

Charles Universal Broadband Enclosure

CUBE-MP1412-PHD

General Description and Installation

1. GENERAL INTRODUCTION	1
1.1. Document Purpose	1
1.2. Product Purpose.....	1
1.3. Product Mounting and Location.....	1
2. PRODUCT DESCRIPTION.....	2
3. INSTALLATION	4
3.1. Inspecting the Product.....	4
3.2. Following and Using Safety Precautions.....	4
3.3. Obtaining Tools and Equipment.....	4
3.4. Preparing the Installation Site.....	4
3.5. Lifting the CUBE.....	4
3.6. Mounting the CUBE.....	5
3.7. Cable Reels.....	5
4. TECHNICAL ASSISTANCE AND REPAIR SERVICE	5
5. WARRANTY & CUSTOMER SERVICE	5
6. SPECIFICATIONS.....	6

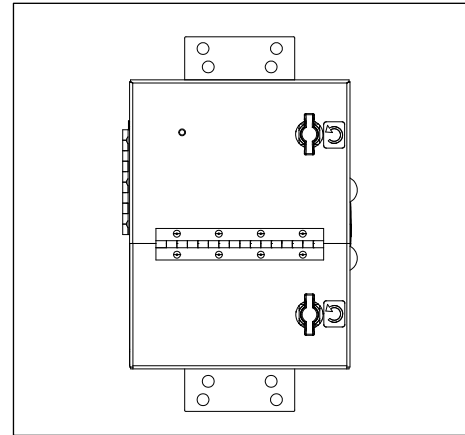


Figure 1 Front View of the CUBE

1. GENERAL INTRODUCTION

1.1. Document Purpose

This document provides general information for the CUBE-MP1412-PHD of the Charles Industries’ Universal Broadband Enclosure (CUBE) product line. Figure 1 shows a closed front view of the enclosure.

-NOTE-
Hereafter, the Charles Universal Broadband Enclosure CUBE-MP1412-PHD will be referred to as the “CUBE.”

1.2. Product Purpose

The CUBE consists of a protective enclosure for an integrated system of electronic components and equipment that can serve fiber and copper interfaces.

1.3. Product Mounting and Location

This enclosure is suitable for outside plant-type (OSP) locations and those that may require NEC compliance. The outdoor, weather-resistant CUBE is to be mounted on a wall. The installer connects the power, fiber, and copper connections. Detailed mounting and installation information is covered in Section 3.

2. PRODUCT DESCRIPTION

The CUBE is a single wall-mounted compartment that includes two mounting locations inside for mounting customer supplied cable reels. To front door has a hinge across the middle so that the cable reel can be easily accessed through the lower half of the door.

Figure 2 shows the CUBE dimensions. Figure 3 shows the main components of the CUBE.

