Leviton Network Solutions Berk-Tek a Leviton Company

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**Product Guide Specification**

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat, SectionFormat,* and *PageFormat,* as described in *The CSI Construction Specifications Practice Guide.*

**This section must be carefully reviewed and edited by the Architect or Engineer to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all “Specifier Notes” after editing this section.**

Section numbers and titles are from *MasterFormat 2011 Update.*

1. **27 15 00**

**COMMUNICATIONS HORIZONTAL CABLING - COPPER**

**GENERAL**

* + 1. **SECTION INCLUDES**
       1. Details of Horizontal cabling systems and channel performance requirements.
       2. Detailed component specifications for horizontal cable and connecting hardware from Telecommunications Room (TR) to Telecommunication Outlets (TO).
    2. **RELATED REQUIREMENTS**
       1. Section 27 05 26 – Grounding and Bonding for Communications Systems.
       2. Section 27 05 28 – Pathways for Communications Systems.
       3. Section 27 10 00 – Structured Cabling.
       4. Section 27 11 00 – Communications Equipment Room Fittings.
       5. Section 27 13 00 – Communications Backbone Cabling.
       6. Section 27 16 00 – Communications Connecting Cords, Devices, and Adapters.
    3. **REFERENCE STANDARDS**
       1. ANSI/TIA-568.0-E – Generic Communications Cabling for Customer Premises.
       2. ANSI/TIA-568.1-E – Commercial Building Communications Cabling Standard Part 1: General Requirements.
       3. ANSI/TIA 568.2-D – Balanced Twisted-Pair Telecommunications Cabling and Components Standards
       4. ANSI/TIA-569-E – Commercial Building Standard for Telecommunications Pathways and Spaces.
       5. ANSI/TIA-606-C – Administration Standard for the Commercial Telecommunications Infrastructure.
       6. ANSI/TIA-607-D – Commercial Building Bonding and Grounding (Earthing) Requirements for Telecommunications.
       7. NFPA 70 – National Electrical Code (NEC).
       8. BICSI – TDMM, Building Industries Consulting Services International, Telecommunications Distribution Methods Manual (TDMM)
    4. **PRE-INSTALLATION MEETINGS**
       1. Convene pre-installation meeting 2 weeks before start of installation of communications horizontal cabling.
       2. Require attendance of parties directly affecting work of this section, including Contractor, Architect, installer, and manufacturer’s representative.
       3. Review materials, installation, field quality control, labeling, protection, and coordination with other work.
    5. **SUBMITTALS**
       1. Comply with Section 01 33 00 – Submittal Procedures.
       2. Product Data: Submit manufacturer’s product data sheets, including installation instructions verifying that materials comply with specified requirements and are suitable for intended application.
       3. Installer’s Project References: Submit installer’s list of successfully completed communications horizontal cabling projects, including project name and location, name of architect, and type and quantity of communications horizontal cabling installed.
    6. **QUALITY ASSURANCE**
       1. Manufacturer’s Qualifications: Manufacturer regularly engaged, for past 10 years, in manufacture of communications horizontal cabling of similar type to that specified.
       2. Installer's Qualifications:
          1. Approved Leviton Certified Installer before, during, and through completion of the system installation. Supporting documentation will be required as part of the submittal.
          2. Responsible for workmanship and installation practices in accordance with Leviton Certified Installer Program.
    7. **DELIVERY, STORAGE, AND HANDLING**
       1. Delivery and Acceptance Requirements: Deliver materials to site in manufacturer’s original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
       2. Storage and Handling Requirements:
          1. Store and handle materials in accordance with manufacturer’s instructions.
          2. Keep materials in manufacturer’s original, unopened containers and packaging until installation.
          3. Store materials in clean, dry area indoors.
          4. Protect materials during storage, handling, and installation to prevent damage.
    8. **WARRANTY**
       1. The horizontal communications cabling system installed shall be eligible for coverage by a Limited Lifetime Warranty to the end user.
          1. Horizontal channels shall be completed with the appropriate Berk-Tek cable and Leviton Network Solutions connectivity products, including Leviton factory manufactured patch cords, for each System listed in Part 2 Systems Descriptions below in order to qualify for the Limited Lifetime Warranty.
          2. Approved products shall be listed on the most recent version of the applicable Leviton Systems Data Sheets.
       2. Certified Installer/Certified Integrator shall provide labor, materials, and documentation in accordance with Leviton Network Solutions requirements necessary to ensure that the Owner will be furnished with a Limited Lifetime Warranty.
       3. The installed structured cabling system shall provide a warranty guaranteeing installed channel performance above the ANSI/TIA 568-E requirements for Cat 5e, Cat 6, and/or Cat 6A cabling systems or ISO 11801-1 requirements for Cass D, Class E, and/or Class Ea.
          1. Standards-compliant channel or permanent link performance tests shall be performed in the field with a Leviton approved certification tester in the permanent link test configuration. See 1.8 A.1 above for channel requirements.
       4. Necessary documentation for warranty registration shall be provided to the manufacturer by the installer (within 10 days) following 100 percent testing of cables.
          1. Submit test results to Leviton Network Solutions, in the certification tester’s original software files.
          2. Installer shall ensure that the warranty registration is properly submitted, with all required documentation within 10 days of project completion.
          3. Certified Contractor/Certified Integrator must adhere to the terms and conditions of the respective manufacturer’s warranty programs.
       5. Installer shall ensure that the Owner receives the manufacturer issued project warranty certificate within 60 calendar days of warranty registration.
  1. **SYSTEMS AND PRODUCTS**
     1. **MANUFACTURERS**
        1. Leviton Network Solutions, 2222 222nd Street SE, Bothell, Washington 98021. Phone 425-486-2222. Fax 425-485-3373. Website [www.leviton.com](http://www.leviton.com)

Berk-Tek a Leviton Company, 132 White Oak Road, New Holland, PA 17557 Phone: 717-354-6200. Fax 717-354-7944. Website [www.leviton.com/ns/berktek](http://www.leviton.com/ns/berktek)

* + 1. **COPPER SYSTEMS DESCRIPTION**
       1. Horizontal twisted-pair category rated cabling systems are TIA 568 standards compliant intra-building twisted-pair communications cabling channels connecting Telecommunication Rooms (TRs) to Telecommunication Outlets (TOs) located at individual work areas.
       2. Each system consists of a matched set of components installed according to industry guidelines that yield a defined and guaranteed systems performance level.
       3. Each Horizontal twisted pair category rated cabling system includes the following components matched to the desired system performance.
          1. Category rated horizontal cable
          2. Category rated connector modules
          3. Category rated patch panels
          4. Category rated patch cords
          5. Necessary support systems, such as QuickPort panels, cable managers and faceplates
       4. Copper Systems and Performance Categories

Copper Systems consist of specific components to achieve a certain level of performance. Available systems are shown below with the key components included.

**SPECIFIER NOTES:**

* Click on the system name to jump to the detailed system specification (Place curser over the underlined text, hold down the Ctrl button and Click).
* Delete Section 2.2D and any Copper Systems not required for completed specification.
* Detailed specifications for components are available in Section 2.4 of this template. Delete any components not required for completed specification.
  + - * 1. [CX6900 High-Density Cat 6A Premium+ UTP System](#1fob9te)

Berk-Tek LANmark-SST Cat 6A UTP cable

Leviton Atlas-X1 Cat 6A UTP connectivity

Leviton Cat 6A Shielded patch cords (6AS10)

* + - * 1. [CX6850 Cat 6A Premium+ UTP System](#3dy6vkm)

Berk-Tek LANmark-XTP Cat 6A UTP cable

Leviton Atlas-X1 Cat 6A UTP connectivity

Leviton Cat 6A Shielded patch cords (6AS10)

* + - * 1. [CX6700 Cat 6A Enhanced+ UTP System](#4d34og8)

Berk-Tek LANmark-XTP Cat 6A UTP cable

Leviton eXtreme Cat 6A UTP connectivity

Leviton Cat 6A Shielded patch cords (6AS10)

* + - * 1. [CX6650 Cat 6A Enhanced UTP System](#17dp8vu)

Berk-Tek LANmark-10G2 Cat 6A UTP cable

Leviton Atlas-X1 Cat 6A UTP connectivity

Leviton Cat 6A Shielded patch cords (6AS10)

* + - * 1. [CX6500 Cat 6A Standard UTP System](#3rdcrjn)

Berk-Tek LANmark-10G2 Cat 6A UTP cable

Leviton eXtreme Cat 6A UTP connectivity

Leviton Cat 6A Shielded patch Cords (6AS10)

* + - * 1. [CR6550 10G Reduced OD UTP System](#26in1rg)

Berk-Tek 10GRD reduced O/D Cat 6A UTP cable

Leviton Atlas-X1 Cat 6A UTP connectivity

Leviton Cat 6A Shielded patch cords (6AS10)

* + - * 1. [CS6700 Cat 6A Shielded System](#lnxbz9)

Berk-Tek LANmark-10G FTP Cat 6A F/UTP Cable

Leviton Atlas-X1 Cat 6A Shielded connectivity

Leviton Cat 6A Shielded patch cords (6AS10)

* + - * 1. [AV6850 10 Gb/s AV UTP System](#35nkun2)

Berk-Tek LANmark-XTP Cat 6A UTP cable

Leviton Atlas-X1 Cat 6A UTP connectivity

Leviton Cat 6A Shielded patch cords (6AS10)

* + - * 1. [IX6850 Cat 6A Premium+ X/UTP Industrial System](#1ksv4uv)

Berk-Tek LANmark-A750 Cat 6A UTP cable

Leviton Atlas-X1 Cat 6A UTP connectivity

Leviton Cat 6A Shielded patch cords (6AS10)

Leviton DuraPort Cat 6A patch cords

* + - * 1. [IS6730 Cat 6A High-Flex SF/UTP Industrial System](#44sinio)

Berk-Tek LANmark-C637 Cat 6A High-Flex Shielded cable

Leviton Atlas-X1 Cat 6A Shielded connectivity

Leviton Cat 6A Shielded patch cords (6AS10)

Leviton DuraPort Cat 6A patch cords

* + - * 1. [IS6720 Cat 6A High-Flex SF/UTP Industrial System](#2jxsxqh)

Berk-Tek LANmark-C545 Cat 6A High-Flex Shielded cable

Leviton Atlas-X1 Cat 6A Shielded connectivity

Leviton Cat 6A Shielded patch cords (6AS10)

Leviton DuraPort Cat 6A patch cords

* + - * 1. [IS6710 Cat 6A F/UTP Industrial System](#z337ya)

Berk-Tek LANmark-B751 Cat 6A Shielded cable

Leviton Atlas-X1 Cat 6A Shielded connectivity

Leviton Cat 6A Shielded patch cords (6AS10)

Leviton DuraPort Cat 6A patch cords

* + - * 1. [CX6300 Cat 6 Premium+ UTP System](#3j2qqm3)

Berk-Tek LANmark-2000 Cat 6 UTP cable

Leviton Atlas-X1 Cat 6 UTP connectivity

Leviton Cat 6 Standard patch cords (6D560)

* + - * 1. [CX6200 Cat 6 Premium UTP System](#4i7ojhp)

Berk-Tek LANmark-2000 Cat 6 UTP cable

Leviton eXtreme Cat 6 UTP connectivity

Leviton Cat 6 Standard patch cords (6D460)

* + - * 1. [CX6175 Cat 6 Hybrid UTP System](#1ci93xb)

Berk-Tek LANmark-1000 Cat 6 UTP cable

Leviton Atlas-X1 Cat 6 UTP connectivity

Leviton Cat 6 Standard patch cords (6D560)

* + - * 1. [CX6150 Cat 6 Enhanced+ UTP System](#3whwml4)

Berk-Tek LANmark-1000 Cat 6 UTP cable

Leviton eXtreme Cat 6 UTP connectivity

Leviton Cat 6 Standard patch cords (6D560)

* + - * 1. [CX6100 Cat 6 Enhanced UTP System](#qsh70q)

Berk-Tek LANmark-1000 Cat 6 UTP cable

Leviton eXtreme Cat 6 UTP connectivity

Leviton Cat 6 Standard patch cords (6D460)

* + - * 1. [CX6050 Cat 6 Standard+ UTP System](#3as4poj)

Berk-Tek LANmark-6 Cat 6 UTP cable

Leviton eXtreme Cat 6 UTP connectivity

Leviton Cat 6 Standard patch cords (6D560)

* + - * 1. [CX6000 Standard UTP System](#49x2ik5)

Berk-Tek LANmark-6 Cat 6 UTP cable

Leviton eXtreme Cat 6 UTP connectivity

Leviton Cat 6 Standard patch cords (6D460)

* + - * 1. [CS6100 Cat 6 Shielded System](#2p2csry)

Berk-Tek LANmark-6 FTP Cat 6 Shielded cable

Leviton Atlas-X1 Cat 6 Shielded connectivity

Leviton Cat 6 Shielded patch cords (6S460)

* + - * 1. [AV6400 1 Gb/s AV Shielded System](#147n2zr)

Berk-Tek LANmark-HD F/UTP Cat 6 Shielded Cable

Leviton Atlas-X1 Cat 6 Shielded connectivity

Leviton Cat 6 Shielded patch cords (6S460)

* + - * 1. [CX5000 Cat 5e Standard UTP System](#3o7alnk)

Berk-Tek HyperPlus Cat 5e UTP cable

Leviton GigaMax Cat 5e UTP connectivity

Leviton Cat 5e Standard patch cords (5G460)

* + - * 1. [CP5300 Cat 5e High PoE UTP System](#23ckvvd)

Berk-Tek LANmark-IP UTP 22 AWG Cat 5e cable

Leviton Atlas-X1 Cat 5e UTP connectivity

Leviton Cat 5e Standard patch cords (5D460)

* + - * 1. [UP1000 Ultra-High PoE 1G System](#ihv636)

Berk-Tek LANmark-IP UTP 22 AWG Cat 5e cable

Leviton GigaMax Cat 5e UTP connectivity

Leviton Universal Tool-Free Plug (6APLG)

* + - 1. Cables: Route through conduit, cable trays, spaces below raised floors, open ceiling areas, non-ventilated spaces above ceiling tile, and through plenum air-handling spaces above ceiling tile.
      2. Furnish and install all materials necessary for a complete and working communications horizontal cabling system.
    1. **COPPER SYSTEMS CHANNEL PERFORMANCE SPECIFICATIONS**

* + - 1. **CX6900 High-Density Cat 6A Premium+ UTP System**. Category 6A System utilizing unshielded twisted-pair cable with specially designed insulated metallic isolation wrap (SST), high performance Atlas-X1 connector modules, and Leviton Cat 6A Shielded patch pords.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| IL | NEXT | ANEXT | ACRF | PSACRF | RL | ACRN | PSACRN | PSANEXT | PSAACRF |
| 3% | 4dB | 6dB | 10dB | 10dB | 4dB | 7dB | 7dB | 6dB | 11dB |

* + - * 1. **Channel margin guarantees** for a CX6900 High-Density Cat 6A Premium+ UTP System(margin vs. ANSI/TIA-568.2-D and margin guarantees are for a 4-connector channel).
        2. **Cable**: LANmark-SST 100-ohm, Category 6A, 23 AWG, 4-pair unshielded twisted-pair with specially designed insulated isolation wrap.

