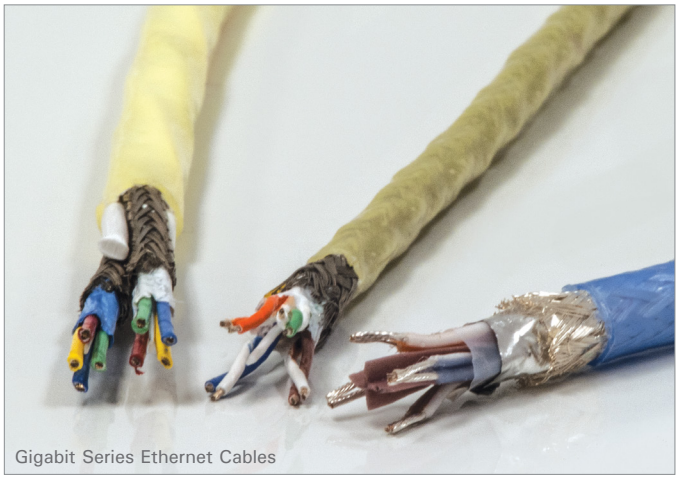
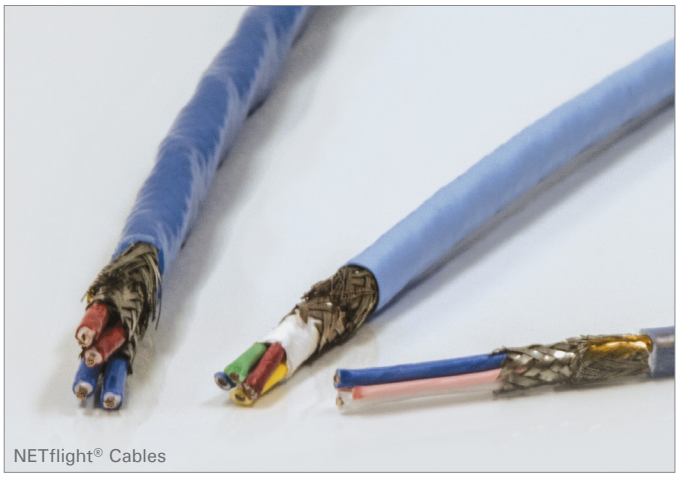
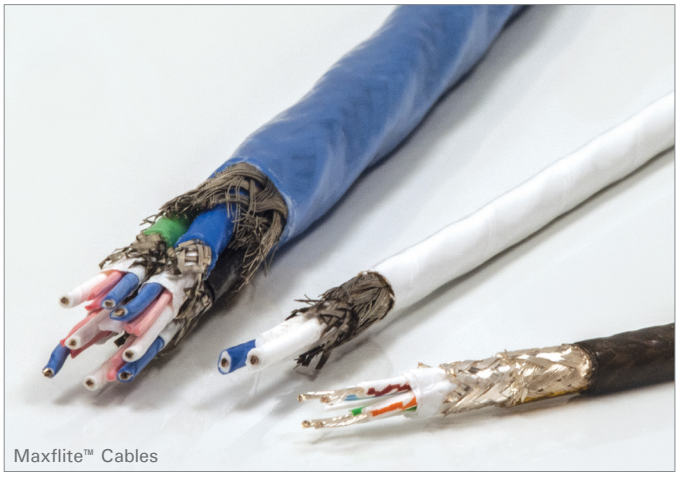
# Data Cables



Gigabit Series Ethernet Cables



NETflight® Cables



Maxflite™ Cables

## INTRODUCTION

Carlisle Interconnect Technologies (CarlisleIT) manufactures a wide variety of high performance data cables designed to meet the needs of aerospace, defense, military, ground transportation, industrial and RF communication applications. Typical applications include: Ethernet Backbone, Avionics, High Definition Video, Cabin Management Systems, In-Flight Entertainment and Bus applications.

