

Section 27 11 00

COMMUNICATION EQUIPMENT ROOM FITTINGS

Section 27 11 16

Communications Cabinets, Racks, Frames and Enclosures

PART 1 – GENERAL

1.1 WORK INCLUDED

- A. Provide all labor, materials, and equipment for the complete installation of work called for in the Contract Documents.

1.2 SCOPE OF WORK

- A. This section includes the minimum requirements for wall-mounted racks for use in communications equipment rooms.
- B. Included in this section are the minimum composition requirements and installation methods for the following:
 - 1. Racks, wall-mounted.

1.3 QUALITY ASSURANCE

- A. All cable and equipment shall be installed in a neat and workmanlike manner. All methods of construction that are not specifically described or indicated in the contract documents shall be subject to the control and approval of the Owner or Owner Representative. Equipment and materials shall be of the quality and manufacture indicated. The equipment specified is based upon the acceptable manufacturers listed. Where “approved equal” is stated, equipment shall be equivalent in every way to that of the equipment specified and subject to approval.
- B. Strictly adhere to all Building Industry Consulting Service International (BICSI), Electronic Industries Alliance (EIA) and Telecommunications Industry Association (TIA) recommended installation practices when installing communications/data cabling.
- C. Material and work specified herein shall comply with the applicable requirements of:
 - 1. ANSI/TIA/EIA – 568-B *Commercial Building Telecommunications Cabling Standard*, 2000-2004
 - 2. TIA – 569-B *Commercial Building Standard for Telecommunications Pathways and Spaces*, 2004
 - 3. ANSI/TIA/EIA – 606-A *Administration Standard for the Telecommunications Infrastructure of Commercial Buildings*, 2002
 - 4. ANSI-J-STD – 607-A *Joint Standard for Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications*, 2002

5. NFPA 70 – *National Electric Code*, 2005
6. BICSI – *Telecommunications Distribution Methods Manual*, 10th Edition, 2003

1.4 SUBMITTALS

- A. Provide product data for the following:
 1. Manufacturers data sheets/cut sheets, specifications and installation instructions for all products (submit with bid).

PART 2 – PRODUCTS

1.0 Racks, Wall-Mounted

A. Wall-Mounted Swing Gate Equipment Rack (Standard Swing Gate Wall Rack)

1. Wall-mounted racks shall be manufactured from sheet aluminum and/or steel and aluminum extrusion.
2. The rack will consist of a wall-mount frame and a swing gate. The swing gate will support 19" EIA or 23" wide equipment, as specified below, and will pivot open to provide easy access to the back of equipment.
3. The swing gate will be connected to the wall-mount frame on both sides at the top and the bottom of the swing gate with spring loaded hinge pins. The swing gate will pivot open to 90°. Spring-loaded hinge pins will allow the rack to open from the right or from the left.
4. The swing gate will be secured in the closed position by the spring-loaded pins. Cast corner ramps on the wall-mount frame will lift the pins during the closing motion so that the rack can be shut with one hand. The pins will latch with an audible click. To open the swing gate, both the top and bottom pins opposite the hinged side must be operated simultaneously.
5. The rack will be EIA-310-D compliant. Rack-mount spaces/units (RMU) will be 1-3/4" high. The swing gate will have a single pair of C-shaped equipment mounting rails. The front and back of the mounting rails will be punched with the Universal hole pattern. Mounting holes will be spaced vertically on alternating 5/8"-5/8"-1/2" centers and will be roll-formed with #12-24 threads. Mounting rails will provide 13, 21, 27 or 41 rack-mount spaces (RMU) for equipment as specified below.
6. The rack will be 12", 18" or 25" deep as specified below.
7. The rack will be rated to support 100 pounds of equipment. Load bearing capacity will be certified and UL Listed using NWIN and UL Standard 60950. UL Listing will be stated in the manufacturer's product literature. The manufacturer will sell a heavy-duty bracing kit for the 18" deep and

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25" deep versions of the rack that will increase the load of the rack to 150 pounds of equipment when used.