Cable CA Score of 8.6 Verified to UL #B638581

Electrical performance Third-party (ETL) verified and Characterized to 750 MHz

Maximum Cable Diameter: 0.250 inch

Cabling manufacturer must be able to provide independent third-party testing that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

Part Number: CMP 11101842 (blue, other colors available)

CMR 11104157 (blue, other colors available)

* + - * 1. **Connector Modules**: Leviton Atlas-X1 Category 6A UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: Standard version: 6AUJK-R\*6, Shuttered version: 6AUJK-S\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Leviton Category 6A 110-style

Detailed specification in Product section

Component-rated, 8-position modular jack panel, Category 6A, T568A/B universal wiring label.

Available 24 or 48 port, flat or angled, part numbers below

24/48 Port Flat 6A586-U24, 6A586-U48

24/48 Port, angled 6A587-U24, 6A587-U48 .

* + - * 1. **Patch Panels:** Modular QuickPort style. Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + - * 1. **Patch Cords:** Leviton Cat 6A Shielded patch cords (6AS10)

Detailed specification in Product section

Category 6A, shielded cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6AS10-xxy xx = Length in feet, y = Color

* + - 1. **CX6850 Cat 6A Premium+ UTP System**. Category 6A System utilizing unshielded twisted-pair cable with innovative crosstalk prevention (XTP), high performance Atlas-X1 connector modules, and Leviton Cat 6A Shielded patch cords.
         1. **Channel margin guarantees** for a CX6850 Cat 6A Premium+ UTP System(margin vs. ANSI/TIA-568.2-D and margin guarantees are for a 4-connector channel).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| IL | NEXT | ANEXT | ACRF | PSACRF | RL | ACRN | PSACRN | PSANEXT | PSAACRF |
| 3% | 5dB | 6dB | 10dB | 10dB | 4dB | 7dB | 7dB | 5dB | 11dB |

* + - * 1. **Cable:** LANmark-XTP 100-ohm, Category 6A, 23 AWG, 4-pair unshielded twisted pair with innovative crosstalk prevention technology. Compliance to HDBaseT™.

Cable CA Score of 8.6 Verified to UL #B638581

Electrical performance Third-party (ETL) verified and Characterized to 750 MHz

Maximum Cable Diameter: 0.275 inch

Compliance to HDBaseT™

Cabling manufacturer must be able to provide independent third-party testing that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

Part Number: CMP 11082057 (blue, other colors available)

CMR 11082062 (blue, other colors available)

* + - * 1. **Connector Modules**: Leviton Atlas-X1 Category 6A UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: Standard version: 6AUJK-R\*6, Shuttered version: 6AUJK-S\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Leviton Category 6A 110-style

Detailed specification in Product section

Component-rated, 8-position modular jack panel, Category 6A, T568A/B universal wiring label.

Available 24 or 48 port, flat or angled, part numbers below

24/48 Port Flat 6A586-U24, 6A586-U48

24/48 Port, angled 6A587-U24, 6A587-U48 .

* + - * 1. **Patch Panels:** Modular QuickPort style. Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + - * 1. **Patch Cords:** Leviton Cat 6A Shielded patch cords (6AS10)

Detailed specification in Product section

Category 6A, shielded cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6AS10-xxy xx = Length in feet, y = Color

* + - 1. **CX6700 Cat 6A Enhanced+ UTP System**. Category 6A System utilizing unshielded twisted-pair cable with innovative crosstalk prevention (XTP), eXtreme connector modules, and Leviton Cat 6A Shielded patch cords.
         1. **Channel margin guarantees** for a CX6700 Cat 6A Enhanced+ UTP System(margin vs. ANSI/TIA-568.2-D and margin guarantees are for a 4-connector channel).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| IL | NEXT | ANEXT | ACRF | PSACRF | RL | ACRN | PSACRN | PSANEXT | PSAACRF |
| 3% | 4dB | 5dB | 8dB | 8dB | 4dB | 7dB | 7dB | 4dB | 10dB |

* + - * 1. **Cable:** LANmark-XTP 100 ohm, Category 6A, 23 AWG, 4-pair unshielded twisted pair with innovative crosstalk prevention technology.

Cable CA Score of 8.6 Verified to UL #B638581

Electrical performance Third-party (ETL) verified and Characterized to 750 MHz

Maximum Cable Diameter: 0.275 inch

Compliance to HDBaseT™

Cabling manufacturer must be able to provide independent third-party testing that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

Part Number: CMP 11082057 (blue, other colors available)

CMR 11082062 (blue, other colors available)

* + - * 1. **Connector Modules**: Leviton eXtreme Category 6A UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: Standard version: 6110G-R\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Leviton Category 6A 110-style

Detailed specification in Product section

Component-rated, 8-position modular jack panel, Category 6A, T568A/B universal wiring label.

Available 24 or 48 port, flat or angled, part numbers below

24/48 Port Flat 6A586-U24, 6A586-U48

24/48 Port, angled 6A587-U24, 6A587-U48 .

* + - * 1. **Patch Panels:** Modular QuickPort style. Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + - * 1. **Patch Cords:** Leviton Cat 6A Shielded patch cords (6AS10)

Detailed specification in Product section

Category 6A, shielded cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6AS10-xxy xx = Length in feet, y = Color

* + - 1. **CX6650 Cat 6A Enhanced UTP System**. Category 6A System utilizing unshielded twisted-pair cable 10G2 cable, Atlas-X1 UTP connector modules, and Leviton Cat 6A Shielded patch cords.
         1. **Channel margin guarantees** for a CX6650 Cat 6A Enhanced UTP System(margin vs. ANSI/TIA-568.2-D and margin guarantees are for a 4-connector channel).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| IL | NEXT | ANEXT | ACRF | PSACRF | RL | ACRN | PSACRN | PSANEXT | PSAACRF |
| 3% | 4dB | 5dB | 7dB | 8dB | 3dB | 6dB | 7dB | 1dB | 1dB |

* + - * 1. **Cable:** LANmark-10G2 100-ohm, Category 6A, 23 AWG, 4-pair unshielded twisted-pair cable.

Cable CA Score of 7.4 Verified to UL #B63858

Electrical performance Third-party (ETL) verified and Characterized to 750 MHz

Maximum Cable Diameter: 0.300 inch

Compliance to HDBaseT™

Cabling manufacturer must be able to provide independent third-party testing that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

Part Number: CMP Reel: 10130484 Reel in Box: 11085339 (blue)

CMR Reel: 10137700 Reel in Box: 11084689 (blue)

* + - * 1. **Connector Modules**: Leviton Atlas-X1 Category 6A UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: Standard version: 6AUJK-R\*6, Shuttered version: 6AUJK-S\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Leviton Category 6A 110-style

Detailed specification in Product section

Component-rated, 8-position modular jack panel, Category 6A, T568A/B universal wiring label.

Available 24 or 48 port, flat or angled, part numbers below

24/48 Port Flat 6A586-U24, 6A586-U48

24/48 Port, angled 6A587-U24, 6A587-U48 .

* + - * 1. **Patch Panels:** Modular QuickPort style. Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + - * 1. **Patch Cords:** Leviton Cat 6A Shielded patch cords (6AS10)

Detailed specification in Product section

Category 6A, shielded cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6AS10-xxy xx = Length in feet, y = Color

* + - 1. **CX6500 Cat 6A Standard UTP System**. Category 6A System utilizing Unshielded twisted-pair cable 10G2 cable, eXtreme UTP connector modules, and Leviton Cat 6A Shielded patch cords.
         1. **Channel margin guarantees** for a CX6500 Cat 6A Standard UTP System(margin vs. ANSI/TIA-568.2-D and margin guarantees are for a 4-connector channel).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| IL | NEXT | ANEXT | ACRF | PSACRF | RL | ACRN | PSACRN | PSANEXT | PSAACRF |
| 3% | 2dB | 3dB | 5dB | 6dB | 1dB | 4dB | 5dB | 0dB | 0dB |

* + - * 1. **Cable:** LANmark-10G2 100-ohm, Category 6A, 23 AWG, 4-pair unshielded twisted-pair cable.

Cable CA Score of 7.4 Verified to UL #B638581

Electrical performance Third-party (ETL) verified and Characterized to 750 MHz

Maximum Cable Diameter: 0.300 inch

Compliance to HDBaseT™

Cabling manufacturer must be able to provide independent third-party testing that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

Part Number: CMP 11082057 (blue, other colors available)

CMR 11082062 (blue, other colors available)

* + - * 1. **Connector Modules**: Leviton eXtreme Category 6A UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: Standard version: 6110G-R\*6

\* = color option 13 colors available

* + - * 1. **Patch Panels:** Leviton Category 6A 110-style

Detailed specification in Product section

Component-rated, 8-position modular jack panel, Category 6A, T568A/B universal wiring label.

Available 24 or 48 port, flat or angled, part numbers below

24/48 Port Flat 6A586-U24, 6A586-U48

24/48 Port, angled 6A587-U24, 6A587-U48 .

* + - * 1. **Patch Panels:** Modular QuickPort style. Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + - * 1. **Patch Cords:** Leviton Cat 6A Shielded patch cords (6AS10)

Detailed specification in Product section

Category 6A, shielded cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6AS10-xxy xx = Length in feet, y = Color

* + - 1. **CR6550 10G Reduced Diameter UTP System**. 10GBase-T System utilizing Unshielded Twisted Pair LANmark 10G RD cable, Atlas-X1 UTP connector modules, and Leviton Cat 6A Shielded patch cords.
         1. Systems Performance:

System guaranteed to support IEEE 10GBASE-T (802.3an) networks to 60m

Systems meets ANSI/TIA-568.2-D internal requirements for 10G cabling

* + - * 1. **Cable:** LANmark-10GRD 100-ohm, Cat 6A, 23 AWG, 4-pair unshielded twisted-pair cable.

Maximum Cable Diameter: 0.265 inch.

Part Number: CMP 10190333 (blue)

CMR 10189758 (blue)

* + - * 1. **Connector Modules**: Leviton Atlas-X1 Category 6A UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: Standard version: 6AUJK-R\*6, Shuttered version: 6AUJK-S\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Leviton Category 6A 110-style

Detailed specification in Product section

Component-rated, 8-position modular jack panel, Category 6A, T568A/B universal wiring label.

Available 24 or 48 port, flat or angled, part numbers below

24/48 Port Flat 6A586-U24, 6A586-U48

24/48 Port, angled 6A587-U24, 6A587-U48 .

* + - * 1. **Patch Panels:** Modular QuickPort style. Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + - * 1. **Patch Cords:** Leviton Cat 6A Shielded patch cords (6AS10)

Detailed specification in Product section

Category 6A, shielded cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6AS10-xxy xx = Length in feet, y = Color

* + - 1. **CS6700 Cat 6A Shielded System**. Category 6A System utilizing shielded F/UTP twisted-pair LANmark-10G FTP cable, high performance Atlas-X1 STP connector modules, and Leviton Cat 6A Shielded patch cords.
         1. **Channel margin guarantees** for a CS6700 Cat 6A Shielded System (margin vs. ANSI/TIA-568.2-D and margin guarantees are for a 4-connector channel).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| IL | NEXT | ANEXT | ACRF | PSACRF | RL | ACRN | PSACRN | PSANEXT | PSAACRF |
| 3% | 4dB | 6dB | 8dB | 8dB | 3dB | 7dB | 8dB | 16dB | 16dB |

* + - * 1. **Cable**: LANmark-10G2 FTP 100-ohm, Category 6A, 23 AWG, 4-pair shielded twisted-pair cable.

Electrical performance Third-party (ETL) verified

Maximum Cable Diameter: 0.280 inch

Part Number: CMP 10167487 (gray, other colors available)

CMR 10189798 (gray, other colors available)

All category cabling manufacturers must be able to provide documentation from an independent third-party testing agency that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

* + - * 1. **Connector Modules**: Leviton Atlas-X1 Category 6A Shielded QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: Standard version: 6ASJK-R\*6, Shuttered version: 6ASJK-S\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Modular Shielded QuickPort style. Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

Shielded QuickPort style patch panel, empty, part numbers below.