Gigabit Series Ethernet cables have been developed in a wide variety of configurations to provide 1 and 10 Gb performance in the most demanding applications. Our proven NETflight® Ethernet cables in single pair, dual pair and quadrax configurations are widely used throughout the aerospace industry and provide superior electrical and mechanical performance. Our Maxflite™ series provides high speed performance for the popular video and data bus protocols: HDMI, DVI, USB, Firewire and CAN Bus. In addition to the standard protocols, when a custom solution is required, CarlisleIT has experienced on-site engineering to design a cable to meet your needs.

Should assembly capability be needed, CarlisleIT provides this service as well.

## FEATURES & BENEFITS

- Exceptional electrical and mechanical performance
- Operating performance from -55°C to as high as 200°C
- Meets the requirements of aerospace and other harsh environments including FAR 25.853 flammability and Boeing/Airbus smoke and toxicity requirements
- Multiple configurations to meet the needs of almost any application
- Lightweight versions to address weight and space requirements
- Advanced technologies such as Bonded-Pairs and an innovative X-Web reduces cross talk and ensures installable performance

# Gigabit Series

| | | Gigabit 10-HP™ | Gigabit-Plus™ | | Gigabit-Flexx™ | | Gigabit-STP™ | | Gigabit-S2Q™ | | Gigabit-UTP™ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 24 AWG | 24 AWG | 26 AWG | 24 AWG | 26 AWG | 24 AWG | 26 AWG | 24 AWG | 26 AWG | 24 AWG | 26 AWG |
| Part Number | | MX10G-24HP | MX10G-24 | MX10G-26 | MX10G-24FLX | MX10G-26FLX | NF24-P4-100* | NF26-P4-100* | NF24-2Q100 | NF26-2Q100 | NF24GB100 | NF26GB100 |
| Impedance (Ohms) | | 100 | 100 | | 100 | | 100 | | 100 | | 100 | |
| DC Resistance (100 ft) | | 2.76 Ohms | 2.76 Ohms | 4.38 Ohms | 2.76 Ohms | 4.38 Ohms | 2.76 Ohms | 4.38 Ohms | 2.76 Ohms | 4.38 Ohms | 2.76 Ohms | 4.38 Ohms |
| Velocity of Propagation | | 70% | 70% | | 70% | | 80% | | 80% | | 80% | |
| Attenuation (100m) | 100 MHz | 22 dB | 24 dB | 29 dB | 26.4 dB | 31.6 dB | 19.7 dB | 26.2 dB | 26.2 | 30.5 dB | 26.2 dB | 30.5 dB |
| | 250 MHz | 32 dB | 40 dB | 48 dB | - | - | - | - | - | - | - | - |
| | 500 MHz | 48 dB | - | - | - | - | - | - | - | - | - | - |
| Weight (lbs/1000 ft) | | 55 | 50 | 35 | 35 | 28 | 83 | 61 | 58 | 45 | 41 | 32 |
| Size (in.) | | .290 | .270 | .220 | .245 | .195 | .340 | .250 | .305 | .265 | .245 | .205 |
| Min. Bend Radius (in.) | | .50 | 2.00 | 1.75 | 1.00 | 0.75 | 3.40 | 2.50 | 3.05 | 2.65 | 2.45 | 2.05 |
| Operating Temperature | | -55 to 150°C | -55 to 150°C | | -55 to 200°C | | -55 to 150°C | | -55 to 150°C | | -55 to 150°C | |
| Other | | ROHS Compliant<br>Meets FAR 25.853 and Boeing/Airbus Smoke and Toxicity | ROHS Compliant<br>Meets FAR 25.853 and Boeing/Airbus Smoke and Toxicity | | ROHS Compliant<br>Meets FAR 25.853 and Boeing/Airbus Smoke and Toxicity | | Meets FAR 25.853 and Boeing/Airbus Smoke and Toxicity | | Meets FAR 25.853 and Boeing/Airbus Smoke and Toxicity | | Meets FAR 25.853 and Boeing/Airbus Smoke and Toxicity | |

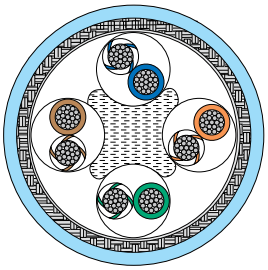
* 24773/1A042X-8(LD) and 26463/1A042X-8(LD) are cables designed specifically for use with an Octax™ connector.