8. Finish shall be clear (brushed/grained aluminum) or epoxy-polyester hybrid powder coat (paint) in the color(s) specified below.
9. Each rack will include 50 each #12-24 equipment mounting screws and installation hardware (1/4" x 2" hex lag screws for wood stud walls).
10. Design Make:
Chatsworth Products, Inc. (CPI),
Standard Swing Gate Wall Rack

Part Number **11790-112**, Standard Swing Gate Wall Rack, 19" EIA x 24.5" High x 12" Deep, 13 RMU, Gray.

Part Number **11790-212**, Standard Swing Gate Wall Rack, 19" EIA x 24.5" High x 12" Deep, 13 RMU, Computer White.

Part Number **11790-512**, Standard Swing Gate Wall Rack, 19" EIA x 24.5" High x 12" Deep, 13 RMU, Clear (Brushed Aluminum).

Part Number **11790-712**, Standard Swing Gate Wall Rack, 19" EIA x 24.5" High x 12" Deep, 13 RMU, Black.

Part Number **11790-118**, Standard Swing Gate Wall Rack, 19" EIA x 24.5" High x 18" Deep, 13 RMU, Gray.

Part Number **11790-218**, Standard Swing Gate Wall Rack, 19" EIA x 24.5" High x 18" Deep, 13 RMU, Computer White.

Part Number **11790-518**, Standard Swing Gate Wall Rack, 19" EIA x 24.5" High x 18" Deep, 13 RMU, Clear (Brushed Aluminum).

Part Number **11790-718**, Standard Swing Gate Wall Rack, 19" EIA x 24.5" High x 18" Deep, 13 RMU, Black.

Part Number **11790-125**, Standard Swing Gate Wall Rack, 19" EIA x 24.5" High x 25" Deep, 13 RMU, Gray.

Part Number **11790-225**, Standard Swing Gate Wall Rack, 19" EIA x 24.5" High x 25" Deep, 13 RMU, Computer White.

Part Number **11790-725**, Standard Swing Gate Wall Rack, 19" EIA x 24.5" High x 25" Deep, 13 RMU, Black.

Part Number **11791-112**, Standard Swing Gate Wall Rack, 19" EIA x 38.5" High x 12" Deep, 21 RMU, Gray.

Part Number **11791-212**, Standard Swing Gate Wall Rack, 19" EIA x 38.5" High x 12" Deep, 21 RMU, Computer White.

Part Number **11791-512**, Standard Swing Gate Wall Rack, 19" EIA x 38.5" High x 12" Deep, 21 RMU, Clear (Brushed Aluminum).

Part Number **11791-712**, Standard Swing Gate Wall Rack, 19" EIA x 38.5" High x 12" Deep Exterior, 21 RMU, Black.

Part Number **11791-118**, Standard Swing Gate Wall Rack, 19" EIA x 38.5" High x 18" Deep, 21 RMU, Gray.

Part Number **11791-218**, Standard Swing Gate Wall Rack, 19" EIA x 38.5" High x 18" Deep, 21 RMU, Computer White.

Part Number **11791-518**, Standard Swing Gate Wall Rack, 19" EIA x 38.5" High x 18" Deep, 21 RMU, Clear (Brushed Aluminum).

Part Number **11791-718**, Standard Swing Gate Wall Rack, 19" EIA x 38.5" High x 18" Deep, 21 RMU, Black.

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Part Number **11791-125**, Standard Swing Gate Wall Rack, 19" EIA x 38.5" High x 25" Deep, 21 RMU, Gray.

Part Number **11791-225**, Standard Swing Gate Wall Rack, 19" EIA x 38.5" High x 25" Deep, 21 RMU, Computer White.

Part Number **11791-725**, Standard Swing Gate Wall Rack, 19" EIA x 38.5" High x 25" Deep, 21 RMU, Black.

Part Number **11807-112**, Standard Swing Gate Wall Rack, 19" EIA x 49" High x 12" Deep, 27 RMU, Gray.

Part Number **11807-212**, Standard Swing Gate Wall Rack, 19" EIA x 49" High x 12" Deep, 27 RMU, Computer White.