24/48 port flat 4S255-S24, 4S255-S48

24/48 port angled 4S256-S24, 4S256-S48

* + - * 1. **Patch Cords:** Leviton Cat 6A Shielded patch cords (6AS10)

Detailed specification in Product section

Category 6A, shielded cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6AS10-xxy xx = Length in feet, y = Color

* + - 1. **AV6850 10 Gb/s AV UTP System**. Category 6A System for Audio/Video applications utilizing unshielded twisted-pair cable with innovative crosstalk prevention (XTP), high performance Atlas-X1 connector modules, and Leviton Cat 6A Shielded patch cords.
         1. **Cable:** LANmark-XTP 100-ohm, Category 6A, 23 AWG, 4-pair unshielded twisted pair with innovative crosstalk prevention technology. Compliance to HDBaseT™.

Cable CA Score of 8.6 Verified to UL #B638581

Electrical performance Third-party (ETL) verified and Characterized to 750 MHz

Maximum Cable Diameter: 0.275 inch

Compliance to HDBaseT™

Cabling manufacturer must be able to provide independent third-party testing that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

Part Number: CMP 11082057 (blue, other colors available)

CMR 11082062 (blue, other colors available)

* + - * 1. **Connector Modules**: Leviton Atlas-X1 Category 6A UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: Standard version: 6AUJK-R\*6, Shuttered version: 6AUJK-S\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Modular QuickPort style. Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + - * 1. **Patch Cords:** Leviton Cat 6A Shielded patch cords (6AS10)

Detailed specification in Product section

Category 6A, shielded cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6AS10-xxy xx = Length in feet, y = Color

* + - 1. **IX6850 Cat 6A Premium+ X/UTP Industrial System**. Category 6A System for industrial applications utilizing unshielded twisted-pair cable with innovative crosstalk prevention (XTP), high performance Atlas-X1 connector modules, Leviton Cat 6A Shielded patch cords, and Leviton Cat 6A DuraPort patch cords.
         1. **Cable:** LANmark-LD750 100-ohm, Category 6A, 23 AWG, 4-pair unshielded twisted pair with innovative crosstalk prevention technology.

Electrical performance Third-party (ETL) verified and Characterized to 750 MHz

Maximum Cable Diameter: 0.313 inch

Cabling manufacturer must be able to provide independent third-party testing that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

Part Number: CMR-CMX 11099511 (teal)

* + - * 1. **Connector Modules**: Leviton Atlas-X1 Category 6A UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: Standard version: 6AUJK-R\*6, Shuttered version: 6AUJK-S\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Leviton Category 6A 110-style

Detailed specification in Product section

Component-rated, 8-position modular jack panel, Category 6A, T568A/B universal wiring label.

Available 24 or 48 port, flat or angled, part numbers below

24/48 Port Flat 6A586-U24, 6A586-U48

24/48 Port, angled 6A587-U24, 6A587-U48 .

* + - * 1. **Patch Panels:** Modular QuickPort style. Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + - * 1. **Patch Cords:** Leviton Cat 6A Shielded patch cords (6AS10)

Detailed specification in Product section

Category 6A, shielded cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6AS10-xxy xx = Length in feet, y = Color

* + - * 1. **Patch Cords:** Leviton Cat 6A DuraPort patch cords

Category 6A, shielded industrial cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.

Color: black

Part Numbers: D6722-xxE Industrial Plug – Industrial Plug

D6723-xxE Industrial Plug – RJ45 plug

xx = Length in feet

* + - 1. **IS6730 Cat 6A High-Flex SF/UTP Industrial System**. Category 6A System for industrial applications utilizing SF/UTP twisted-pair stranded cable, high performance Atlas-X1 Shielded connector modules, Leviton Cat 6A Shielded patch cords, and Leviton Cat 6A DuraPort patch cords.
         1. **Cable**: LANmark-HD637 100-ohm, Category 6A, 26 AWG, 4-pair SF/UTP twisted-pair stranded cable.

Electrical performance Third-party (ETL) verified

Maximum Cable Diameter: 0.290 inch

Part Number: CMR-CMX 11095466 (teal, other colors available)

All category cabling manufacturers must be able to provide documentation from an independent third-party testing agency that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

* + - * 1. **Connector Modules**: Leviton Atlas-X1 Category 6A Shielded QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: Standard version: 6ASJK-R\*6, Shuttered version: 6ASJK-S\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Modular Shielded QuickPort style. Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

Shielded QuickPort style patch panel, empty, part numbers below.

24/48 port flat 4S255-S24, 4S255-S48

24/48 port angled 4S256-S24, 4S256-S48

* + - * 1. **Patch Cords:** Leviton Cat 6A Shielded patch cords (6AS10)

Detailed specification in Product section

Category 6A, shielded cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6AS10-xxy xx = Length in feet, y = Color

* + - * 1. **Patch Cords:** Leviton Cat 6A DuraPort patch cords

Category 6A, shielded industrial cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.

Color: black

Part Numbers: D6722-xxE Industrial Plug – Industrial Plug

D6723-xxE Industrial Plug – RJ45 plug

xx = Length in feet

* + - 1. **IS6720 Cat 6A High-Flex SF/UTP Industrial System**. Category 6A System for industrial applications utilizing SF/UTP twisted-pair stranded cable, high performance Atlas-X1 Shielded connector modules, Leviton Cat 6A Shielded patch cords, and Leviton Cat 6A DuraPort patch cords.
         1. **Cable**: LANmark-HD545 100-ohm, Category 6A, 24 AWG, 4-pair SF/UTP twisted-pair stranded cable.

Electrical performance Third-party (ETL) verified

Maximum Cable Diameter: 0.322 inch

Part Number: CMR-CMX 11081386 (teal, other colors available)

All category cabling manufacturers must be able to provide documentation from an independent third-party testing agency that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

* + - * 1. **Connector Modules**: Leviton Atlas-X1 Category 6A Shielded QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: Standard version: 6ASJK-R\*6, Shuttered version: 6ASJK-S\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Modular Shielded QuickPort style. Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

Shielded QuickPort style patch panel, empty, part numbers below.

24/48 port flat 4S255-S24, 4S255-S48

24/48 port angled 4S256-S24, 4S256-S48

* + - * 1. **Patch Cords:** Leviton Cat 6A Shielded patch cords (6AS10)

Detailed specification in Product section

Category 6A, shielded cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6AS10-xxy xx = Length in feet, y = Color

* + - * 1. **Patch Cords:** Leviton Cat 6A DuraPort patch cords

Category 6A, shielded industrial cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.

Color: black

Part Numbers: D6722-xxE Industrial Plug – Industrial Plug

D6723-xxE Industrial Plug – RJ45 plug

xx = Length in feet

* + - 1. **IS6710 Cat 6A F/UTP Industrial System**. Category 6A System for industrial applications utilizing F/UTP twisted-pair solid cable, high performance Atlas-X1 Shielded connector modules, Leviton Cat 6A Shielded patch cords, and Leviton Cat 6A DuraPort patch cords.
         1. **Cable**: LANmark-MD751 100-ohm, Category 6A, 23 AWG, 4-pair F/UTP twisted-pair solid cable.

Electrical performance Third-party (ETL) verified

Maximum Cable Diameter: 0.315 inch

Part Number: CMR-CMX 11098512 (teal, other colors available)

All category cabling manufacturers must be able to provide documentation from an independent third-party testing agency that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

* + - * 1. **Connector Modules**: Leviton Atlas-X1 Category 6A Shielded QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: Standard version: 6ASJK-R\*6, Shuttered version: 6ASJK-S\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Modular Shielded QuickPort style. Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

Shielded QuickPort style patch panel, empty, part numbers below.

24/48 port flat 4S255-S24, 4S255-S48

24/48 port angled 4S256-S24, 4S256-S48

* + - * 1. **Patch Cords:** Leviton Cat 6A Shielded patch cords (6AS10)

Detailed specification in Product section

Category 6A, shielded cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6AS10-xxy xx = Length in feet, y = Color

* + - * 1. **Patch Cords:** Leviton Cat 6A DuraPort patch cords

Category 6A, shielded industrial cord (use same cord for shielded or unshielded systems) 4-pair, stranded wire construction.

Color: black

Part Numbers: D6722-xxE Industrial Plug – Industrial Plug

D6723-xxE Industrial Plug – RJ45 plug

xx = Length in feet

* + - 1. **CX6300 Cat 6 Premium+ UTP System**. Category 6 System utilizing Lanmark-2000 Unshielded twisted-pair cable, Atlas-X1 connector modules, and Leviton Cat 6 UTP patch cords.
         1. **Channel margin guarantees** for a CX6300 Cat 6 Premium+ UTP System(margin vs. ANSI/TIA-568.2-D and margin guarantees are for a 4-connector channel).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| IL | NEXT | PSNEXT | ACRF | PSACRF | RL | ACRN | PSACRN |
| 5% | 8dB | 8dB | 9dB | 10dB | 5dB | 9dB | 10dB |

* + - * 1. **Cable**: LANmark-2000 100-ohm, Category 6, 23 AWG, 4-pair unshielded twisted-pair cable

Cable CA Score of 8.0 Verified to UL #B638581

Electrical performance Third-party (ETL) verified and Characterized to 600 MHz

Maximum Cable Diameter: 0.220 inch

Cabling manufacturer must be able to provide independent third-party testing that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

Part Number: CMP 10163222 (reel) 10063780 (reel-in-a-box).

CMR 10167476 (reel) 10067477 (reel-in-a-box).

* + - * 1. **Connector Modules**: Leviton Atlas-X1 Category 6 UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: Standard version: 61UJK-R\*6, Shuttered version: 61UJK-S\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Leviton Category 6 110-style

Detailed specification in Product section

Component-rated, 8-position modular jack panel, Category 6, T568A/B universal wiring label.

Available 24 or 48 port, flat or angled, part numbers below

24/48 Port Flat 69586-U24, 69586-U48

24/48 Port angled 69587-U24, 69587-U48

* + - * 1. **Patch Panels:** Modular QuickPort style**.** Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + - * 1. **Patch Cords:** Leviton Cat 6 Standard patch cords (6D560)

Detailed specification in Product section

Slim-Line style, Category 6, unshielded 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6D560-##\* ##- Length in feet, \*- Color

* + - 1. **CX6200 Cat 6 Premium UTP System**. Category 6 System utilizing Lanmark-2000 Unshielded twisted-pair cable, eXtreme connector modules, and Leviton Cat 6 UTP patch cords.
         1. **Channel margin guarantees** for a CX6200 Cat 6 Premium UTP System(margin vs. ANSI/TIA-568.2-D and margin guarantees are for a 4-connector channel).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| IL | NEXT | PSNEXT | ACRF | PSACRF | RL | ACRN | PSACRN |
| 5% | 8dB | 8dB | 9dB | 10dB | 5dB | 8dB | 9dB |

* + - * 1. **Cable**: LANmark-2000 100-ohm, Category 6, 23 AWG, 4-pair unshielded twisted-pair cable

Cable CA Score of 8.0 Verified to UL #B638581

Electrical performance Third-party (ETL) verified and Characterized to 600 MHz

Maximum Cable Diameter: 0.220 inch.

Cabling manufacturer must be able to provide independent third-party testing that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

Part Number: CMP 10163222 (reel) 10063780 (reel-in-a-box).

CMR 10167476 (reel) 10067477 (reel-in-a-box).

* + - * 1. **Connector Modules**: Leviton eXtreme Category 6 UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: 61110-R\*6

\* = color option 13 colors available

* + - * 1. **Patch Panels:** Leviton Category 6 110-style

Detailed specification in Product section

Component-rated, 8-position modular jack panel, Category 6, T568A/B universal wiring label.

Available 24 or 48 port, flat or angled, part numbers below

24/48 Port Flat 69586-U24, 69586-U48

24/48 Port angled 69587-U24, 69587-U48

* + - * 1. **Patch Panels:** Modular QuickPort style.Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + - * 1. **Patch Cords:** Leviton Cat 6 Standard patch cords (6D460)

Detailed specification in Product section

Category 6, unshielded 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6D460-##\* ##- Length in feet, \*- Color

* + - 1. **CX6175 Cat 6 Hybrid UTP System**. Category 6 System utilizing Lanmark-1000 unshielded twisted-pair cable, Atlas-X1 connector modules, and Leviton Cat 6 UTP patch cords.
         1. Channel margin guarantees for a **CX6175 Cat 6 Hybrid UTP System** (margin vs. ANSI/TIA-568.2-D and margin guarantees are for a 4-connector channel).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| IL | NEXT | PSNEXT | ACRF | PSACRF | RL | ACRN | PSACRN |
| 3% | 6dB | 7dB | 8dB | 9dB | 3dB | 8dB | 9dB |

* + - * 1. **Cable**: LANmark-1000 100-ohm, Category 6, 23 AWG, 4-pair unshielded twisted-pair cable

Cable CA Score of 7.3 Verified to UL #B638581

Electrical performance Third-party (ETL) verified and Characterized to 550 MHz

Maximum Cable Diameter: 0.230 inch

Cabling manufacturer must be able to provide independent third-party testing that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

Part Number: CMP 11074694 (1500’ SmartPak box) 10032094 (1000’ TekPak box)

CMR 11074701 (1500’ SmartPak box) 10032455 (1000’ TekPak box)

* + - * 1. **Connector Modules**: Leviton Atlas-X1 Category 6 UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: Standard version: 61UJK-R\*6, Shuttered version: 61UJK-S\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Leviton Category 6 110-style

Detailed specification in Product section

Component-rated, 8-position modular jack panel, Category 6, T568A/B universal wiring label.

