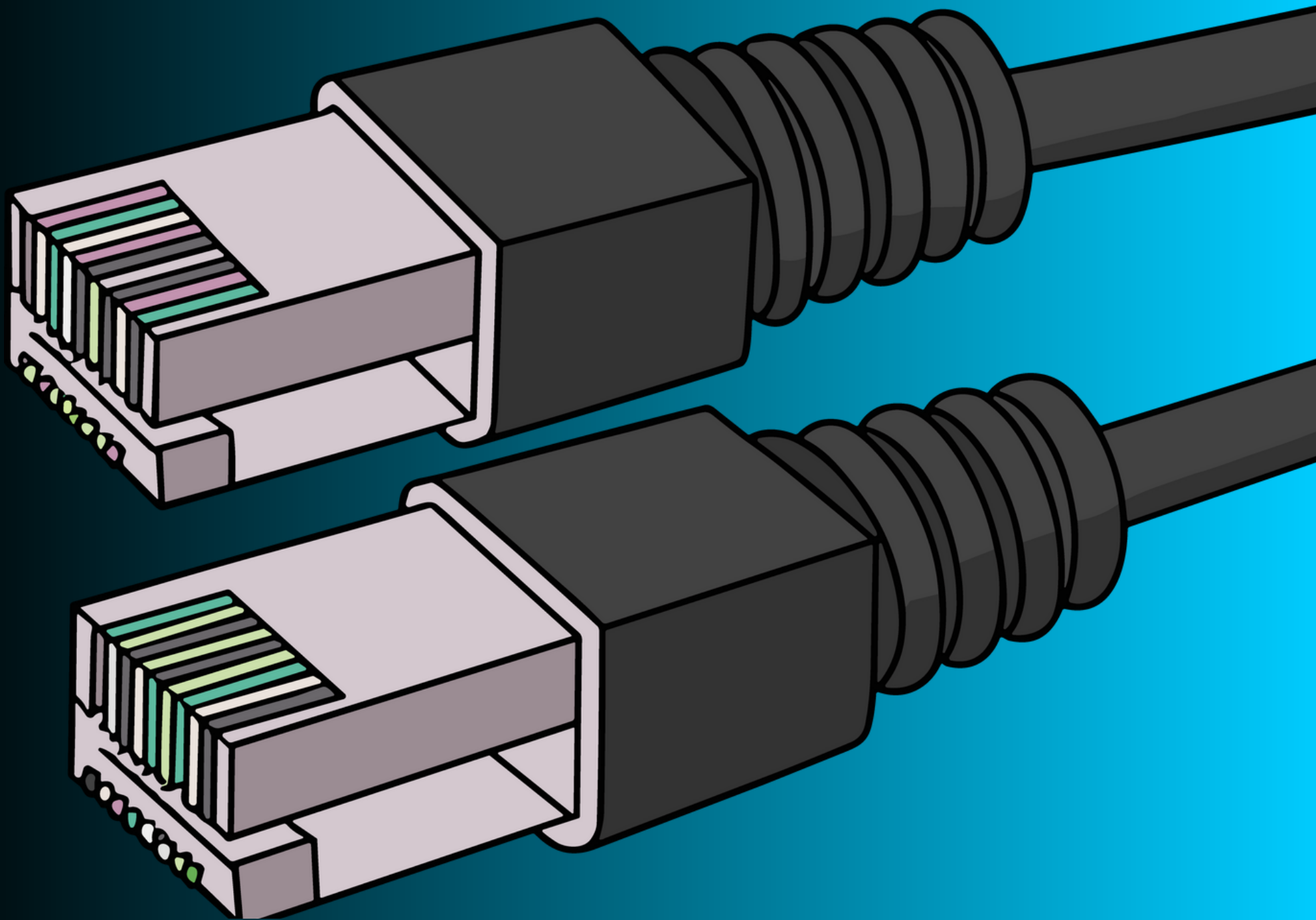


8 factors to select

LAN CABLES



TECHNICAL DIFFERENCES

CAT	Bandwidth	Data rate
CAT 5	Up to 100 MHz	Up to 1 Gbit/s
CAT 6	Up to 250 MHz	10 Gbit/s
CAT 6A	Up to 500 MHz	10 Gbit/s
CAT 7	Up to 600 MHz	10 Gbit/s
CAT 7A	Up to 1000 MHz	10 Gbit/s
CAT 8	Up to 2000 MHz	Up to 40Gbit/s

8 INFLUENTIAL FACTORS

- 1** Bandwidth requirement / data rate
- 2** Cable length & range
- 3** Screening
- 4** Costs / budget
- 5** Compatibility / plugs & components
- 6** Longevity & flexibility
- 7** Standards & testability
- 8** Fire ratings

