



SCIENTIFIC ATLANTA STYLE OTS(W)XU NARROW AND WIDE BODY TAPS

Installation Instructions



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Scientific Atlanta style OTS(W)XU



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Overview

Scientific Atlanta style OTS(W)XU taps 1.2GHz series deliver RF signals across HFC networks. OTS(W)XU taps distribute RF signals through tap ports to individual subscribers.

OTS(W)XU Models

Table 1 includes each of the OTS(W)XU Series models:

Table 1 OTS(W)XU Series models

Model	Description	Part Number ⁽¹⁾
OTSXU-2	2-port tap. Nominal tap loss values (9) 4 dB to 29 dB.	OTSXU-2-XX OTSXU-2-XX/F
OTSXU-4	4-port tap. Nominal tap loss values (8) 8 dB to 29 dB.	OTSXU-4-XX OTSXU-4-XX/F
OTSWXU-2	2-port tap. Nominal tap loss values (9) 4 dB to 29 dB.	OTSWXU-2-XX OTSWXU-2-XX/F
OTSWXU-4	4-port tap. Nominal tap loss values (8) 8 dB to 29 dB.	OTSWXU-4-XX OTSWXU-4-XX/F
OTSWXU-8	8-port tap. Nominal tap loss value (7) 11 dB to 29 dB.	OTSWXU-8-XX OTSWXU-8-XX/F

Figure 1: Front view of a Narrow Body OTSXU-4-20 unit.



Figure 2: Front view of a Wide Body OTSWXU-2-20 unit.



Installation

There are three methods for installing the OTS(W)XU taps.

Strand Mounting

1. Ensure strand clamp and bolt assembly are loose. The unit will be adjusted after cable connections are made.
2. Install the OTS(W)XU using instructions provided in the subsection Cable Installation below.

Extended Suspension Mounting

1. Remove the bolt and strand clamp from the top of the OTS(W)XU housing. Retain bolt.
2. Mount the bracket supplied with the hanger bracket to the housing using the bolt removed in Step 1. Save the original clamp for future use.
3. Install the OTS(W)XU as described in the subsection Cable Installation below.

Pedestal Mounting

1. Remove plugs from the threaded feeder ports to be used in the installation as shown in Figure 3.
2. Install OTS(W)XU as described in the subsection Cable Installation below.

Cable Installation

1. Remove the red plastic port covers and discard.
2. If necessary, cut and trim the cable and center conductor as illustrated in Figure 4. The OTS(W)XU accepts a standard feeder line center conductor diameter of 0.067 inches.
3. Install all cable connectors in the 5/8 x 24 ports of the OTS(W)XU in accordance with instructions provided by the manufacturer of the cable connector. Pin-type connectors are recommended. Attach the connector body to the OTS(W)XU housing and tighten to 40–50 in-lbs (4.52 to 5.7 N•m).