Available 24 or 48 port, flat or angled, part numbers below

24/48 Port Flat 69586-U24, 69586-U48

24/48 Port angled 69587-U24, 69587-U48

* + - * 1. **Patch Panels:** Modular QuickPort style.Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + - * 1. **Patch Cords:** Leviton Cat 6 Standard patch cords (6D560)

Detailed specification in Product section

Category 6, unshielded 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6D560-##\* ##- Length in feet, \*- Color

* + - 1. **CX6150 Cat 6 Enhanced+ UTP System**. Category 6 System utilizing Lanmark-1000 unshielded twisted-pair cable, eXtreme connector modules, and Leviton Cat 6 UTP patch cords.
         1. **Channel margin guarantees** for a CX6150 Cat 6 Enhanced+ UTP System(margin vs. ANSI/TIA-568.2-D and margin guarantees are for a 4-connector channel).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| IL | NEXT | PSNEXT | ACRF | PSACRF | RL | ACRN | PSACRN |
| 5% | 6dB | 6dB | 8dB | 9dB | 3dB | 8dB | 9dB |

* + - * 1. **Cable**: LANmark-1000 100-ohm, Category 6, 23 AWG, 4-pair unshielded twisted-pair cable

Cable CA Score of 7.3 Verified to UL #B638581

Electrical performance Third-party (ETL) verified and Characterized to 600 MHz

Maximum Cable Diameter: 0.230 inch

Cabling manufacturer must be able to provide independent third-party testing that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

Part Number: CMP 11074694 (1500’ SmartPak box) 10032094 (1000’ TekPak box)

CMR 11074701 (1500’ SmartPak box) 10032455 (1000’ TekPak box)

* + - * 1. **Connector Modules**: Leviton eXtreme Category 6 UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: 61110-R\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Leviton Category 6 110-style

Detailed specification in Product section

Component-rated, 8-position modular jack panel, Category 6, T568A/B universal wiring label.

Available 24 or 48 port, flat or angled, part numbers below

24/48 Port Flat 69586-U24, 69586-U48

24/48 Port angled 69587-U24, 69587-U48

* + - * 1. **Patch Panels:** Modular QuickPort style.Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + - * 1. **Patch Cords:** Leviton Cat 6 Standard patch cords (6D560)

Detailed specification in Product section

Category 6, unshielded 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6D560-##\* ##- Length in feet, \*- Color

* + - 1. **CX6100 Cat 6 Enhanced UTP System**. Category 6 System utilizing Lanmark-1000 unshielded twisted-pair cable, eXtreme connector modules, and Leviton Cat 6 UTP patch cords.
         1. **Channel margin guarantees** for a CX6100 Cat 6 Enhanced UTP System(margin vs. ANSI/TIA-568.2-D and margin guarantees are for a 4-connector channel).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| IL | NEXT | PSNEXT | ACRF | PSACRF | RL | ACRN | PSACRN |
| 5% | 6dB | 6dB | 8dB | 9dB | 3dB | 7dB | 8dB |

* + - * 1. **Cable**: LANmark-1000 100-ohm, Category 6, 23 AWG, 4-pair unshielded twisted-pair cable

Cable CA Score of 7.3 Verified to UL #B638581

Electrical performance Third-party (ETL) verified and Characterized to 600 MHz

Maximum Cable Diameter: 0.230 inch

Cabling manufacturer must be able to provide independent third-party testing that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

Part Number: CMP 11074694 (1500’ SmartPak box) 10032094 (1000’ TekPak box)

CMR 11074701 (1500’ SmartPak box) 10032455 (1000’ TekPak box)

* + - * 1. **Connector Modules**: Leviton eXtreme Category 6 UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: 61110-R\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Leviton Category 6 110-style

Detailed specification in Product section

Component-rated, 8-position modular jack panel, Category 6, T568A/B universal wiring label.

Available 24 or 48 port, flat or angled, part numbers below

24/48 Port Flat 69586-U24, 69586-U48

24/48 Port angled 69587-U24, 69587-U48

* + - * 1. **Patch Panels:** Modular QuickPort style**.** Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + - * 1. **Patch Cords:** Leviton Cat 6 Standard patch cords (6D460)

Detailed specification in Product section

Category 6, unshielded 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6D460-##\* ##- Length in feet, \*- Color

* + - 1. **CX6050 Cat 6 Standard+ UTP System**. Category 6 System utilizing Lanmark-6 unshielded twisted-pair cable, eXtreme connector modules, and Leviton Cat 6 UTP patch cords.
         1. **Channel margin guarantees** for a CX6050 Cat 6 Standard+ UTP System(margin vs. ANSI/TIA-568.2-D and margin guarantees are for a 4-connector channel).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| IL | NEXT | PSNEXT | ACRF | PSACRF | RL | ACRN | PSACRN |
| 3% | 3dB | 3dB | 3dB | 5dB | 2dB | 3dB | 5dB |

* + - * 1. **Cable**: LANmark-6 100-ohm, Category 6, 24 AWG, 4-pair unshielded twisted-pair cable

Cable CA Score of 6.4 Verified to UL #B638581

Maximum Cable Diameter: 0.224 inch

Part Number: CMP 11074702 (1500’ Smartpak) 10136226 (1000’ Tekpak)

CMR 11074703 (1500’ Smartpak) 10136339 (1000’ Tekpak)

* + - * 1. **Connector Modules**: Leviton eXtreme Category 6 UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: 61110-R\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Leviton Category 6 110-style

Detailed specification in Product section

Component-rated, 8-position modular jack panel, Category 6, T568A/B universal wiring label.

Available 24 or 48 port, flat or angled, part numbers below

24/48 Port Flat 69586-U24, 69586-U48

24/48 Port angled 69587-U24, 69587-U48

* + - * 1. **Patch Panels:** Modular QuickPort style**.** Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + - * 1. **Patch Cords:** Leviton Cat 6 Standard patch cords (6D560)

Detailed specification in Product section

Category 6, unshielded 4-pair, stranded wire construction.

Color: 9 colors available.

Part Numbers: Leviton 6D560-##\* ##- Length in feet, \*- Color

* + - 1. **CX6000 Cat 6 Standard UTP System**. Category 6 System utilizing Lanmark-6 unshielded twisted-pair cable, eXtreme connector modules, and Leviton Cat 6 UTP patch cords.
         1. **Channel margin guarantees** for a CX6000 Cat 6 Standard+ UTP System(margin vs. ANSI/TIA-568.2-D and margin guarantees are for a 4-connector channel).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| IL | NEXT | PSNEXT | ACRF | PSACRF | RL | ACRN | PSACRN |
| 2% | 2B | 2dB | 2dB | 2dB | 2dB | 2dB | 2dB |

* + - * 1. **Cable**: LANmark-6 100-ohm, Category 6, 24 AWG, 4-pair unshielded twisted-pair cable

Cable CA Score of 6.4 Verified to UL #B638581

Maximum Cable Diameter: 0.224 inch

Part Number: CMP 11074702 (1500’ Smartpak) 10136226 (1000’ Tekpak)

CMR 11074703 (1500’ Smartpak) 10136339 (1000’ Tekpak)

* + - * 1. **Connector Modules**: Leviton eXtreme Category 6 UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: 61110-R\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Leviton Category 6 110-style

Detailed specification in Product section

Component-rated, 8-position modular jack panel, Category 6, T568A/B universal wiring label.

Available 24 or 48 port, flat or angled, part numbers below

24/48 Port Flat 69586-U24, 69586-U48

24/48 Port angled 69587-U24, 69587-U48

* + - * 1. **Patch Panels:** Modular QuickPort style.Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + - * 1. **Patch Cords:** Leviton Cat 6 Standard patch cords (6D460)

Detailed specification in Product section

Category 6, unshielded 4-pair, stranded wire construction.

Color: 7 colors available.

Part Numbers: Leviton 6D460-##\* ##- Length in feet, \*- Color

* + - 1. **CS6100 Cat 6 Shielded System**. Category 6 System utilizing shielded twisted-pair LANmark-6 FTP cable, high performance Atlas-X1 STP connector modules, and Leviton Cat 6 Shielded patch cords.
         1. **Channel margin guarantees** for a CS6100 Cat 6 Shielded System(margin vs. ANSI/TIA-568.2-D and margin guarantees are for a 4-connector channel).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| IL | NEXT | ANEXT | ACRF | PSACRF | RL | ACRN | PSACRN |
| 2% | 5dB | 6dB | 5dB | 6dB | 2dB | 6dB | 7dB |

* + - * 1. **Cable**: LANmark-6 FTP 100-ohm, Category 6, 23 AWG, 4-pair shielded twisted pair cable.

Electrical performance Third-party (ETL) verified

Maximum Cable Diameter: 0.285 inch

Part Number: CMP 10057903 (gray, other colors available)

CMR 10070439 (gray, other colors available)

All category cabling manufacturers must be able to provide documentation from an independent third-party testing agency that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

* + - * 1. **Connector Modules**: Leviton Atlas-X1 Category 6 Shielded QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: Standard version: 61SJK-R\*6, Shuttered version: 61SJK-S\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Modular Shielded QuickPort style. Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

Shielded QuickPort style patch panel, empty, part numbers below.

24/48 port flat 4S255-S24, 4S255-S48

24/48 port angled 4S256-S24, 4S256-S48

* + - * 1. **Patch Cords:** Leviton Cat 6 Shielded patch cords

Detailed specification in Product section

Category 6, shielded cord 4-pair, stranded wire construction

Color: gray

Part Numbers: Leviton 6S560-##S ##- Length in feet

* + - 1. **AV6400 1 Gb/s AV Shielded System**. Category 6 System utilizing shielded twisted-pair LANmark-HD F/UTP cable, high performance Atlas-X1 STP connector modules, and Leviton Cat 6 Shielded patch cords.
         1. **Cable**: LANmark-HD F/UTP 100-ohm, Category 6, 23 AWG, 4-pair shielded twisted pair cable.

Electrical performance Third-party (ETL) verified

Maximum Cable Diameter: 0.275 inch CMP 0.280 inch CMR

Part Number: CMP 11100942 (blue, other colors available)

CMR 11100946 (blue, other colors available)

All category cabling manufacturers must be able to provide documentation from an independent third-party testing agency that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

* + - * 1. **Connector Modules**: Leviton Atlas-X1 Category 6 Shielded QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: Standard version: 61SJK-R\*6, Shuttered version: 61SJK-S\*6

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Modular Shielded QuickPort style. Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

Shielded QuickPort style patch panel, empty, part numbers below.

24/48 port flat 4S255-S24, 4S255-S48

24/48 port angled 4S256-S24, 4S256-S48

* + - * 1. **Patch Cords:** Leviton Cat 6 Shielded patch cords

Detailed specification in Product section

Category 6, shielded cord 4-pair, stranded wire construction

Color: gray

Part Numbers: Leviton 6S560-##S ##- Length in feet

* + - 1. **CX5000 Cat 5e Standard UTP System**. Category 5e System utilizing Hyper Plus Cat 5e unshielded twisted-pair cable, GigaMax cat 5e connector modules, and Leviton Cat 5e UTP patch cords.
         1. **Cable:** Hyper Plus UTP 100 ohm, Category 5e, 24 AWG, 4-pair unshielded twisted pair, Hyper+ 5e

Color: Blue

O.D.: 0.224”

Part Number: CMP 11074705 (1500’ Smartpak) 10032227 (1000’ Tekpak)

CMR 11074706 (1500’ Smartpak) 10032528 (1000’ Tekpak)

* + - * 1. **Connector Modules**: Leviton GigaMax Category 5e UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: 5G108-R\*5

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Leviton Category 5e 110-style

Detailed specification in Product section

Component-rated, 8-position modular jack panel, Category 5e, T568A/B universal wiring label.

Available 24 or 48 port, flat or angled, part numbers below

24/48 Port Flat 5G586-U24, 5G586-U48

24/48 Port angled 5G587-U24, 5G587-U48 .

* + - * 1. **Patch Panels:** Modular QuickPort style.Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + - * 1. **Patch Cords:** Leviton Cat 5e Standard patch cords (5G460)

Category 5e UTP patch cord, 4-pair, stranded wire construction.

Color: 5 colors available.

Part Numbers:

Leviton 5G460-##\* ##- Length in feet, \*- Color

* + - 1. **CP5300 Cat 5e High PoE System.** Category 5e System utilizing 22 AWG unshielded twisted-pair LANmark-IP cable, high performance Atlas-X1 shielded connector modules, and Leviton Cat 5e UTP patch cords.
         1. **Channel margin guarantees** for a CP5300 Cat 5e High PoE UTP System (margin vs. ANSI/TIA-568.2-D and margin guarantees are for a 4-connector channel).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| IL | NEXT | ANEXT | ACRF | PSACRF | RL | ACRN | PSACRN |
| 2% | 2dB | 2dB | 2dB | 2dB | 2dB | 2dB | 2dB |

* + - * 1. **Cable:** Berk-Tek LANmark-IP 100 ohm, Enhanced Category 5e, 22 AWG, 4-pair unshielded twisted-pair cable

Electrical performance Third-party (ETL) verified and Characterized to 250 MHz

Maximum Cable Diameter: 0.240 inch

Part Number: CMP 11098078 (blue, other colors available)

All category cabling manufacturers must be able to provide documentation from an independent third-party testing agency that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

* + - * 1. **Connector Modules**: Leviton Atlas-X1 Category 5E UTP QuickPort connector module

Connector modules are installed at TR and WA

Part Numbers: Standard version: 5EUJK-R\*5, Shuttered version: 5EUJK-S\*5

\* = color option: 13 colors available

* + - * 1. **Patch Panels:** Modular Shielded QuickPort style. Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

Shielded QuickPort style patch panel, empty, part numbers below.

24/48 port flat 4S255-S24, 4S255-S48

24/48 port angled 4S256-S24, 4S256-S48

* + - * 1. **Patch Cords** Leviton Cat 5e Standard patch cords (5D460)

Category 5e patch cord, 4-pair, shielded, stranded wire construction.