Part Number **11807-512**, Standard Swing Gate Wall Rack, 19" EIA x 49" High x 12" Deep, 27 RMU, Clear (Brushed Aluminum).

Part Number **11807-712**, Standard Swing Gate Wall Rack, 19" EIA x 49" High x 12" Deep, 27 RMU, Black.

Part Number **11807-118**, Standard Swing Gate Wall Rack, 19" EIA x 49" High x 18" Deep, 27 RMU, Gray.

Part Number **11807-218**, Standard Swing Gate Wall Rack, 19" EIA x 49" High x 18" Deep, 27 RMU, Computer White.

Part Number **11807-518**, Standard Swing Gate Wall Rack, 19" EIA x 49" High x 18" Deep, 27 RMU, Clear (Brushed Aluminum).

Part Number **11807-718**, Standard Swing Gate Wall Rack, 19" EIA x 49" High x 18" Deep, 27 RMU, Black.

Part Number **11807-125**, Standard Swing Gate Wall Rack, 19" EIA x 49" High x 25" Deep, 27 RMU, Gray.

Part Number **11807-225**, Standard Swing Gate Wall Rack, 19" EIA x 49" High x 25" Deep, 27 RMU, Computer White.

Part Number **11807-725**, Standard Swing Gate Wall Rack, 19" EIA x 49" High x 25" Deep, 27 RMU, Black.

Part Number **11792-112**, Standard Swing Gate Wall Rack, 19" EIA x 73.5" High x 12" Deep, 41 RMU, Gray.

Part Number **11792-212**, Standard Swing Gate Wall Rack, 19" EIA x 73.5" High x 12" Deep, 41 RMU, Computer White.

Part Number **11792-512**, Standard Swing Gate Wall Rack, 19" EIA x 73.5" High x 12" Deep, 41 RMU, Clear (Brushed Aluminum).

Part Number **11792-712**, Standard Swing Gate Wall Rack, 19" EIA x 73.5" High x 12" Deep, 41 RMU, Black.

Part Number **11792-118**, Standard Swing Gate Wall Rack, 19" EIA x 73.5" High x 18" Deep, 41 RMU, Gray.

Part Number **11792-218**, Standard Swing Gate Wall Rack, 19" EIA x 73.5" High x 18" Deep, 41 RMU, Computer White.

Part Number **11792-518**, Standard Swing Gate Wall Rack, 19" EIA x 73.5" High x 18" Deep, 41 RMU, Clear (Brushed Aluminum).

Part Number **11792-718**, Standard Swing Gate Wall Rack, 19" EIA x 73.5" High x 18" Deep, 41 RMU, Black.

Part Number **11792-125**, Standard Swing Gate Wall Rack, 19" EIA x 73.5" High x 25" Deep, 41 RMU, Gray.

Part Number **11792-225**, Standard Swing Gate Wall Rack, 19" EIA x 73.5" High x 25" Deep, 41 RMU, Computer White.

Part Number **11792-725**, Standard Swing Gate Wall Rack, 19" EIA x 73.5" High x 25" Deep, 41 RMU, Black.

Part Number **11793-112**, Standard Swing Gate Wall Rack, 23" Wide x 24.5" High x 12" Deep, 13 RMU, Gray.

Part Number **11793-212**, Standard Swing Gate Wall Rack, 23" Wide x 24.5" High x 12" Deep, 13 RMU, Computer White.

Part Number **11793-512**, Standard Swing Gate Wall Rack, 23" Wide x 24.5" High x 12" Deep, 13 RMU, Clear (Brushed Aluminum).

Part Number **11793-712**, Standard Swing Gate Wall Rack, 23" Wide x 24.5" High x 12" Deep, 13 RMU, Black.

Part Number **11793-118**, Standard Swing Gate Wall Rack, 23" Wide x 24.5" High x 18" Deep, 13 RMU, Gray.

Part Number **11793-218**, Standard Swing Gate Wall Rack, 23" Wide x 24.5" High x 18" Deep, 13 RMU, Computer White.