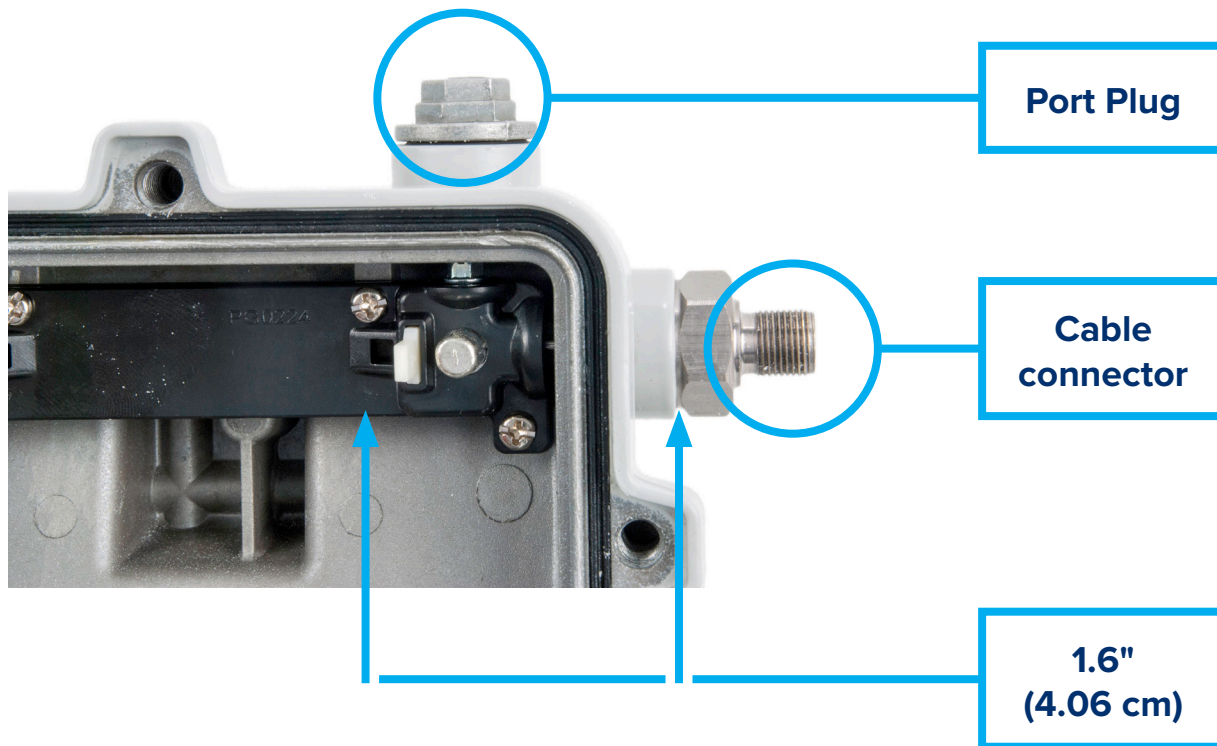


Figure 3: Cable connector

A strip gauge is embossed on the base of the OTS(W)XU, as illustrated in Figure 4.



**Figure 4: Housing base
(OTSWX-X-XX shown)**

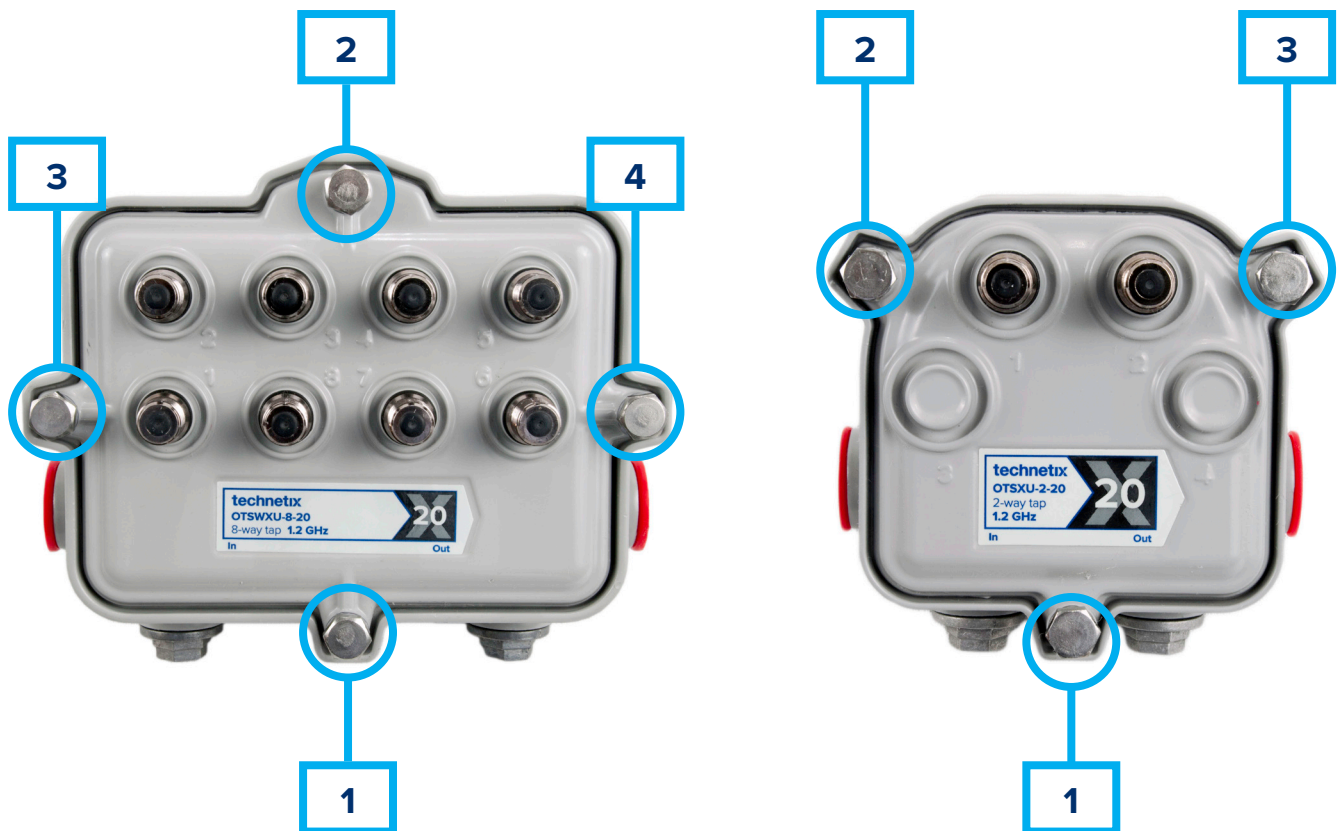
4. The nut on the installed fitting should be loose enough to allow the cable end to pass through the fitting into the housing.
5. Once the cable is positioned, tighten the nut on the fitting to 70-100 in-lbs (7.8-11.3 N•m).
6. Remove the port plug from the 5/8 x 24 port and apply the seizure screw with a Phillips or hex head nut driver to a recommended torque of 16-20 in-lbs (1.7-2.3N•m).
7. Seal the 5/8 x 24 port with the port plug and tighten to 20-40 in-lbs (2.3-4.5 N•m). Repeat this process with the other 5/8 x 24 port.
8. Position the OTS(W)XU on the strand so the feeder cable expansion loops are equal in length and shape.
9. Secure the OTS(W)XU with the strand clamp bolt (as shown in Figure 4) and torque to 26-44 in-lbs (2.95-4.9 N•m).
10. Secure loose lashing wire ends to the strand.
11. Prepare the ends of the drop cables as required for the type of fittings to be installed. The OTS(W)XU accommodates an RG-59, RG-6 and RF-7 drop cable with F-type connector and center conductor diameter of 0.022 to 0.0513 inches.
12. Slide a weather boot over each cable end and then apply the fittings.