Color: 5 colors available

Part Numbers:

Leviton 5D560-##\* ##- Length in feet, \*- Color

* + - 1. **UP1000 Ultra-High PoE 1G System.** Category 5e System supporting 1 Gb/s and up to 140 Watt power delivery utilizing 22 AWG unshielded twisted-pair LANmark-IP cable, high performance Atlas-X1 shielded connector modules, and Leviton Cat 5e UTP patch cords.
         1. **Cable:** Berk-Tek LANmark-IP 100 ohm, Enhanced Category 5e, 22 AWG, 4-pair unshielded twisted-pair cable

Electrical performance Third-party (ETL) verified and Characterized to 250 MHz

Maximum Cable Diameter: 0.240 inch

Part Number: CMP 11098078 (blue, other colors available)

All category cabling manufacturers must be able to provide documentation from an independent third-party testing agency that verifies through random sampling that cable components perform at or above the levels contained on their product specifications, not simply at or above the standard.

* + - * 1. **Connector Modules**: Leviton GigaMax Category 5e UTP QuickPort connector module

Detailed specification in Product section

Connector modules are installed at TR and WA

Part Numbers: 5G108-R\*5

\* = color option: 13 colors available.

* + - * 1. **Connector Modules**: Leviton Universal Tool-Free Plug (6APLG)

Universal plug supports Category 6A and below shielded and UTP applications

Field terminate 6APLG plugs to LANmark-IP cable to assembled patch cords to support 140W power delivery

Color: Silver

Part Numbers: 6APLG-S6A

* + - * 1. **Patch Panels: Modular QuickPort style:** Add appropriate number of connector modules to complete the patch panel.

Detailed specification in Product section

QuickPort style patch panel, empty, part numbers below.

24/48 port flat 49255-H24, 49255-H48

24/48 port flat w/mag lens 49255-L24, 49255-L48 (Magnifying lens holder)

24/48 port angled 49256-H24, 49256-H48

24/48 port angled w/mag lens 49256-L24, 49256-L48 (Magnifying lens holder)

* + 1. **DETAILED COMPONENT SPECIFICATIONS**
       1. MODULAR JACKS AND FIBER ADAPTERS FOR WORKSTATION OUTLETS
          1. Leviton Atlas-X1 Category 6A UTP QuickPort connector module

8-position modular jack, Category 6A, IDC terminals, T568A/B wiring scheme.

The modular connector shall meet or exceed all requirements for Category 6A as described in ANSI/TIA-568.2-D, as well as Class EA requirements as described in ISO/IEC 11801-1

The Modular Connector shall be terminated without the need for any punch down tool or other specialized or proprietary termination tool.

The Connector Module shall feature a termination wire manager that holds individual conductors in place during termination.

The Category 6A Modular Connector termination method shall be consistent with the termination method available for Category 5e and Category 6 UTP modules from the same manufacturer. The same termination method shall also be consistent with Category 5e, 6 and 6A shielded modules from the same manufacturer.

The Modular Connector shall be reusable and support multiple termination and re-termination cycles and be facilitated by simple termination release levers.

The modular connector shall be independently tested and verified by Intertek (ETL) to exceed Category 6A component performance.

The eight-position connector module shall utilize a method of tine tensioning that prevents six-position modular plug insertion from damaging either the cord or the module.

The connector module shall comply with the following PoE standards:

IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af, Type 2 (30 Watts) formerly 802.3at, Type 3 (60 Watts), Type 4 (90 Watts)

Cisco UPoE (60 Watts), UPoE+ (90 Watts)

Power over HDBaseT™ PoH (95 Watts)

The connector module shall utilize an engineered method to prevent PoE arcing damage from occurring at the critical contact-mating zone between the plug and connector module tines.

The connector shall be compliant with UL 2043 for use in air handling spaces.

The connector body shall be made of die-cast zinc and all plastic components shall be made of high-impact, fire-retardant plastic rated UL 94V-0.

The connector shall also be in compliance will all National Electrical Codes; compliant with ANSI/TIA-1096-A (formerly FCC Part 68); cULus Listed; and independently tested for component compliance.

In addition to Category 6A component compliance, the connector shall have the ability to support high megabit and shared sheath applications.

Connector wiring shall be universal and will accommodate both T568A and T568B pair/pin assignments.

The connector shall incorporate a triple-stage compensation design with integrated flexible circuit design that enhances link and channel performance.

The modular connector shall fit a range of telecommunications faceplates, outlets, and field-configurable patch panels.

The modular connector shall be available in 13 ANSI/TIA-606 compatible colors.

Select connectors shall be supplied with interchangeable icons (voice, data, A/V, and blank, color coded to match the connector face) for easy identification and tracking of data, voice, or other functions.

Additional bulk Icons for the connector shall be available in 13 colors to facilitate a broad range of connector marking/identification options.

Connector Modules shall be available with an internal shutter to protect against dust and debris

Connector Module shall have a maximum depth of 1.31”

Each connector shall be identified on its face as CAT 6A.

Part Numbers: Standard version: 6AUJK-R\*6, Shuttered version: 6AUJK-S\*6

\* = color option: 13 colors available

Icons: ICONS-IC\* (72 two-sided Icons)

\* = color option: 13 colors available

* + - * 1. Leviton eXtreme Category 6A UTP QuickPort connector module

8-position eXtreme QuickPort modular jack, Category 6A, IDC terminals, T568A/B wiring scheme.

The modular connector shall meet or exceed all requirements for Category 6A as described in ANSI/TIA-568.2-D, as well as Class EA requirements as described in ISO/IEC 11801-1

All plastics used in construction of connector bodies shall be fire retardant with a UL flammability rating of 94V-0.

All terminations shall use 110-type insulation displacement connectors (IDC).

The connector shall provide a ledge directly adjacent to the 110-style termination against which wires can be directly terminated and cut in one action by the installation craftsperson.

The termination field shall be of 180-degree design such that punch downs occur in the rear of the connector body.

The connector shall include an alien crosstalk attenuation cover (Cone of Silence) to protect the termination field from induced noise from adjacent connectors.

The modular connector shall fit all other installed telecommunications wallplates, outlets, field-configurable patch panels, and patch blocks.

Rear termination field shall include pointed pair separation towers to promote easier installation.

The connector module shall comply with the following PoE standards:

IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af, Type 2 (30 Watts) formerly 802.3at, Type 3 (60 Watts), Type 4 (90 Watts)

Cisco UPoE (60 Watts), UPoE+ (90 Watts)

Power over HDBaseT™ PoH (95 Watts)

The connector module shall utilize an engineered method to prevent PoE arcing damage from occurring at the critical contact-mating zone between the plug and connector module tines.

The connector shall be compliant with UL 2043 for use in air handling spaces.

The eight-position connector module shall utilize a tine retention technology to accommodate six-position modular cord plugs without damage to either the cord or the module.

Connector wiring is universal and will accommodate installation color codes for T568A and T568B wiring schemes and incorporate Dual-layer T568B/T568A wiring labels

Each Jack: Identified on its face as CAT 6A.

Part Numbers: 6110G-R\*6 \* = color option: 13 colors available

* + - * 1. Leviton Atlas-X1 Category 6 UTP QuickPort connector module

8-position modular jack, Category 6, IDC terminals, T568A/B wiring scheme.

The modular connector shall meet or exceed all requirements for Category 6 as described in ANSI/TIA-568.2-D, as well as Class E requirements as described in ISO/IEC 11801-1

The modular connector shall be terminated without the need for any punch down tool or other specialized or proprietary termination tool.

The Connector Module shall feature a termination wire manager that holds individual conductors in place during termination.

The Category 6 modular connector termination method shall be consistent with the termination method available for Category 5e and Category 6A UTP modules from the same manufacturer. The same termination method shall also be consistent with Category 5e, 6 and 6A shielded modules from the same manufacturer.

The Modular Connector shall be reusable and support multiple termination and re-termination cycles and be facilitated by simple termination release levers.

The modular connector shall be independently tested and verified by Intertek (ETL) to exceed Category 6 component performance.

The eight-position connector module shall utilize a method of tine tensioning that prevents six-position modular plug insertion from damaging either the cord or the module.

The connector module shall comply with the following PoE standards:

IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af, Type 2 (30 Watts) formerly 802.3at, Type 3 (60 Watts), Type 4 (90 Watts)

Cisco UPoE (60 Watts), UPoE+ (90 Watts)

Power over HDBaseT™ PoH (95 Watts)

The connector module shall utilize an engineered method to prevent PoE arcing damage from occurring at the critical contact-mating zone between the plug and connector module tines.

The connector shall be compliant with UL 2043 for use in air handling spaces.

The connector body shall be made of die-cast zinc and all plastic components shall be made of high-impact, fire-retardant plastic rated UL 94V-0.

The connector shall also be in compliance will all National Electrical Codes; compliant with ANSI/TIA-1096-A (formerly FCC Part 68); cULus Listed; and independently tested for component compliance.

Connector wiring shall be universal and will accommodate both T568A and T568B pair/pin assignments.

The modular connector shall fit a range of telecommunications faceplates, outlets, and field-configurable patch panels.

The modular connector shall be available in 13 TIA 606-A compatible colors.

Select connectors shall be supplied with interchangeable icons (voice, data, A/V, and blank, color coded to match the connector face) for easy identification and tracking of data, voice, or other functions

Additional bulk Icons for the connector shall be available in 13 colors to facilitate a broad range of connector marking/identification options.

Connector Modules shall be available with an internal shutter to protect against dust and debris

Connector Module shall have a maximum depth of 1.31”

Each connector shall be identified on its face as CAT 6.

Part Numbers: Standard version: 61UJK-R\*6, Shuttered version: 61UJK-S\*6

\* = color option: 13 colors available

Icons: ICONS-IC\* (72 two-sided Icons) \* = color option: 13 colors available

* + - * 1. Leviton eXtreme Category 6 UTP QuickPort connector module

8-position eXtreme QuickPort modular jack, Category 6, IDC terminals, T568A/B wiring scheme.

The modular connector shall meet or exceed all requirements for Category 6 as described in ANSI/TIA-568.2-D, as well as Class E requirements as described in ISO/IEC 11801-1

All plastics used in construction of connector bodies shall be fire retardant with a UL flammability rating of 94V-0.

All terminations shall use 110-type insulation displacement connectors (IDC).

The connector shall provide a ledge directly adjacent to the 110-style termination against which wires can be directly terminated and cut in one action by the installation craftsperson.

The termination field shall be of 180-degree design such that punch downs occur in the rear of the connector body.

The modular connector shall fit all other installed telecommunications wallplates, outlets, field-configurable patch panels, and patch blocks.

The connector module shall comply with the following PoE standards:

IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af, Type 2 (30 Watts) formerly 802.3at, Type 3 (60 Watts), Type 4 (90 Watts)

Cisco UPoE (60 Watts), UPoE+ (90 Watts)

Power over HDBaseT™ PoH (95 Watts)

The connector module shall utilize an engineered method to prevent PoE arcing damage from occurring at the critical contact-mating zone between the plug and connector module tines.

The connector shall be compliant with UL 2043 for use in air handling spaces.

The eight-position connector module shall utilize a tine retention technology to accommodate six-position modular cord plugs without damage to either the cord or the module.

Connector wiring is universal and will accommodate installation color codes for T568A and T568B wiring schemes and incorporate Dual-layer T568B/T568A wiring labels

Component-rated jack.

Each Jack: Identified on its face as CAT 6.

Part Numbers: 61110-R\*6 \* = color option: 13 colors available

* + - * 1. Leviton GigaMax Category 5e UTP QuickPort connector module

8-position GigaMax QuickPort modular jack, Category 5e, IDC terminals, T568A/B wiring scheme.

The modular connector shall meet or exceed all requirements for Category 5e as described in ANSI/TIA-568.2-D, as well as Class D requirements as described in ISO/IEC 11801-1

The connector shall be compliant with UL 2043 for use in air handling spaces.

Each Jack: Identified on its face as CAT 5e.

Part Numbers: 5G108-R\*5 \* = color option: 13 colors available

* + - * 1. Leviton Atlas-X1 Category 6A Shielded QuickPort connector module

8-position modular jack, Category 6A, IDC terminals, T568A/B wiring scheme.

The modular connector shall meet or exceed all requirements for Category 6A as described in ANSI/TIA-568.2-D, as well as Class EA requirements as described in ISO/IEC 11801-1

The Modular Connector shall be terminated without the need for any punch down tool or other specialized or proprietary termination tool.

The Connector Module shall feature a termination wire manager that holds individual conductors in place during termination. The wire manager shall incorporate a 360-degree bonding mechanism for cable shielding, as well as a capture feature for the shielded cable drain wire.

The Shielded Category 6A Modular Connector termination method shall be consistent with the termination method available for Category 5e and Category 6 shielded modules from the same manufacturer. The same termination method shall also be consistent with Category 5e, 6 and 6A UTP modules from the same manufacturer.

The Modular Connector shall be reusable and support multiple termination and re-termination cycles and be facilitated by simple termination release levers.

The modular connector shall be independently tested and verified by Intertek (ETL) to exceed Category 6A component performance.

The eight-position connector module shall utilize a method of tine tensioning that prevents six-position modular plug insertion from damaging either the cord or the module.

The connector module shall comply with the following PoE standards:

IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af, Type 2 (30 Watts) formerly 802.3at, Type 3 (60 Watts), Type 4 (90 Watts)

Cisco UPoE (60 Watts), UPoE+ (90 Watts)

Power over HDBaseT™ PoH (95 Watts)

The connector module shall utilize an engineered method to prevent PoE arcing damage from occurring at the critical contact-mating zone between the plug and connector module tines.

The connector shall be compliant with UL 2043 for use in air handling spaces.

The connector body shall be made of die-cast zinc and all plastic components shall be made of high-impact, fire-retardant plastic rated UL 94V-0.