Part Number **11793-518**, Standard Swing Gate Wall Rack, 23" Wide x 24.5" High x 18" Deep, 13 RMU, Clear (Brushed Aluminum).

Part Number **11793-718**, Standard Swing Gate Wall Rack, 23" Wide x 24.5" High x 18" Deep, 13 RMU, Black.

Part Number **11793-125**, Standard Swing Gate Wall Rack, 23" Wide x 24.5" High x 25" Deep, 13 RMU, Gray.

Part Number **11793-225**, Standard Swing Gate Wall Rack, 23" Wide x 24.5" High x 25" Deep, 13 RMU, Computer White.

Part Number **11793-725**, Standard Swing Gate Wall Rack, 23" Wide x 24.5" High x 25" Deep, 13 RMU, Black.

Part Number **11794-112**, Standard Swing Gate Wall Rack, 23" Wide x 38.5" High x 12" Deep, 21 RMU, Gray.

Part Number **11794-212**, Standard Swing Gate Wall Rack, 23" Wide x 38.5" High x 12" Deep, 21 RMU, Computer White.

Part Number **11794-512**, Standard Swing Gate Wall Rack, 23" Wide x 38.5" High x 12" Deep, 21 RMU, Clear (Brushed Aluminum).

Part Number **11794-712**, Standard Swing Gate Wall Rack, 23" Wide x 38.5" High x 12" Deep, 21 RMU, Black.

Part Number **11794-118**, Standard Swing Gate Wall Rack, 23" Wide x 38.5" High x 18" Deep, 21 RMU, Gray.

Part Number **11794-218**, Standard Swing Gate Wall Rack, 23" Wide x 38.5" High x 18" Deep, 21 RMU, Computer White.

Part Number **11794-518**, Standard Swing Gate Wall Rack, 23" Wide x 38.5" High x 18" Deep, 21 RMU, Clear (Brushed Aluminum).

Part Number **11794-718**, Standard Swing Gate Wall Rack, 23" Wide x 38.5" High x 18" Deep, 21 RMU, Black.

Part Number **11794-125**, Standard Swing Gate Wall Rack, 23" Wide x 38.5" High x 25" Deep, 21 RMU, Gray.

Part Number **11794-225**, Standard Swing Gate Wall Rack, 23" Wide x 38.5" High x 25" Deep, 21 RMU, Computer White.

Part Number **11794-725**, Standard Swing Gate Wall Rack, 23" Wide x 38.5" High x 25" Deep, 21 RMU, Black.

Part Number **11808-112**, Standard Swing Gate Wall Rack, 23" Wide x 49" High x 12" Deep, 27 RMU, Gray.

Part Number **11808-212**, Standard Swing Gate Wall Rack, 23" Wide x 49" High x 12" Deep, 27 RMU, Computer White.

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Part Number **11808-512**, Standard Swing Gate Wall Rack, 23" Wide x 49" High x 12" Deep, 27 RMU, Clear (Brushed Aluminum).

Part Number **11808-712**, Standard Swing Gate Wall Rack, 23" Wide x 49" High x 12" Deep, 27 RMU, Black.

Part Number **11808-118**, Standard Swing Gate Wall Rack, 23" Wide x 49" High x 18" Deep, 27 RMU, Gray.

Part Number **11808-218**, Standard Swing Gate Wall Rack, 23" Wide x 49" High x 18" Deep, 27 RMU, Computer White.

Part Number **11808-518**, Standard Swing Gate Wall Rack, 23" Wide x 49" High x 18" Deep, 27 RMU, Clear (Brushed Aluminum).

Part Number **11808-718**, Standard Swing Gate Wall Rack, 23" Wide x 49" High x 18" Deep, 27 RMU, Black.

Part Number **11808-125**, Standard Swing Gate Wall Rack, 23" Wide x 49" High x 25" Deep, 27 RMU, Gray.

Part Number **11808-225**, Standard Swing Gate Wall Rack, 23" Wide x 49" High x 25" Deep, 27 RMU, Computer White.

Part Number **11808-725**, Standard Swing Gate Wall Rack, 23" Wide x 49" High x 25" Deep, 27 RMU, Black.