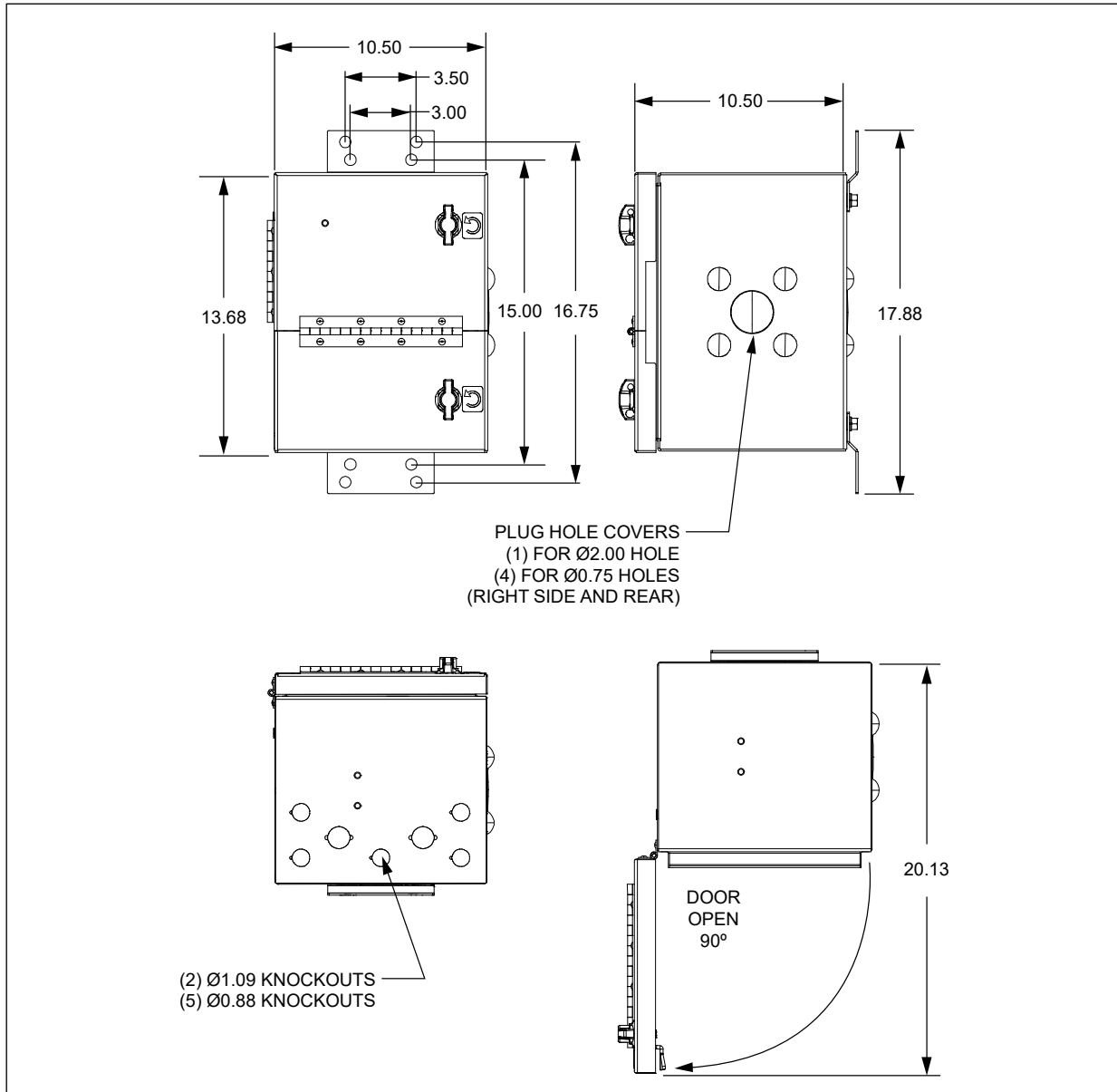


Figure 2 CUBE Dimensions (in inches)