The connector shall also be in compliance will all National Electrical Codes; compliant with ANSI/TIA-1096-A (formerly FCC Part 68); cULus Listed; and independently tested for component compliance.

In addition to Category 6A component compliance, the connector shall have the ability to support high megabit and shared sheath applications.

Connector wiring shall be universal and will accommodate both T568A and T568B pair/pin assignments.

The connector shall incorporate a triple-stage compensation design with integrated flexible circuit design that enhances link and channel performance.

The modular connector shall fit a range of telecommunications faceplates, outlets, and field-configurable patch panels.

The modular connector shall be available in 13 TIA 606-A compatible colors.

Select connectors shall be supplied with interchangeable icons (voice, data, A/V, and blank, color coded to match the connector face) for easy identification and tracking of data, voice, or other functions.

Additional bulk Icons for the connector shall be available in 13 colors to facilitate a broad range of connector marking/identification options.

Connector Modules shall be available with an internal shutter to protect against dust and debris

Connector Module shall have a maximum depth of 1.31”

Each connector shall be identified on its face as CAT 6A.

Part Numbers: Standard version: 6ASJK-R\*6, Shuttered version: 6ASJK-S\*6

\* = color option: 13 colors available

Icons: ICONS-IC\* (72 two-sided Icons)

\* = color option: 13 colors available

* + - * 1. Leviton Atlas-X1 Category 6 Shielded QuickPort connector module

8-position modular jack, Category 6, IDC terminals, T568A/B wiring scheme.

The modular connector shall meet or exceed all requirements for Category 6 as described in ANSI/TIA-568.2-D, as well as Class E requirements as described in ISO/IEC 11801-1

The Modular Connector shall be terminated without the need for any punch down tool or other specialized or proprietary termination tool.

The Connector Module shall feature a termination wire manager that holds individual conductors in place during termination. The wire manager shall incorporate a 360-degree bonding mechanism for cable shielding, as well as a capture feature for the shielded cable drain wire.

The Shielded Category 6 Modular Connector termination method shall be consistent with the termination method available for Category 5e and Category 6A shielded modules from the same manufacturer. The same termination method shall also be consistent with Category 5e, 6 and 6A UTP modules from the same manufacturer.

The Modular Connector shall be reusable and support multiple termination and re-termination cycles and be facilitated by simple termination release levers.

The modular connector shall be independently tested and verified by Intertek (ETL) to exceed Category 6 component performance.

The eight-position connector module shall utilize a method of tine tensioning that prevents six-position modular plug insertion from damaging either the cord or the module.

The connector module shall comply with the following PoE standards:

IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af, Type 2 (30 Watts) formerly 802.3at, Type 3 (60 Watts), Type 4 (90 Watts)

Cisco UPoE (60 Watts), UPoE+ (90 Watts)

Power over HDBaseT™ PoH (95 Watts)

The connector module shall utilize an engineered method to prevent PoE arcing damage from occurring at the critical contact-mating zone between the plug and connector module tines.

The connector shall be compliant with UL 2043 for use in air handling spaces.

The connector body shall be made of die-cast zinc and all plastic components shall be made of high-impact, fire-retardant plastic rated UL 94V-0.

The connector shall also be in compliance will all National Electrical Codes; compliant with ANSI/TIA-1096-A (formerly FCC Part 68); cULus Listed; and independently tested for component compliance.

Connector wiring shall be universal and will accommodate both T568A and T568B pair/pin assignments.

The modular connector shall fit a range of telecommunications faceplates, outlets, and field-configurable patch panels.

The modular connector shall be available in 13 TIA 606-A compatible colors.

Select connectors shall be supplied with interchangeable icons (voice, data, A/V, and blank, color coded to match the connector face) for easy identification and tracking of data, voice, or other functions.

Additional bulk Icons for the connector shall be available in 13 colors to facilitate a broad range of connector marking/identification options.

Connector Modules shall be available with an internal shutter to protect against dust and debris

Connector Module shall have a maximum depth of 1.31”

Each connector shall be identified on its face as CAT 6.

Part Numbers: Standard version: 61SJK-R\*6, Shuttered version: 61SJK-S\*6

\* = color option: 13 colors available

Icons: ICONS-IC\* (72 two-sided Icons)

\* = color option: 13 colors available

* + - * 1. Leviton Universal Tool-Free Field Installable Modular Plug

The universal plug shall meet or exceed all performance requirements for Category 6A as described in ANSI/TIA-568.2-D, as well as Class EA requirements as described in ISO/IEC 11801-1.

The plug shall comply with all National Electrical Codes, be compliant with ANSI/TIA-1096-A, and be UL listed.

The plug shall meet all requirements of IEC 60603-7 (including IEC 60512-5-2) and IEC 60512-99-001(including IEC 60512-9-3) standards.

The plug shall be compliant with UL 2043 for use in air handling spaces.

The plug shall be encased in a 360º die-cast housing to protect it from potential EMI/RFI.

The plug shall not require a specialized termination tool.

The plug wiring shall accommodate T568 A/B wiring schemes.

The plug shall accommodate 26-22 AWG solid or stranded conductors.

The plug shall comply with the following PoE standards:

IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af, Type 2 (30 Watts) formerly 802.3at, Type 3 (60 Watts), Type 4 (90 Watts)

Cisco UPoE (60 Watts), UPoE+ (90 Watts)

Power over HDBaseT™ PoH (95 Watts)

Part Number: 6APLG-S6A

* + - 1. WORK AREA HOUSINGS
         1. Flush-mounted Plastic Wallplates w/ designation window

The wallplate housing shall be a one-piece, single- or dual-gang flush mount style that fits standard NEMA openings.

Wallplate shall provide 1, 2, 3, 4, 6, 8 or 12 ports.

Wallplate shall be able to accept connector modules from approved connector module manufacturer.

Wallplate shall be made of high-impact, fire-retardant plastic rated UL 94V-0, and be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

Colors, port counts and configurations to be specified per schedule on plan.

The flush-mounted wallplate shall have no visible mounting screws after installation.

The flush-mounted wallplate shall have the option of being mounted on adapter boxes for surface mount installation.

The flush-mounted wallplate shall have a labeling capability using built-in labeling windows, to facilitate outlet identification and ease network management.

The flush-mounted wallplate shall provide flexibility in configuring multimedia workstation outlets that respond to present or future network needs such as audio, video, coaxial and optical fiber applications.

Part Numbers: 42080-x\*S Single gang

42080-y\*P Dual gang

42080-12\* Dual gang 12 port

x = single gang port count (1, 2, 3, 4, 6)

y = dual gang port count (1, 2, 3, 4, 6, 8)

\* = color option: 6 colors available (white, light almond, ivory, grey, black)

Wallplate Colors: Standard color is white. Coordinate with Architect to match finish.

* + - * 1. Flush-mounted Plastic Wallplates

The wallplate housing shall be a one-piece, single -gang flush mount style that fits standard NEMA openings.

Wallplate shall provide 1, 2, 3, 4, or 6 ports.

Wallplate shall be able to accept connector modules from approved connector module manufacturer.

Wallplate shall be made of high-impact, fire-retardant plastic rated UL 94V-0, and be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

Colors, port counts and configurations to be specified per schedule on plan.

Wallplate screws must match wallplate color.

The flush-mounted wallplate shall have the option of being mounted on adapter boxes for surface mount installation.

The flush-mounted wallplate shall provide flexibility in configuring multimedia workstation outlets that respond to present or future network needs such as audio, video, coaxial and optical fiber applications.

Part Numbers: 41080-x\*S Single gang

x = single gang port count (1, 2, 3, 4, 6)

\* = color option: 6 colors available (white, light almond, ivory, grey, black)

Wallplate Colors: Standard color is white. Coordinate with Architect to match finish.

* + - * 1. Flush-Mounted Stainless Steel Wallplates with designation window

The wallplate housing shall be a single- or dual-gang flush mount style that fits standard NEMA openings.

Wallplate shall provide 1, 2, 3, 4, 6, 8 or 12 ports.

Wallplate must be able to accept connector modules from approved connector module manufacturer.

Wallplate must be manufactured from 304 stainless steel in a brushed finish to provide corrosion resistance in a non-magnetic material and be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

Port counts and configurations to be specified per schedule on plan.

Wallplate screws must match wallplate color.

The flush-mounted wallplate shall have no visible mounting screws after installation.

The flush-mounted wallplate shall have the option of being mounted on adapter boxes for surface mount installation.

The flush-mounted wallplate shall have a labeling capability using built-in labeling windows, to facilitate outlet identification and ease network management.

The flush-mounted wallplate shall provide flexibility in configuring multimedia workstation outlets that respond to present or future network needs such as audio, video, coaxial and optical fiber applications.

Part Numbers: 43080-1Lx Single gang

43080-2Ly Dual gang

x = single gang port count (1, 2, 3, 4, 6)

y = dual gang port count (4, 8)

* + - * 1. Flush-Mounted Stainless Steel Wallplates

The wallplate housing shall be a single- or dual-gang flush mount style that fits standard NEMA openings.

Wallplate shall provide 1, 2, 3, 4, 6, 8 or 12 ports.

Wallplate must be able to accept connector modules from approved connector module manufacturer.

Wallplate must be manufactured from 304 stainless steel in a brushed finish to provide corrosion resistance in a non-magnetic material and be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

Port counts and configurations to be specified per schedule on plan.

Wallplate screws must match wallplate color.

The flush-mounted wallplate shall have the option of being mounted on adapter boxes for surface mount installation.

The flush-mounted wallplate shall have a labeling capability using built-in labeling windows, to facilitate outlet identification and ease network management.

The flush-mounted wallplate shall provide flexibility in configuring multimedia workstation outlets that respond to present or future network needs such as audio, video, coaxial and optical fiber applications.

Part Numbers: 43080-1Sx Single gang

43080-2Sy Dual gang

43080-S12 Dual gang 12-port

x = single gang port count (1, 2, 3, 4, 6)

y = dual gang port count (2, 4, 6, 8)

* + - * 1. Flush-Mounted Stainless Steel Phone Wallplates

The wallplate housing shall be a single-gang flush mount style that fits standard NEMA openings.

Wallplate shall provide 1 port.

Wallplate shall be able to accept connector modules from approved connector module manufacturer.

Wallplate shall be manufactured from 304 stainless steel in a brushed finish to provide corrosion resistance in a non-magnetic material and be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

Part Numbers: 4108W-0SP (flush connector)

4108W-1SP (recessed connector)

* + - * 1. Surface-Mounted Outlet Boxes

The surface mount housing shall provide 1, 2, 4, 6, or 12 ports.

The surface mount housing base and cover shall include knockouts for rear, bottom, or side cable entry.

The surface mount housing base shall include cable anchor points.

The surface mount housing mounting methods shall include screws, pressure sensitive adhesive, and magnets.

The surface mount housing cover shall have a labeling capability using built-in labeling windows, to facilitate outlet identification and ease network management.

The surface mount housing cover shall accommodate a user provided #6 x 1/2" security screw.

The surface mount housing shall have no visible mounting screws after installation.

The surface mount housing shall be made of high-impact, fire-retardant plastic rated UL 94V-0, and be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

2-port housings shall comply with UL 2043 as suitable for use in air-handling spaces per NEC 300-22(b)(c).

The surface mount housing shall provide flexibility in configuring multimedia workstation outlets that respond to present or future network needs such as audio, video, coaxial and optical fiber applications.

Part Numbers: 41089-x\*P

41089-12\*

4S089-y^P

x = port count (1, 2, 4, 6)

\* = color option: 5 colors available (white, ivory, grey, black)

y = extended depth port count (2, 4)

^ = color option: 2 colors available (white, ivory)

Surface mount box Colors: Standard color is white. Coordinate with Architect to match finish.

* + - * 1. Modular Furniture Plates

The modular furniture plate shall be a field-configurable faceplate providing from one to four flush-mount ports for a variety of snap-in connectors and adapters.

The modular furniture plate shall extend 0.75" from the furniture raceway to facilitate fiber or copper cable bend-radius compliance, or to compensate for shallow or crowded raceway channels.

The modular furniture plate shall have a rattle-free fit and a tool-less release latch.

The modular furniture plate shall be made of high-impact, fire-retardant plastic rated UL 94V-0, and be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.; be constructed of high-impact self-extinguishing plastic rated UL 94V-O; and be cULus Listed, and compliant with FCC Part 68, NEC Article 800 and ANSI/TIA-568-D specifications.

The modular furniture plate shall have a labeling capability using built-in labeling windows, to facilitate outlet identification and ease network management.

The modular furniture plate shall provide flexibility in configuring multimedia workstation outlets that respond to present or future network needs such as audio, video, coaxial and optical fiber applications.

Part Numbers: 49910-S\*x (standard)

49910-H\*x (Herman Miller)

49910-E\*4 (extended depth)

x = port count (2, 4)

\* = color option: 4 colors available (white, ivory, grey, black)

Furniture plate Colors: Standard color is white. Coordinate with Architect to match finish.

* + - * 1. Multimedia Outlet System – Flush-Mounted Wallplates, Surface Mount Housings and Outlet Adapter Modules

The wallplate housing shall be a single- or dual-gang flush mount style that fits standard NEMA openings.

Plastic wallplate and housings shall be made of high-impact, fire-retardant plastic rated UL 94V-0, and be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

Metallic wallplates shall be manufactured from 304 stainless steel in a brushed finish to provide corrosion resistance in a non-magnetic material, and be UL Listed, cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

The wallplate or housing shall be front-loading, configurable with individual ports.

The wallplate or housing shall provide flexibility in configuring multimedia workstation outlets that respond to present or future network needs such as audio, video, coaxial and optical fiber applications.

The surface mount housing cover shall have a labeling capability using built-in labeling windows, to facilitate outlet identification and ease network management.

