

CABLE CONSTRUCTION

1. PTFE Tape Jacket (White) Laser Markable
2. 40 AWG Round SPC Overall Shield
3. Aluminum/Polyimide Foil
4. PTFE Tape Binder
5. PFA Insulation
6. Fluoropolymer Spline
7. Silver-Plated Copper Alloy Conductors

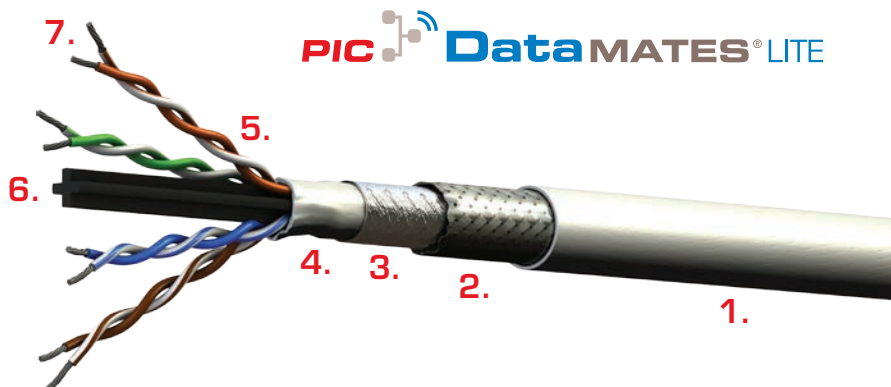
COLOR CODES

- Pair #1 - Blue, White/Blue
- Pair #2 - Orange, White/Orange
- Pair #3 - Green, White/Green
- Pair #4 - Brown, White/Brown

DataMATES Lite ethernet cables incorporate innovative design features that provide maximum electrical performance in a small, light weight and flexible package. PIC's E6A6824 delivers 10 Gigabit (ANSI/TIA-568 Category 6a) performance up to 246 ft.

Data transmission aboard aircraft faces more severe environmental and EMI situations than conventional LAN systems in commercial buildings, hence special measures have been taken to preserve technical performance. Silver-plated copper conductors and shielding assure uniform conductivity with excellent solderability. An PTFE jacket which is laser markable passed EN3475-503 Scrape Abrasion testing and is also flexible for ease of installation.

E6A6824 is ideal for harsh environment applications that demand high reliability, maximum flexibility and light weight, such as cabin management, in-flight entertainment, internet backbones. It is Skydrol resistant, RoHS compliant and passes the FAA flammability requirements of FAR Part 23 and 25, Appendix F.



PHYSICAL DATA

- Conductors 24 AWG (19/36) Stranded SPCA
- Shield Coverage 100% (Foil), 80% (Braid)
- Operating Temperature -55° to +200°C
- Outer Diameter: in (mm) 0.26 (6.60)
- Minimum Bend Radius: in (mm) 0.78 (19.81)
- Weight: lbs/100 ft (kg/100 m) 4.4 (6.5)

ELECTRICAL DATA

- Impedance: ohms 100
- Capacitance: pF/ft (m) 14.5 (47.6)
- Velocity of Propagation: % 70.0
- Dielectric Voltage Rating (kV RMS) 1.5
- DC Resistance: ohms/1000 ft (m) Max 28.5 (93.5)
- Max Distance*: ft (m) 246 (75)
- Attenuation: Nom / Max dB/100 ft (dB/100 m)

- @10 MHz 2.3 / 2.6 (7.5 / 8.5)
- @100 MHz 7.0 / 8.4 (23.0 / 27.6)
- @250 MHz 11.4 / 13.7 (37.4 / 44.9)
- @500 MHz 16.5 / 20.0 (58.1 / 65.6)

All values nominal unless otherwise noted
 *Note: The max distance is based on maximum channel insertion loss per ANSI/TIA-568-C.2



Description	Connector P/N	Tool P/N
Shielded CAT 6, Plug w/ATUM Strain Relief	110506	110288 - RJ45 Crimp Tool
Shielded CAT 6, Plug w/Strain Relief Sleeve	110629	110288 - RJ45 Crimp Tool
Shielded CAT 6, Plug w/Protective Boot	110630	110288 - RJ45 Crimp Tool
Shielded CAT 6, Plug w/ATUM Strain Relief (fits Amphenol (RJF) ruggedized backshell)	110789	110288 - RJ45 Crimp Tool
Shielded CAT 6a, Plug w/ATUM Strain Relief	110650 (568A) 110649 (568B)	110701 - Soft Jaw Clamping Pliers
Shielded CAT 6a, 90° Plug w/ATUM Strain Relief	110912 (568A) 110900 (568B)	110701 - Soft Jaw Clamping Pliers
Shielded CAT 6a, Jack w/ATUM Strain Relief	110937 (568A) 110938 (568B)	110701 - Soft Jaw Clamping Pliers
Siemon CAT 7 (Tera) Plug, 4 Pair, 24 AWG	110807*	110701 - Soft Jaw Clamping Pliers
Siemon CAT 7 (Tera) Jack, 4 Pair, 24 AWG	110808*	110701 - Soft Jaw Clamping Pliers

E6A6824 is a Category 6a (10Gb) ethernet cable that can be terminated in a variety of ways.

E6A6824 may also be terminated into miniature circulator connectors such as the Mighty Mouse connector made by GlenAir. These connectors provide a durable ruggedized solution option to the RJ45. Contact PIC Wire & Cable for more information about these connectors.



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