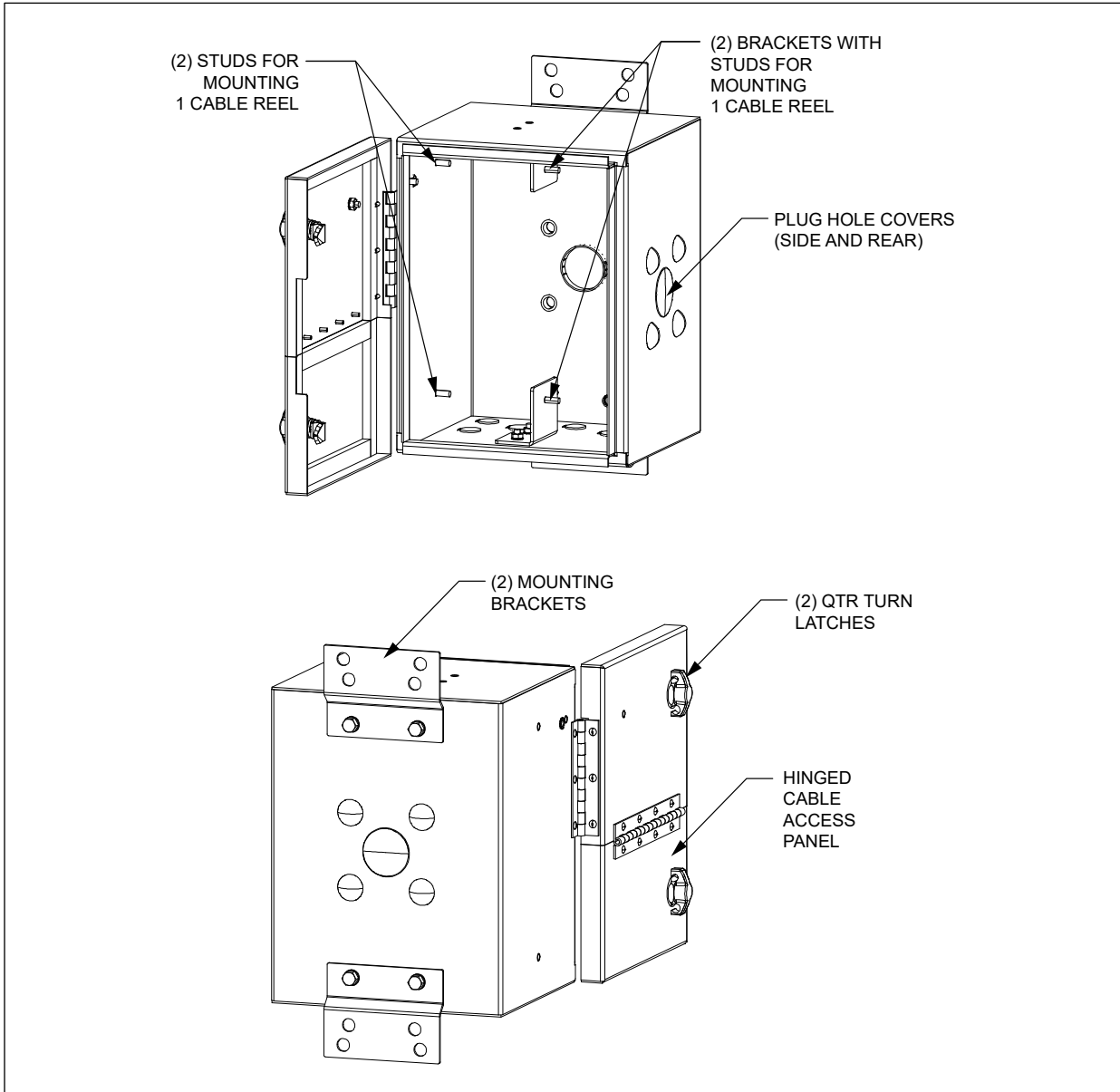


Figure 3 CUBE Components

3. INSTALLATION

3.1. Inspecting the Product

The CUBE is shipped in a carton. Unpack the unit and dispose of the packaging material.

-INSPECTION NOTE-

Visually inspect the unit for damages prior to installation. If the equipment was damaged in transit, immediately report the extent of the damage to the transportation company.

3.2. Following and Using Safety Precautions

Read the following site and safety tips, cautions, and warnings, then proceed with the paragraphs that follow.

- Read all instructions, warnings and cautions on the equipment and in the documentation shipped with the product.
- Do not place this product on weak or unstable surfaces which may allow the product to fall, resulting in potentially serious damage(s) to persons or product.
- Only authorized trained personnel shall install the CUBE.

3.3. Obtaining Tools and Equipment

Obtain the following recommended or needed items for installing the CUBE.

- Sufficient length and quantities of fiber cable (or pigtails)
- Cable scoring, opening, and cutting tools for cable sheathing, shields, wrappings, strength members and buffer tubes
- Wire strippers
- Crimpers
- Cable, tube, wire, and fiber cleaning materials
- Protective and/or insulated work gloves
- Safety glasses
- Tape measure
- Marking utensil
- Any exterior cable strain relief, per company practice
- Slotted, hex, and Phillips screwdrivers
- Torque wrench
- Assorted cable ties, clips, or fasteners (optional)
- Can wrench (216 type tool)
- Level

3.4. Preparing the Installation Site

Observe the following site preparation recommendations.