The surface mount housing cover shall accommodate a user provided #6 x 1/2" security screw.

A fiber storage/spacer ring shall be available as an accessory. The ring shall mount behind a front-loading double-gang wallplate or on top of dual-gang NEMA-style surface-mount box to provide 0.6-inch extra depth and a guided cable path in support of ANSI/TIA-568-D bend radius requirements.

Part Numbers: 41290-SM\* Single gang flush-mounted

41290-DM\* Dual gang flush-mounted

41290-DR^ Fiber storage/spacer ring

4M089-1^M Surface mount housing, 1-module

41296-MM^ Surface mount housing, 3 modules

\* = color option: 6 colors available (white, light almond, ivory, grey, black, stainless steel)

^ = color option: 5 colors available (white, light almond, ivory, grey, black)

Wallplate Colors: Standard color is white. Coordinate with Architect to match finish.

Multimedia Outlet System (MOS) Inserts: For a complete list of MOS Inserts available please visit www.leviton.com/mos

* + - 1. TERMINATION BLOCKS
         1. Category 6A 110-Style Termination Blocks

The termination block shall be available as a kit including termination block with legs, labels, and C-4 clips.

Plastic bases and blocks shall be made of fire-retardant plastic rated UL 94V-0.

The components shall be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

Termination blocks shall support 64-pair densities with provision for ANSI/TIA-606 compliant labeling.

Wiring blocks shall accommodate 22-26 AWG solid copper wire.

Termination block shall meet or exceed all requirements for Category 6A as described in ANSI/TIA-568.2-D, as well as Class EA requirements as described in ISO/IEC 11801-1.

Part Number: 41D6A-1F4 Wall-mounted, 64-pair,16 C-4 clips

* + - * 1. Category 6, 110-Style Blocks

The termination block shall be available as a kit including termination block with legs, labels, and C-4 clips.

Plastic bases and blocks shall be made of fire-retardant plastic rated UL 94V-0.

The components shall be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

Termination blocks shall support 300- or 100-pair densities with provision for ANSI/TIA-606 compliant labeling.

Termination block shall meet or exceed all requirements for Category 6 as described in ANSI/TIA-568.2-D, as well as Class E requirements as described in ISO/IEC 11801-1.

Part Number: 41AB6-3F4 Wall-mounted,288-pair, 72 C-4 clips

41AB6-1F4 Wall-mounted, 96-pair, 24 C-4 clips

41DR6-1F4 Rack-mounted (1RU), 24 C-4 clips

* + - * 1. Category 5e 110-Style Termination Block Kits

The termination block shall be available as a kit including termination block with legs, labels, and either C-4 or C-5 clips.

Plastic bases and blocks shall be made of fire-retardant plastic rated UL 94V-0.

The components shall be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

Termination blocks shall support 100-pair densities with provision for ANSI/TIA-606 compliant labeling.

Termination block shall meet or exceed all requirements for Category 5e as described in ANSI/TIA-568.2-D, as well as Class E requirements as described in ISO/IEC 11801-1.

Part Number: 41AB2-1F4 Wall-mounted,100-pair, 24 C-4 clips

41AB2-1F5 Wall-mounted, 100-pair, 20 C-5 clips

41DBR-1F4 Rack-mounted (1RU),100-pair, 24 C-4 clips

41DBR-1F5 Rack-mounted (1RU), 100-pair, 20 C-5 clips

* + - 1. PATCH PANELS
         1. Category 6A 110-style Modular Patch Panels

The patch panel shall meet or exceed all requirements for Category 6A as described in ANSI/TIA-568.2-D, as well as Class EA requirements as described in ISO/IEC 11801-1

The panels shall feature industry standard 'in-line' 110 IDCs and separated 6-pack IDC blocks.

The 110 IDCs shall include conductor retention features and pair separation towers designed specifically for large conductor size in CAT 6A cable.

The patch panels shall incorporate a triple-stage compensation design with integrated flexible circuit to enhance permanent link and channel performance.

The panel circuit board design shall incorporate an isolation gap to minimize Alien Crosstalk.

The 110 IDCs connector housing shall provide a cutting ledge directly adjacent to the 110-style termination against which wires can be terminated and cut in one action by the installer. The 110 punch down module shall incorporate pair separation towers for ease of installation with larger conductor sizes of Cat6A cabling.

Patch panels shall be available in 24- and 48-port configurations in both flat and angled forms.

Patch panels shall not require separate termination manager.

Panels shall have a black painted finish with white silk-screened port numbers.

Panels shall be available in both flat and angled styles.

Patch panel shall be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

The connector module shall comply with the following POE standards:

IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af, Type 2 (30 Watts) formerly 802.3at, Type 3 (60 Watts), Type 4 (90 Watts)

Cisco UPoE (60 Watts), UPoE+ (90 Watts)

Power over HDBaseT™ PoH (95 Watts)

Part Number: 6A586-U24 24-port flat, 1RU

6A586-U48 48-port, flat, 2RU

6A587-U24 24-port, angled, 1RU

6A587-U48 48-port, angled, 2RU

* + - * 1. Category 6 110-style Modular Patch Panels:

The patch panel shall meet or exceed all requirements for Category 6 as described in ANSI/TIA-568.2-D, as well as Class E requirements as described in ISO/IEC 11801-1

The patch panel shall be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

The panels shall feature both T568A and T568B wiring configurations, white IDC 110-punchdown modules, mounting standoffs for cable management bars, color-coded front window labeling, and a termination standoff for patch panel earthing/grounding.

The 110 punch down module shall provide a cutting ledge directly adjacent to IDCs against which the wires can be directly terminated and cut in one action.

The patch panel connector module shall utilize a tine retention technology to accommodate six-position modular plug modular cords without damage to either the cord or the module and to minimize arcing due to contact bounce.

The panels shall have universal T568A and T568B wiring card for terminations.

The panels shall be made of 16-gauge steel and shall have a black painted finish with white silk-screening. The plastic elements shall be fire-retardant with a UL flammability rating of 94V-0.

The panel shall be offered in 12-, 24-, 48-, 96-port configurations as well as an 89D 12-port configuration.

The patch panel shall be configured with six port modules.

The 110 termination on the rear of the panel shall follow normal installation color sequence (blue, orange, green, brown) from left to right.

The patch panel shall be compatible with 19" equipment racks, cabinets or wall mount brackets.

The panel shall be equipped with front labeling space to facilitate port identification.

The connector module shall comply with the following POE standards:

IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af, Type 2 (30 Watts) formerly 802.3at, Type 3 (60 Watts), Type 4 (90 Watts)

Cisco UPoE (60 Watts), UPoE+ (90 Watts)

Power over HDBaseT™ PoH (95 Watts)

The patch panel connector modules shall utilize an engineered method to prevent POE arcing damage from occurring at the critical contact-mating zone between the plug and connector module tines.

Part Number: 69586-Uxx flat panel

69587-Uxx angled panel

69586-U89 12-port 89D panel

69586-Lyy flat panel with magnifying lens label holder

69587-Lyy angled panel with magnifying lens label holder

xx = port count (12, 24, 48, 96)

yy = port count (24, 48)

* + - * 1. Category 5e 110-style Modular Patch Panels

The patch panel shall meet or exceed all requirements for Category 5e as described in ANSI/TIA-568.2-D, as well as Class D requirements as described in ISO/IEC 11801-1

The patch panel shall be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

The panels shall feature both T568A and T568B wiring configurations, white IDC 110-punchdown modules, mounting standoffs for cable management bars, color-coded front window labeling, and a termination standoff for patch panel earthing/grounding.

The 110 punch down module shall provide a cutting ledge directly adjacent to IDCs against which the wires can be directly terminated and cut in one action.

The patch panel connector module shall utilize a tine retention technology to accommodate six-position modular plug modular cords without damage to either the cord or the module and to minimize arcing due to contact bounce.

The panels shall have universal T568A and T568B wiring card for terminations.

The panels shall be made of 16-gauge steel and shall have a black painted finish with white silk-screening. The plastic elements shall be fire-retardant with a UL flammability rating of 94V-0.

The panel shall be offered in 12-, 24-, 48-, 96-port configurations as well as an 89D 12-port configuration.

The patch panel shall be configured with six port modules.

The 110 termination on the rear of the panel shall follow normal installation color sequence (blue, orange, green, brown) from left to right.

The patch panel shall be compatible with 19" equipment racks, cabinets or wall mount brackets.

The panel shall be equipped with front labeling space to facilitate port identification.

The connector module shall comply with the following POE standards:

IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af, Type 2 (30 Watts) formerly 802.3at, Type 3 (60 Watts)

Cisco UPoE (60 Watts)

The patch panel connector modules shall utilize an engineered method to prevent POE arcing damage from occurring at the critical contact-mating zone between the plug and connector module tines.

Part Number: 5G596-Uxx flat panel

5G597-Uxx angled panel

5G596-U89 12-port 89D panel

5G596-Lyy flat panel with magnifying lens label holder

5G597-Lyy angled panel with magnifying lens label holder

xx = port count (12, 24, 48, 96)

yy = port count (24, 48)

* + - * 1. QuickPort-Style UTP Patch Panels:

Patch panel shall be field configurable in 24(1RU), 48(2RU) and 72(2RU) port densities

Patch panel shall be available in high density 48 port 1U configuration.

The patch panel shall be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

The patch panels shall be compatible with 19" EIA equipment racks, cabinets or wall mount brackets.

For panels equipped with silk-screened labeling: Label positioning blocks and port numbers shall be silkscreened in white and be typical of front labeling of traditional patch panels.

Panel shall accept the full range of modules from the approved manufacturer including Category 5e, 6, 6A as well as AV and optical fiber modules.

Part Number: 49255-Hxx flat panel, standard density

49256-Hxx angled panel, standard density

49255-Q48 flat panel, high density

49256-D48 angled panel, high density

49255-Lyy flat panel with magnifying lens label holder

49256-Lyy angled panel with magnifying lens label holder

xx = port count (24, 48)

yy = port count (24, 48)

* + - * 1. QuickPort-Style Shielded Patch Panels:

Patch panel shall be field configurable in 24(1RU), 48(2RU) and 72(2RU) port densities

Patch panel shall be available in high density 48 port 1U configuration.

The patch panel shall be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

The patch panels shall be compatible with 19" EIA equipment racks, cabinets or wall mount brackets.

For panels equipped with silk-screened labeling: Label positioning blocks and port numbers shall be silkscreened in white and be typical of front labeling of traditional patch panels.

Panel shall accept the full range of modules from the approved manufacturer including Category 5e, 6, 6A as well as AV and optical fiber modules.

Part Number: 4S255-Sxx flat panel, standard density

4S256-Sxx angled panel, standard density

4S255-D48 flat panel, high density

1) xx = port count (24, 48)

* + - 1. PATCH CORDS/JUMPERS
         1. Category 6A Shielded Patch Cords

The patch cords shall meet or exceed all requirements for Category 6A as described in ANSI/TIA-568.2-D, as well as Class EA requirements as described in ISO/IEC 11801-1

The patch cord shall be an 8P/8C, 26 AWG, F/UTP construction with stranded center conductors.

The patch cord shall meet ANSI/TIA-1096-A requirements to include 50 micro inches of gold plating.

The patch cord plug shall be industry standard, FCC compliant 94V-0 clear material.

The patch cord shall be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

The patch cord jacket shall meet or exceed UL 444 CMR rating and be RoHS compliant.

The patch cord shall comply with the following POE standards:

IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af, Type 2 (30 Watts) formerly 802.3at, Type 3 (60 Watts), Type 4 (90 Watts)

Cisco UPoE (60 Watts), UPoE+ (90 Watts)

Power over HDBaseT™ PoH (95 Watts)

The patch cord will incorporate a molded boot to provide strain relief and ease of use in higher density applications.

The patch cords shall be available in standard 3, 5, 7, 10, 15, and 20-foot lengths. Custom lengths shall also be available through a made to order program.

The patch cord shall be available in 7 standard colors.

Part Number: 6AS10-xxy

xx = length in feet (03, 05, 07, 10, 15, 20)

y = color (white, blue, black, yellow, red, green, gray).

* + - * 1. Category 6 UTP Standard Patch Cords

The patch cords shall meet or exceed all requirements for Category 6 as described in ANSI/TIA-568.2-D, as well as Class E requirements as described in ISO/IEC 11801-1

The patch cord shall be an 8P/8C, 24 AWG, U/UTP construction with stranded center conductors.

The patch cord shall meet ANSI/TIA-1096-A requirements to include 50 micro inches of gold plating.

The patch cord plug shall be industry standard, FCC compliant 94V-0 clear material.

The patch cord shall be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

The patch cord jacket shall meet or exceed UL 444 CM rating and be RoHS compliant.

The patch cord shall comply with the following POE standards:

IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af, Type 2 (30 Watts) formerly 802.3at, Type 3 (60 Watts), Type 4 (90 Watts)

Cisco UPoE (60 Watts), UPoE+ (90 Watts)

Power over HDBaseT™ PoH (95 Watts)

The patch cord will incorporate a molded boot to provide strain relief and ease of use in higher density applications.

The patch cords shall be available in standard 3, 5, 7, 10, 15, and 20-foot lengths. Custom lengths shall also be available through a made to order program.

The patch cord shall be available in 7 standard colors.

Part Number: 6D560-xxy COO: USA patch cords

6D460-xxy COO: China patch cords

xx = length in feet (03, 05, 07, 10, 15, 20)

y = color (white, blue, black, yellow, red, green, gray)

* + - * 1. Category 6 Shielded Patch Cords

The patch cords shall meet or exceed all requirements for Category 6 as described in ANSI/TIA-568.2-D, as well as Class E requirements as described in ISO/IEC 11801-1

The patch cord shall be an 8P/8C, 26 AWG, F/UTP construction with stranded center conductors.