13. Remove the rubber protective caps from the recommended tap port F-type connectors and connect the drop cables. Torque each fitting to 28–33 in-lbs (3.1-3.7 N•m).
14. Install drop cables and/or terminate ports as applicable.

Removing Faceplate from Housing Base

The OTS(W)XU receives high frequency signals, so caution is required to reduce the risk of signal anomalies to minimize the effect that removing the cover might have on transmission signals, please observe the instructions below.

1. Use a 5/16 nut driver to loosen the four bolts that attach the faceplate to the housing base. The housing bolts are shown in Figure 5.
2. Remove the faceplate parallel to the housing base with even pulling motion using bolts 1 and 2 as shown in Figure 5.



**Figure 5: Housing bolts
(OTSWX-8-20 and OTSXU-2-20 shown)**

Signals will continue to pass through the tap housing and down the feeder line when the faceplate is removed and the OTS(W)XU is functioning. Parallel switches located in each corner of the housing base enable you to remove or replace the OTS(W)XU faceplate without feeder line service interruption.

Figure 6 illustrates an open OTSWXU-8 housing base along with the location of the continuity switches and RF/AC bus strap.

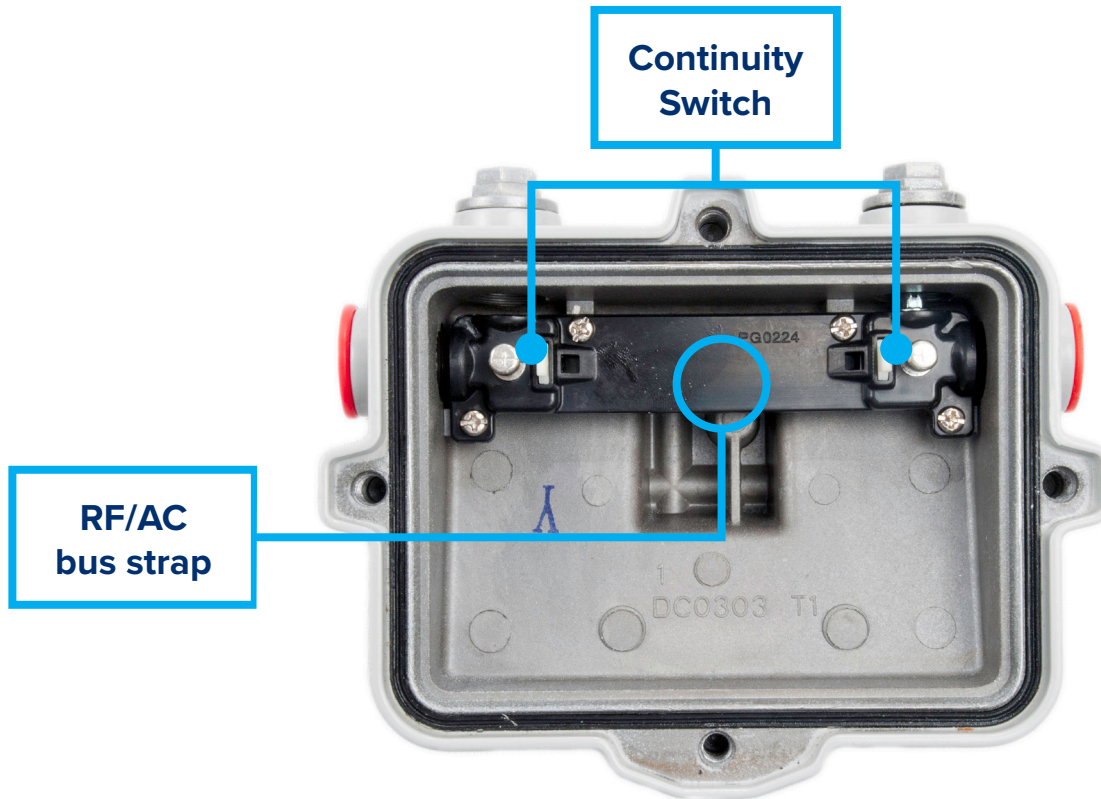


Figure 6: Internal view of OTSWXU housing base

Installing the OTS(W)XU Faceplate

1. Place the faceplate and the housing base parallel to one another as illustrated in Figure 7:
2. Align the bosses in the faceplate with the corresponding depressions in the housing.
3. Insert the faceplate in the base until firmly seated.
4. Tighten the four bolts in the faceplate, shown in Figure 5, to a minimum of 26 in-lbs. and a maximum of 44 in-lbs. in the sequential order provided.