Part Number **11795-112**, Standard Swing Gate Wall Rack, 23" Wide x 73.5" High x 12" Deep, 41 RMU, Gray.

Part Number **11795-212**, Standard Swing Gate Wall Rack, 23" Wide x 73.5" High x 12" Deep, 41 RMU, Computer White.

Part Number **11795-512**, Standard Swing Gate Wall Rack, 23" Wide x 73.5" High x 12" Deep, 41 RMU, Clear (Brushed Aluminum).

Part Number **11795-712**, Standard Swing Gate Wall Rack, 23" Wide x 73.5" High x 12" Deep, 41 RMU, Black.

Part Number **11795-118**, Standard Swing Gate Wall Rack, 23" Wide x 73.5" High x 18" Deep, 41 RMU, Gray.

Part Number **11795-218**, Standard Swing Gate Wall Rack, 23" Wide x 73.5" High x 18" Deep, 41 RMU, Computer White.

Part Number **11795-518**, Standard Swing Gate Wall Rack, 23" Wide x 73.5" High x 18" Deep, 41 RMU, Clear (Brushed Aluminum).

Part Number **11795-718**, Standard Swing Gate Wall Rack, 23" Wide x 73.5" High x 18" Deep, 41 RMU, Black.

Part Number **11795-125**, Standard Swing Gate Wall Rack, 23" Wide x 73.5" High x 25" Deep, 41 RMU, Gray.

Part Number **11795-225**, Standard Swing Gate Wall Rack, 23" Wide x 73.5" High x 25" Deep, 41 RMU, Computer White.

Part Number **11795-725**, Standard Swing Gate Wall Rack, 23" Wide x 73.5" High x 25" Deep, 41 RMU, Black.

B. Heavy Duty Swing Gate Kit for Standard Swing Gate Wall Rack:

1. Provide additional bracing for 18" deep and 25" deep Standard Swing Gate Wall Racks to increase the load bearing capacity of the rack from 100 pounds to 150 pounds.
2. Heavy Duty Swing Gate Kit will include two corner brackets/gussets made from tubular steel, 3/8" wide x 1-1/2" high with .065" wall thickness. The brackets be formed in a 90° curved bend, will be drilled with holes for attaching to the rack and will include rack installation hardware.

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3. Finish shall be epoxy-polyester hybrid powder coat (paint) in the color(s) specified below.

4. Design Make:
Chatsworth Products, Inc. (CPI),
Standard Swing Gate Wall Rack
Heavy Duty Swing Gate Kit

Part Number **12795-101**, Heavy Duty Swing Gate Kit, Two Brackets, Gray.

Part Number **12795-201**, Heavy Duty Swing Gate Kit, Two Brackets, Computer White.

Part Number **12795-701**, Heavy Duty Swing Gate Kit, Two Brackets, Black.

C. Equipment-Mounting Hardware for Standard Swing Gate Wall Rack:

1. Provide additional equipment-mounting hardware if required to attach equipment to the rack.

2. Equipment mounting hardware will be combination pan head, pilot point mounting screws, threaded #12-24 and 5/8" long.

3. Design Make:
Chatsworth Products, Inc. (CPI),
Equipment Mounting Hardware

Part Number **40605-001**, Hardware Kit For Threaded Mounting Rails, 12-24 Screws, Package Of 50, Zinc.

Part Number **40605-005**, Hardware Kit For Threaded Mounting Rails, 12-24 Screws, Package Of 50, Black.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Wall-Mounted Swing Gate Equipment Rack (Standard Swing Gate Wall Rack)

1. Attach the rack to the wall so that the swing gate can be opened fully without obstruction by other building, storage or architectural components. Follow the manufacturer's assembly and installation instructions when securing the rack to the wall. The rack should be installed on a plywood backboard or attached to a masonry wall. The rack should not be attached to sheet rock (gypsum wall board).

2. Install a Heavy Duty Swing Gate Kit on racks that are 18" or 25" deep to increase rack load bearing capacity to 150 pounds. The Heavy Duty Swing Gate Kit should be installed on the rack before equipment is attached to the rack.