The patch cord shall meet ANSI/TIA-1096-A requirements to include 50 micro inches of gold plating.

The patch cord plug shall be industry standard, FCC compliant 94V-0 clear material.

The patch cord shall be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

The patch cord jacket shall meet or exceed UL 444 CM rating and be RoHS compliant.

The patch cord shall comply with the following POE standards:

IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af, Type 2 (30 Watts) formerly 802.3at, Type 3 (60 Watts), Type 4 (90 Watts)

Cisco UPoE (60 Watts), UPoE+ (90 Watts)

Power over HDBaseT™ PoH (95 Watts)

The patch cord will incorporate a molded boot to provide strain relief and ease of use in higher density applications.

The patch cords shall be available in standard 3, 5, 7, 10, 15, and 20-foot lengths. Custom lengths shall also be available through a made to order program.

Part Number: 6S560-xxS grey color

xx = length in feet (03, 05, 07, 10, 15, 20)

* + - * 1. Category 5E UTP Patch Cords

The patch cords shall meet or exceed all requirements for Category 6 as described in ANSI/TIA-568.2-D, as well as Class E requirements as described in ISO/IEC 11801-1

The patch cord shall be an 8P/8C, 24 AWG, U/UTP construction with stranded center conductors.

The patch cord shall meet ANSI/TIA-1096-A requirements to include 50 micro inches of gold plating.

The patch cord plug shall be industry standard, FCC compliant 94V-0 clear material.

The patch cord shall be cULus Listed (UL 1863 & CAN/CSA-C22.2 No. 182.4) and meet ANSI/TIA-568 specifications.

The patch cord jacket shall meet or exceed UL 444 CM rating and be RoHS compliant.

The patch cord shall comply with the following POE standards:

IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af, Type 2 (30 Watts) formerly 802.3at, Type 3 (60 Watts)

Cisco UPoE (60 Watts)

The patch cords shall be available in standard 3, 5, 7, 10, 15, and 20-foot lengths. Custom lengths shall also be available through a made to order program.

The patch cord shall be available in 7 standard colors.

Part Number: 5D560-xxy Molded boot

5G460-xxy Rubber boot

xx = length in feet (03, 05, 07, 10, 15, 20)

y = color (white, blue, black, yellow, red, green, gray)

* 1. **EXECUTION** 
     1. **EXAMINATION**
        1. Examine areas to receive communications horizontal cabling.
        2. Notify Architect of conditions that would adversely affect installation or subsequent use.
        3. Do not begin installation until unacceptable conditions are corrected.
     2. **INSTALLATION – GENERAL**
        1. Install communications horizontal cabling in accordance with manufacturer’s instructions, ANSI/TIA-568.0-E, ANSI/TIA-568.1-E, ANSI/TIA-569-E, BICSI TDMM, and NFPA 70.
        2. Field Terminated Copper Patch Cords and Optical Fiber Jumpers: Not allowed.
        3. Copper Patch Cords: Manufactured by Leviton Network Solutions.
        4. Install cables after building interior has been physically protected from weather and mechanical work likely to damage cabling has been completed.
        5. Ensure cable pathways are completely and thoroughly cleaned before installing cabling.
        6. Inspect installed conduit, wireway, cable trays, and innerduct.
        7. Clean additional enclosed raceway and innerduct systems furnished.
        8. Provide protection for exposed cables where subject to damage.
        9. Abrasion Protection:
           1. Provide abrasion protection for cable or wire bundles which pass through holes or across edges of sheet metal.
           2. Use protective bushings to protect cables.
        10. Cable Ties and Other Cable Management Clamps:
            1. No more than hand tightened.
            2. Fit snugly, but not compress, crimp, or otherwise change physical characteristics of cable jacket or distort placement of twisted-pair components.
            3. Replace cables exhibiting stresses due to over tightening of cable management devices.
            4. Use plenum-rated cable ties in plenum spaces.
            5. Velcro™ brand tie-wraps are preferred over cable ties for all cable bundles. Plenum-rated Velcro™ brand tie-wraps are available from Leviton.
        11. Where possible, route cables in overhead cable trays and inside wire management systems attached to equipment cabinets and racks.
            1. Use Velcro™ brand tie-wraps, plastic ties or ducts to restrain cabling installed outside of wire management systems on racks or in cabinets.
            2. Cable Trays: Do not exceed 50 percent fill.
        12. Pull Cord:
            1. Nylon, 1/8-inch minimum.
            2. Co-install with cables installed in conduit.
        13. Cable Raceways: Do not fill greater than ANSI/TIA-569-E maximum fill for particular raceway type.
        14. Support horizontal cables at a maximum of 48-inch (1.2 to 1.5-m) irregular intervals, if J-hook or trapeze system is used to support cable bundles.
        15. Do not allow cables to rest on acoustic ceiling grids, plumbing pipes, or electrical conduits.
        16. Bundle horizontal distribution cables in groups of no more than amount of cables designed for by cable support manufacturer, based on cable OD and weight.
        17. Fire-Sprinkler System:
            1. Install cables above fire-sprinkler system.
            2. Do not attach cables to fire-sprinkler system or ancillary equipment or hardware.
            3. Install cable system and support hardware so that it does not obscure valves, fire alarm conduit, boxes, or other control devices.
        18. Do not attach cables to ceiling grid or lighting fixture wires.
        19. Install appropriate carriers to support cabling, where support for horizontal cables are required.
        20. Replace before final acceptance, cables damaged or exceeding recommended installation parameters during installation.
     3. **INSTALLATION –TWISTED-PAIR COPPER CABLES**
        1. Install twisted-pair copper cables in accordance with manufacturer’s instructions.
        2. Install cables in continuous lengths from origin to destination, without splices, except for transition points or consolidation points.
        3. Where transition points or consolidation points are allowed, they shall be located in accessible locations and housed in enclosure intended and suitable for the purpose.
        4. Cable Minimum Bend Radius and Maximum Pulling Tension:
           1. Do not exceed bend radius for UTP and Shielded cable: 4 X Cable OD
           2. Install cables so that there are no bends smaller than 4X cable OD at any point in the run and at the termination field.
           3. Pulling Tension: Do not exceed 25 ft.lb.
        5. Separation from Power Lines: Provide following minimum separation distances between pathways for copper communications cables and power wiring of 480 volts or less:
           1. Open or Nonmetal Communications Pathways:

Electric motors, fluorescent light fixtures, and unshielded power lines carrying up to 3 kVA: 12 inches.

Electrical equipment and unshielded power lines carrying more than 5 kVA: 36 inches.

Large electrical motors or transformers: 48 inches.

* + - * 1. Grounded Metal Conduit Communications Pathways:

Electrical equipment and unshielded power lines carrying up to 2 kVA: 2-1/2 inches.

Electrical equipment and unshielded power lines carrying from 2 kVA to 5 kVA: 6 inches.

Electrical equipment and unshielded power lines carrying more than 5 kVA: 12 inches.

Power lines enclosed in grounded metal conduit (or equivalent shielding) carrying from 2 kVA to 5 kVA: 3 inches.

Power lines enclosed in grounded metal conduit (or equivalent shielding) carrying more than 5 kVA: 6 inches.

* + - 1. Coil cables to house cable coil without exceeding manufacturer’s bend radius.
         1. In hollow wall installations where box eliminators are used, store excess wire in wall.
         2. Store no more than 12 inches of cable slack.
         3. Loosely coil excess slack and store in ceiling above each drop location, when there is not enough space present in outlet box to store slack cables.
      2. Dress and terminate cables in accordance with ANSI/TIA-568.0-E, ANSI/TIA-568.1-E, BICSI TDMM, and manufacturer's instructions.
      3. Terminate 4-pair cables on jack and patch panels using T568-B or T568-A wiring scheme.
      4. Pair Untwist at Termination: Do not exceed 12 mm (1/2 inch).
      5. Neatly bundle cables and dress to their respective panels or blocks.
         1. Feed each panel or block by individual bundle separated and dressed back to point of cable entrance into rack or frame.
    1. **INSTALLATION – OPTICAL FIBER CABLES**
       1. Place fiber optic cables to maintain minimum cable bend radius limits specified by manufacturer or 15X cable OD, whichever is larger.
       2. Use care when handling fiber optic cables.
          1. Carefully monitor pulling tension so as not to exceed limits specified by manufacturer.
       3. Do not splice horizontal fiber optic cables.
       4. Coil cables to house cable coil without exceeding manufacturer’s bend radius.
          1. In hollow wall installations where box eliminators are used, store excess wire in wall.
          2. Store no more 36 inches of fiber slack.
          3. Loosely coil excess slack and store in ceiling above each drop location, when there is not enough space present in outlet box to store slack cables.
    2. **FIELD QUALITY CONTROL** 
       1. Cables and Termination Hardware: Test 100 percent for defects in installation and verify cabling system performance under installed conditions in accordance with ANSI/TIA-568.0-E.
          1. Verify all pairs of each installed cable before system acceptance.
          2. Defects in cabling system installation, including but not limited to cables, connectors, patch panels, and connector blocks shall be repaired or replaced to ensure 100 percent useable conductors in all cables installed.
       2. Test all cables in accordance with this specification section, ANSI/TIA-568.2-D, and ANSI/TIA-568.3-D standards, and Berk-Tek and Leviton Network Solutions instructions
          1. If any of these are in conflict, bring discrepancies to the attention of the Architect for clarification and resolution.
       3. Cables, Jacks, Connecting Blocks, and Patch Panels:
          1. Verify all pairs of each installed cable before system acceptance.
          2. Defects in cabling system installation, including but not limited to cables, connectors, patch panels, and connector blocks shall be repaired or replaced to ensure 100 percent useable conductors in all cables installed.
       4. Testing Twisted-Pair Copper Cables: (**NOTE: Permanent Link Test results are recommended, and are the expected norm** –unless patch cords that will remain installed at the work area and cross-connect are also being tested, in which case Channel Test results would be expected and accepted).
          1. Test twisted-pair copper cable links for continuity, pair reversals, shorts, opens, and performance as specified.

Additional testing is required to verify Category performance.

Test horizontal cabling using approved certification tester for Category 6A, Category 6, and Category 5e performance compliance in accordance with ANSI/TIA-568.2-D.

* + - * 1. Test Equipment: Certification tester (Note: Appropriate Fluke, Ideal, Viavi, Psiber, Softing, or AEM testers may be used).
        2. Basic Tests Required:

Wire map.

Length (feet).

Insertion loss (dB), formerly attenuation.

NEXT (Near end crosstalk) (dB).

Return loss (dB).

ELFEXT (dB).

Propagation delay (ns).

Delay skew (ns).

PSNEXT (Power sum near-end crosstalk loss) (dB).

PSELFEXT (Power sum equal level far-end crosstalk loss) (dB).

* + - * 1. Test Category 6A to 500 MHz.

Alien Crosstalk (AXT) testing and AXT test results are NOT required by Leviton for warranty of a Category 6A system. (**Note**: AXT testing may be required by the customer, in which case these tests WOULD have to be performed).

* + - * 1. Test Category 6 to 250 MHz.
        2. Test Category 5e to 100 MHz.
        3. Provide test results in approved certification testers original software format, with the following minimum information per cable:

Circuit ID.

Information from specified basic tests required.

Test Result: “PASS” or “FAIL”.

Date and time of test.

Project name.

NVP.

Software version.

* + - * 1. An occasional asterisk-Pass (\*PASS) will be accepted by Leviton at the manufacturer’s discretion, but rework of these links should be accomplished in an attempt to achieve clean “PASS” results prior to submission of test results.
        2. To receive Manufacturer’s Warranty for the project, submit software copy of test results, in original tester software format, to the Owner and to the Manufacturer (Leviton).
        3. Report in writing to the Owner immediately, along with copy of test results, failed test results that cannot be remedied through re-termination (as in the case of reversed or split pairs).
      1. Optical Fiber:
         1. Testing procedures shall be in accordance with the following:

ANSI/TIA-568.3-D Tier 1

One jumper reference required for duplex testing

Single mode testing per ANSI/TIA-526-7, Method A1.1.

Multimode testing per the TSB-4979 and TIA-526-14-B standards including one cord reference and encircled flux compliance

Magnified end face inspection per the IEC 61300-3-35 standard.

* + - * 1. Test Equipment: Certification tester (Note: Appropriate Fluke, Ideal, Viavi, Psiber, Softing, or AEM testers may be used).
        2. Testing:

Test optical fibers at both 850 nm and 1300 nm wavelengths for multimode, 1310 nm and 1550 nm wavelengths for single mode, end-to-end insertion loss, Telecommunications Room (TR) to Telecommunications Outlet (TO), Telecommunications Outlet (TO) to Telecommunications Room (TR).

Maximum insertion loss for horizontal fiber optic cables without consolidation point: 2.0 dB.

Test horizontal fiber runs TR to TO, TO to TR, at wavelength of operation to desktop applications.

* + - * 1. Submit software copy of test results, in original tester software format, to the Owner and to the Manufacturer (Leviton).
    1. **LABELING**
       1. All labeling is to be in accordance with ANSI/TIA-606-C and manufacturer’s instructions.
       2. Label horizontal cables using machine-printed label at each end of cable at approximately 12 inches from termination point and again at approximately 48 inches from termination point.
          1. Handwritten Labels: Not acceptable.
       3. Label patch panel ports and TO ports with cable identifier.
       4. Labels: Denote TO ID and unique cable number for that TO, i.e. A-001-A for cable number 1, A-001-B for cable number 2, and so forth.
          1. Owner may provide specific labeling requirements. Coordinate with the Owner.
       5. Note labeling information on as-built drawings.
    2. **PROTECTION**
       1. Protect installed communications horizontal cabling from damage during construction.

**END OF SECTION**