

### Description

*HCS DataLink 250 modular cord series consists of 100 Ohm impedance, 4-pair U/UTP terminated cords for work area, jumper and patching in local area networks (LANs). HCS DataLink 250 modular cords feature a unique termination method, combining strength relief injection molding into the RJ-45 plug with a removable boot. This design provides the advantages of both molded and non-molded terminations. HCS DataLink 250 modular cords exceed all ANSI/TIA-568.2-D EN 50173-1, EN 50173-2, IEC 61935-2 and ISO/IEC-11801 Category 6 requirements and are specially designed to be backward compatible with all Category 5 and Category 5E jacks.*

*The standard color is Gray RAL7035, but they are available in 10 different jacket colors and supplied with boots that match the color of the cords.*

### Applications

HCS DataLink 250 modular cords support all relevant LAN applications, including the following protocols:

- ✓ 1000BASE-T Gigabit Ethernet
- ✓ ATM 155
- ✓ TP-PMD
- ✓ 100BASE-T Fast Ethernet
- ✓ 100BASE-T2
- ✓ 100BASE-T4
- ✓ 100BASE-TX
- ✓ Token Ring 100 Mbps
- ✓ ATM 52
- ✓ ATM 25
- ✓ 10BASE-T Ethernet
- ✓ Token Ring 4 Mbps and 16 Mbps
- ✓ Broadband and Baseband Video
- ✓ ISDN Basic and Primary Access
- ✓ 1BASE-5 Starlan
- ✓ ISALAN
- ✓ ITU V.21 and X.11
- ✓ IEEE 802.3 PoE applications including Type 1 & 2.



### Qualifications and Approvals

HCS DataLink 250 Cables are tested and verified for full compliance with the following standards:

- ➔ Category 6 according to ANSI/TIA/568.2-D
- ➔ Category 6 according to ISO/IEC-11801 (2nd Edition)
- ➔ Category 6 cords according to EN 50173-1, EN 50173-2 & IEC 61935-2

### Benefits & Features

- ➔ Testing every cord prior to shipment - Providing the highest degree of quality assurance.
- ➔ Unique double termination method - Providing the advantages of both molded and non-molded terminations.
- ➔ Exceptional material properties and cable design - Providing the highest degree of reliability.
- ➔ High Return Loss and NEXT Loss values - Providing low BER (Bit-Error-Rate) in all applications.
- ➔ Extremely high pair-balance - Providing excellent EMC (Electro Magnetic Compatibility), minimizing radiation and maximizing noise immunity.
- ➔ Revolutionary pair lay scheme - Providing an extremely low delay skew.
- ➔ Smooth and limp jacket - Providing comfortable cord handling.
- ➔ Unique DoubleSafe™ Quality Assurance Program - Providing lowest rejection rate available.

### PHYSICAL AND MECHANICAL PROPERTIES

4 color-coded, unshielded twisted pairs cabled together and overall jacketed. Both cable ends terminated with unshielded modular plug connectors conforming to IEC 60603-7-4.

|                                    |                                                                                     |
|------------------------------------|-------------------------------------------------------------------------------------|
| Basic Cable Conductor              | Stranded, 24 AWG, 7x0.20 mm, bare annealed copper                                   |
| Wire Insulation                    | Polyolefin                                                                          |
| Number of Insulated Conductors     | 8, twisted in 4 pairs.                                                              |
| Color Code of Pairs                | Blue x White/Blue, Orange x White/Orange, Green x White/Green, Brown x White/Brown. |
| Basic cables standard compliance   |                                                                                     |
| Cables made of stranded conductors | IEC 61156-6                                                                         |
| Cables made of solid conductors    | IEC 61156-5                                                                         |
| Outer Jacket and Boots             | LSOH Halogen free flame retardant.                                                  |
| Standard Jacket and Boot Color     | Light Gray RAL 7035. Other colors available upon request.                           |
| Standard Surface Marking           | Includes HCS P/N, Cable Description, Meter Mark and Batch Number.                   |
| Cable to Plug Tensile Strength     | 9 Kgf (90N) min.                                                                    |
| Pulling Force                      | 1 Kgf (10N) max.                                                                    |
| Storage Temperature                | -20 to +80C                                                                         |
| Durability                         | 750 mating cycles                                                                   |
| Cable OD                           | 5.7 mm nom.                                                                         |
| Bend Radius                        | 23 mm min.                                                                          |
| Plug Housing Material              | Polycarbonate, conforming to UL 94 V-0.                                             |
| Plug Contact Material              | 50 micro-inches gold plating over 100 micro-inches nickel plated copper alloy.      |
| Temperature Operating Range        | -20 to +60C                                                                         |
| Flame Tests                        | IEC 60332-1 (flame propagation), IEC 60754 (acid gas) & IEC 61034 (smoke density).. |
| Halogen Content in LSOH Cables     | Null.                                                                               |