## CABLE CROSS SECTIONS

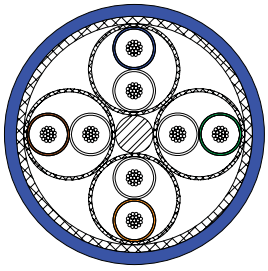
### Gigabit 10-HP™

### Gigabit-Plus™

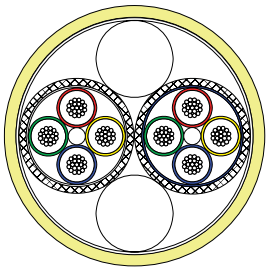
### Gigabit-Flexx™



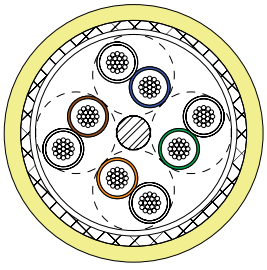
### Gigabit-STP™



### Gigabit-S2Q™



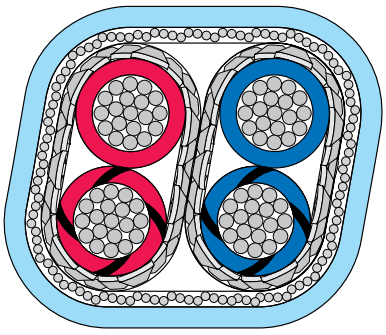
### Gigabit-UTP™



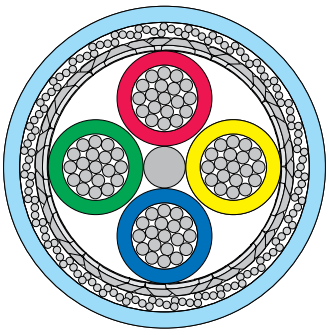
| | 100 Base-T – Twisted Pair | | 100 Base-T – Shielded Quad | | | 100 Base-T – Single Twisted Pair | | |
|---|---|---|---|---|---|---|---|---|
| | 22 AWG | 24 AWG | 22 AWG | 24 AWG | 26 AWG | 22 AWG | 24 AWG | 26 AWG |
| Part Number | NF22P100 | NF24P100 | NF22Q100 | NF24Q100 | NF26Q100 | NF22T100 | NF24T100 | NF26T100 |
| Impedance (Ohms) | 100 | | 100 | | | 100 | | |
| Velocity of Propagation | 80% | | 80% | | | 80% | | |
| Attenuation at 100 MHz (db/100ft) | 5.6/6.7 | 6.0/7.1 | 6.4/7.3 | 8.0/9.2 | 9.3/11.0 | 5.8/6.7 | 6.6/7.7 | 8.5/9.9 |
| Weight (lbs/1000 ft) | 43 | 35 | 34.5 | 24.5 | 18.0 | 26.0 | 18.0 | 15.0 |
| Size (in.) | 0.195x0.290 | 0.175x0.270 | 0.190 | 0.163 | 0.137 | 0.180 | 0.145 | 0.132 |
| Bend Radius (in.) | 1.95 | 1.75 | 1.90 | 1.63 | 1.37 | 1.80 | 1.45 | 1.32 |
| Operating Temperature | -55 to 150°C | | -55 to 150°C | | | -55 to 150°C | | |
| Other | Meets FAR 25.853 and Boeing/ Airbus Smoke and Toxicity | | Meets FAR 25.853 and Boeing/Airbus Smoke and Toxicity | | | Meets FAR 25.853 and Boeing/Airbus Smoke and Toxicity | | |