- Leave adequate horizontal and vertical space between multiple installations to allow for proper cable access, as well as enough room around the enclosure to open the door(s).
- The site must meet minimal personnel and equipment safety requirements.
- The distance from the cable entry point should be consistent with local installation practices.
- The wall must be able to support the weight of the CUBE.
- Run all fiber and copper facilities to the site.

3.5. Lifting the CUBE

See Table 1 for CUBE weight. Use care in moving the CUBE to its mounting location. Use proper lifting equipment per local practice.

3.6. Mounting the CUBE

During shipping, the rear mounting brackets are mounted so that they are flush with the top and bottom of the CUBE. Prior to mounting, remove these brackets, rotate them 180°, and re-mount them. All images in this document show the brackets in the correct positions for mounting.

Mount the CUBE on a wall. Refer to Figure 2 for mounting dimensions for positioning mounting hardware or hold the CUBE against the wall and use a marking utensil to mark the mounting hole locations. Charles recommends using a minimum SAE Grade 2, corrosion-resistant bolts, washers, and nuts for all mounting applications. Use 3/8" diameter hardware. Bolts must be of sufficient length for the mounting surface. A minimum of 3/4" thick plywood or similar surface is required for wall mounting. Ensure that the unit is level.

3.6.1. Torque Requirements

Torque all hardware as shown below (unless otherwise noted). These values apply to SAE Grade 1 & 2 Low Carbon Steel, ASTM A307 Low Carbon Steel, and Stainless Steel Grade 18-8.

Thread Size	In-lbs	Ft-lbs
4-40	4±10%	
6-32	8±10%	
8-32	16±10%	
10-32	26±10%	
12-24	50±10%	
1/4-20/M6	60±5%	5±5%
5/16-18	125±5%	10.4±5%
3/8-16	180±5%	15.0±5%
1/2-13	500±2%	41.7±2%
5/8-11	1000±1%	83.3±1%

3.7. Cable Reels

Mount the cable reels inside the cabinet according to the manufacturer's instructions. For the first reel, use the pair of studs on the left side of the CUBE. For the second reel, use the pair of studs on the reel mounting brackets near the center of the CUBE.

3.7.1. Fiber and Copper Entry

See Figure 2 for all cable entry locations.

Bottom panel: Use the Ø1.09" and Ø0.88" knockouts for Ø0.75" and Ø0.5" conduit fittings, respectively.

Side and rear panels: Remove the plugs to access the holes. The Ø2.00" holes accommodate Ø1.50 conduit fittings, and the Ø0.75" holes accommodate Ø0.125" conduit fittings.

Front: The panel on the front accommodates the cables from the reels. The cover is flexible, so it can be moved out of the way to make room for the cables. Route the cables through the opening as needed.

4. TECHNICAL ASSISTANCE AND REPAIR SERVICE

For questions on product repair or if technical assistance is required, contact Charles Technical Support.

847-806-8500

techserv@charlesindustries.com (email)

<http://www.charlesindustries.com/techserv.htm>

5. WARRANTY & CUSTOMER SERVICE

Charles Industries LLC offers a one-year warranty on the CUBE product. The Charles warranty is limited to the operation of the CUBE hardware as described in this documentation and does not cover equipment that may be integrated by a third party. The terms and conditions applicable to any specific sale of product shall be defined in the resulting sales contract. For questions on warranty or other customer service assistance, contact your Charles Customer Service Representative.

847-806-6300

mktsev@charlesindustries.com (email)

http://www.charlesindustries.com/main/telecom_sales_support.htm

6. SPECIFICATIONS

Physical	
Dimensions	14"Hx11"Wx11"D
Weight	Approx. 13 lbs. as shipped
Materials	0.125" aluminum
Color	Off-white
Environmental	
Operating Temp. Range, Outside Enclosure	-40° to +115°F, -40° to 46°C
Operating Temp Range, Inside Enclosure	-40° to +149°F, -40° to 65°C
Humidity	0 to 95% (non-condensing)
Altitude	Up to 2,000 meters (6560 feet)
Kits and Replacement Parts	
Touch-up Paint	02-000290-0
216 Type Security Tool	07-002070-0
1/4 Turn Latch	39-000420-0

Table 1 CUBE Specifications