## TRANSMISSION PROPERTIES AND ELECTRICAL SPECIFICATIONS

| FREQ.  | NEXT           |                |                 | RL   |
|--------|----------------|----------------|-----------------|------|
| MHz    | dB             |                |                 | dB   |
|        | Min            |                |                 | Min  |
|        | 2 m Patch Cord | 5 m Patch Cord | 10 m Patch Cord |      |
| 1.00   | 65.0           | 65.0           | 65.0            | 19.8 |
| 4.00   | 65.0           | 65.0           | 65.0            | 21.6 |
| 8.00   | 65.0           | 65.0           | 65.0            | 22.5 |
| 10.00  | 65.0           | 65.0           | 62.9            | 22.8 |
| 16.00  | 62.0           | 60.5           | 59.0            | 23.4 |
| 20.00  | 60.1           | 58.6           | 57.2            | 23.7 |
| 25.00  | 58.1           | 56.8           | 55.4            | 24.0 |
| 31.25  | 56.2           | 54.9           | 53.6            | 23.0 |
| 62.50  | 50.4           | 49.2           | 48.1            | 20.0 |
| 100.00 | 46.4           | 45.3           | 44.4            | 18.0 |
| 125.00 | 44.5           | 43.5           | 42.7            | 17.0 |
| 150.00 | 43.0           | 42.1           | 41.4            | 16.2 |
| 200.00 | 40.6           | 39.8           | 39.3            | 15.0 |
| 250.00 | 38.8           | 38.1           | 37.6            | 14.0 |

|                          |                                                     |
|--------------------------|-----------------------------------------------------|
| Characteristic Impedance | 100±6 Ohm @ 1-250 MHz                               |
| Contact Resistance       | 20 mOhm max.                                        |
| Resistance Unbalance     | 2% max.                                             |
| Voltage Rating           | 72 Vdc max.                                         |
| Dielectric Strength      | 1000 Volts/1 minute min rms                         |
| Ampacity                 | 1.0 Amps max.                                       |
| Insulation Resistance    | 500 MOhm min. @ 500 Vdc                             |
| Coupling Attenuation     | 40 dB min @ 30-100 MHz 40-20log (f/100)@100-250 MHz |
| Transfer Impedance       | N/A                                                 |

## ORDERING INFORMATION

| HCS P/N       | Description                           | Length (m) | Notes |
|---------------|---------------------------------------|------------|-------|
| T06-0042x-05y | 4x2x24# U/UTP CAT 6 LSOH Modular Cord | 0.5        |       |
| T06-0042x-10y | 4x2x24# U/UTP CAT 6 LSOH Modular Cord | 1.0        |       |
| T06-0042x-20y | 4x2x24# U/UTP CAT 6 LSOH Modular Cord | 2.0        |       |
| T06-0042x-30y | 4x2x24# U/UTP CAT 6 LSOH Modular Cord | 3.0        |       |
| T06-0042x-50y | 4x2x24# U/UTP CAT 6 LSOH Modular Cord | 5.0        |       |
| T06-0042x-70y | 4x2x24# U/UTP CAT 6 LSOH Modular Cord | 7.0        |       |
| T06-0042x-A0y | 4x2x24# U/UTP CAT 6 LSOH Modular Cord | 10         |       |

## Note:

"x" indicate the Jacket Color

"y" indicate the Clip Color

x,y: 0= Gray (RAL 7035) (Standard Jacket Color)

x,y: 1= Blue (RAL 5015)

x,y: 2= Orange (RAL 2003)

x,y: 3= Green (RAL 6024)

x,y: 4= Brown (RAL 8011)

x,y: 5= White (RAL 9003)

x,y: 6= Red (RAL 3000)

x,y: 7= Black (RAL 9004)

x,y: 8= Yellow (RAL 1021)

x,y: 9= Purple (RAL 4005)

x,y: V= Ivory (RAL 1014)

x,y: D= Dust-Gray (RAL 7037)

x,y: T= Turquoise (RAL 5018)