## CABLE CROSS SECTIONS

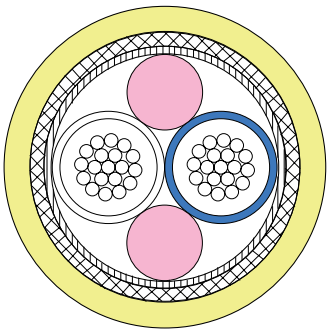
### 100 Base-T – Twisted Pair



### 100 Base-T – Shielded Quad



### 100 Base-T – Single Twisted Pair

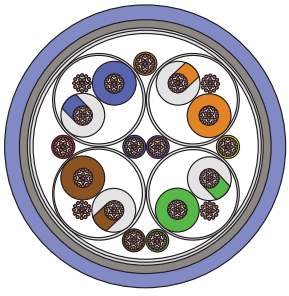


# Maxflite™

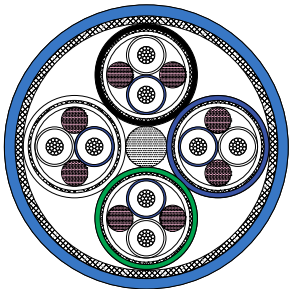
| | HDMI (1.3) | DVI | USB 2.0 | IEEE 1394 Firewire | CAN Bus |
|---|---|---|---|---|---|
| Part Number | 1586-305 | 24463/05099X-8(LD) | 28433/02171LX-4 | 24483/03063LX-6(LD) | CAN24TST120 |
| Impedance (Ohms) | 100 | 100 | 90 | 110 | 120 |
| Velocity of Propagation | 70% | 75% | 69% | 79% | 79% |
| Attenuation (dB/100ft) | 15 at 300 MHz | NA | 14 at 100 MHz | 11 at 200 MHz | 1 at 1 MHz |
| | 36 at 1.6 GHz | | 24 at 200 MHz | 17 at 400 MHz | 2 at 6 MHz |
| | 59 at 4.1 GHz | | 36 at 400 MHz | 24 at 800 MHz | 2.7 at 10 MHz |
| Cable Weight (lbs/1000ft) | 72 | 105 | 15.4 | 78 | 13.5 |
| Cable Diameter (in.) | 0.315 | 0.40 | 0.140 | 0.34 | .142 |
| Min. Bend Radius (in.) | 1.89 | 4.0 | 1.40 | 3.40 | 1.42 |
| Operating Temperature | -55 to 150°C | -55 to 150°C | -55 to 150°C | -55 to 150°C | -55 to 150°C |
| Other | Meets FAR 25.853 and Boeing/Airbus Smoke and Toxicity | Meets FAR 25.853 and Boeing/Airbus Smoke and Toxicity | Meets FAR 25.853 and Boeing/Airbus Smoke and Toxicity | Meets FAR 25.853 and Boeing/Airbus Smoke and Toxicity | Meets FAR 25.853 and Boeing/Airbus Smoke and Toxicity |

## CABLE CROSS SECTIONS

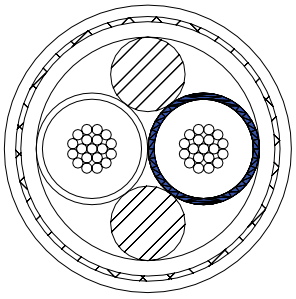
### HDMI



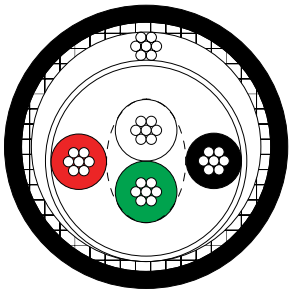
### DVI



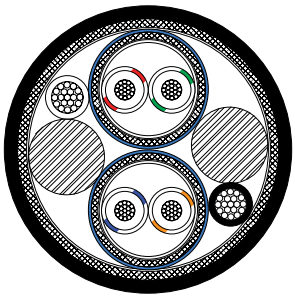
### CAN Bus



### USB



### IEEE 1394 Firewire





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