1

BANDWIDTH & DATA RATES

CAT 6	250 MHZ, 1 GBIT/S
CAT 6A	500 MHZ, 10 GBIT/S
CAT 7	600 MHZ, 10 GBIT/S
CAT 8	2000 MHZ, 40 GBIT/S

2

CABLE LENGTH & RANGE

Short distance (30 m)	CAT 8
55 m	CAT 6
100 m	CAT 6A, CAT 7
Longer distances	Fiber optic cables

3

SCREENING / SUSCEPTIBILITY TO DISRUPTION

UTP cables	STP cables
For office use	Factories, automation systems
Low cost, easy installation	Superior EMI protection
Little protection against EMI	Requires higher technique

4

COSTS / BUDGET

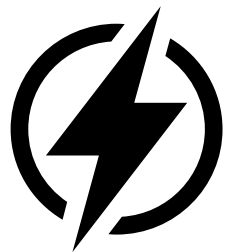
CAT 6

CAT 6A

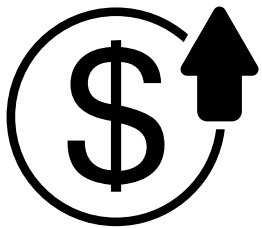
CAT 7

CAT 7A

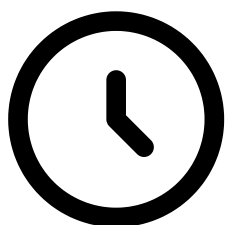
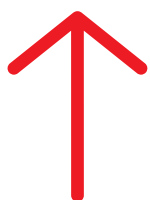
CAT 8



Performance



Cost



Installation time



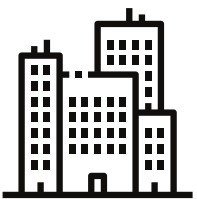
5

COMPATIBILITY / PLUGS & COMPONENTS

Office RJ45	AWG 26–27 only, crimping required
Industrial RJ45	Field-assembled, supports AWG up to 22, stronger shielding

6

LONGEVITY & FLEXIBILITY



Infrastructure can last up to 100 years



Equipment lifecycle: 5 – 10 years



Consider future scalability

7

STANDARDS & TESTABILITY

TIA/EIA-568	North American standard, widely used
ISO/IEC 11801	Global standard
EN 50173	European standard

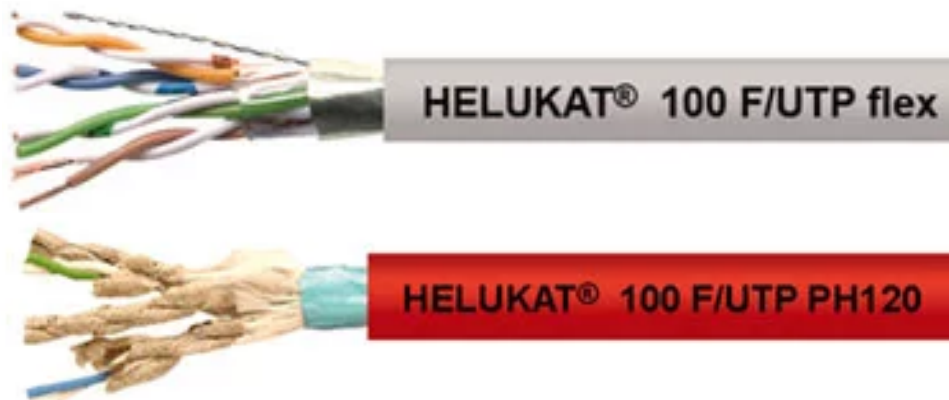
8

FIRE RATINGS

CM	General use
CMR	Improved fire resistance, riser space
CMP	Highest level of fire resistance, plenum spaces
CMX	For outdoor use

HELUKABEL LAN Cables

CAT 5



Industrial Ethernet Torsion Kat. 5e

CAT 5e

HELUKAT® 200A F/UTP

CAT 6



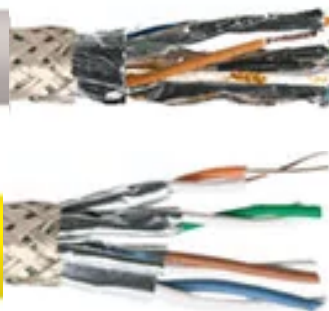
HELUKABEL LAN Cables

CAT 6A



HELUKAT® 600 S/FTP flex

HELUKAT® 1500 S/FTP



CAT 7 CAT 7A

CAT 7e



Chains, Cables, Assemblies: Quality from a Single Source