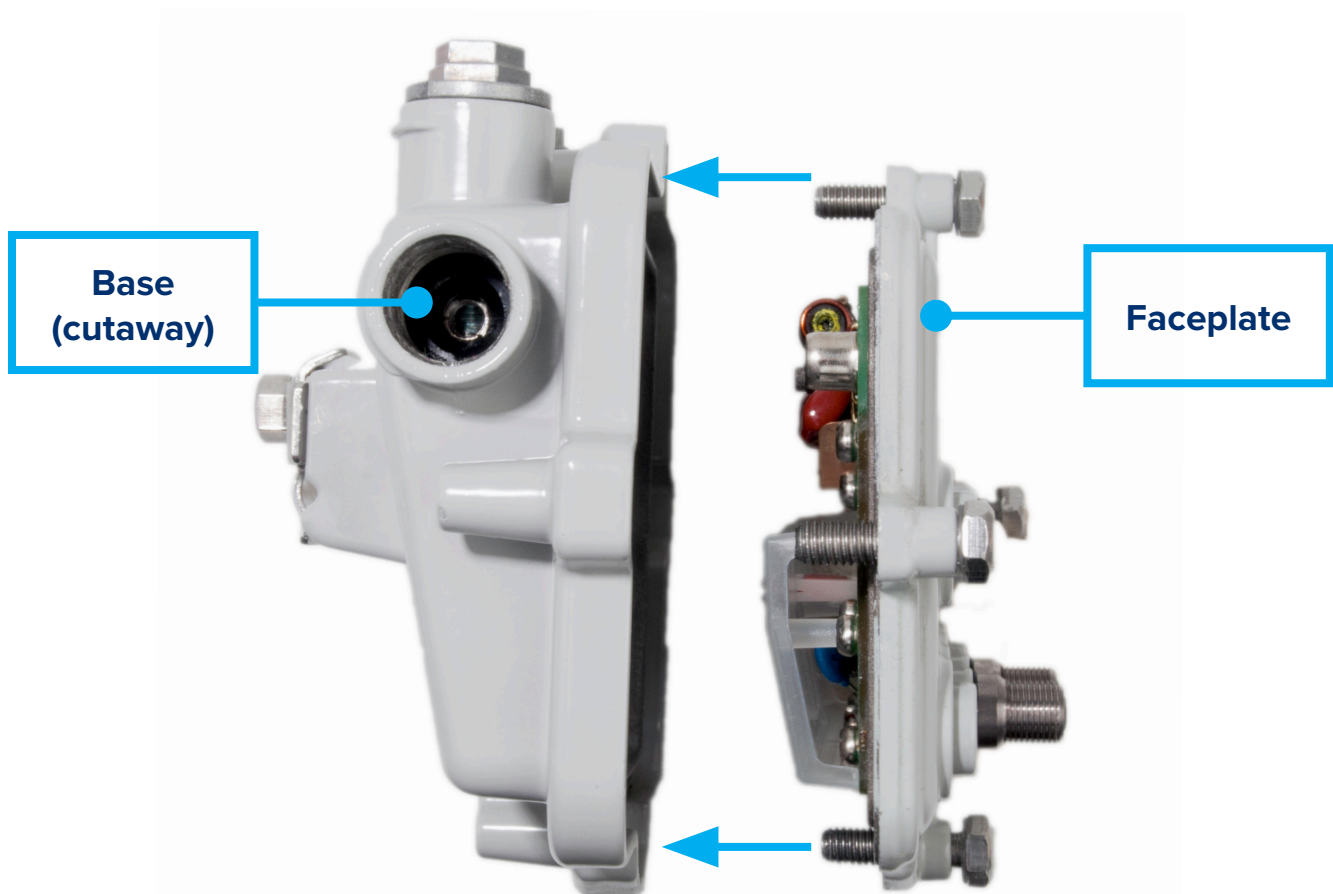


Figure 7: Positioning the faceplate

Signal Conditioning Options (sold separately)

High Tap Value (TX-HTX)

- Used for forward path attenuation
- Maintains the same upstream (Tap value)
- Conditions all tap ports
- Available in 3 dB, 6 dB, 9 dB and 12 dB values

*Additional values available upon request

Cable Equalizer (TX-CEX)

- Designed to compensate negative tilt associated with longer cable lengths
- Conditions all tap ports
- Available in 3 dB, 6 dB, 9 dB and 12 dB values

*Additional values available upon request

Cable Simulator (TX-CSX)

- Designed to compensate for positive tilt
- Provides lower return path attenuation
- Conditions all tap ports
- Available in 3 dB, 6 dB, 9 dB and 12 dB values

*Additional values available upon request

Return Path Attenuator (TX-RAX)

- Designed to attenuate upstream
- Compensates for low dB value in the return path
- Maintains the same downstream (Tap value)
- Available in 2 dB, 4 dB, 6 dB, 8 dB and 10 dB values

*Additional values available upon request

Figure 8 Functional block diagram of an OTS(W)XU-X-XX:

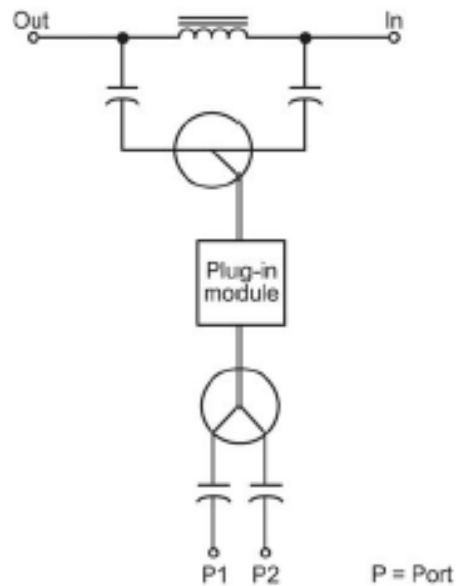


Figure 8: Block diagram

Installing the Plug-in Options

1. Determine which option best meets your system needs.
2. Plug module in the location illustrated in Figure 9, being careful not to damage the pins.

Figure 9 Location for the various plug-in modules in the OTS(W)XU faceplate.

Plug In Module
TX-CEX-*, TX-CSX-*, TX-HTX-*, or TX-RAX-*

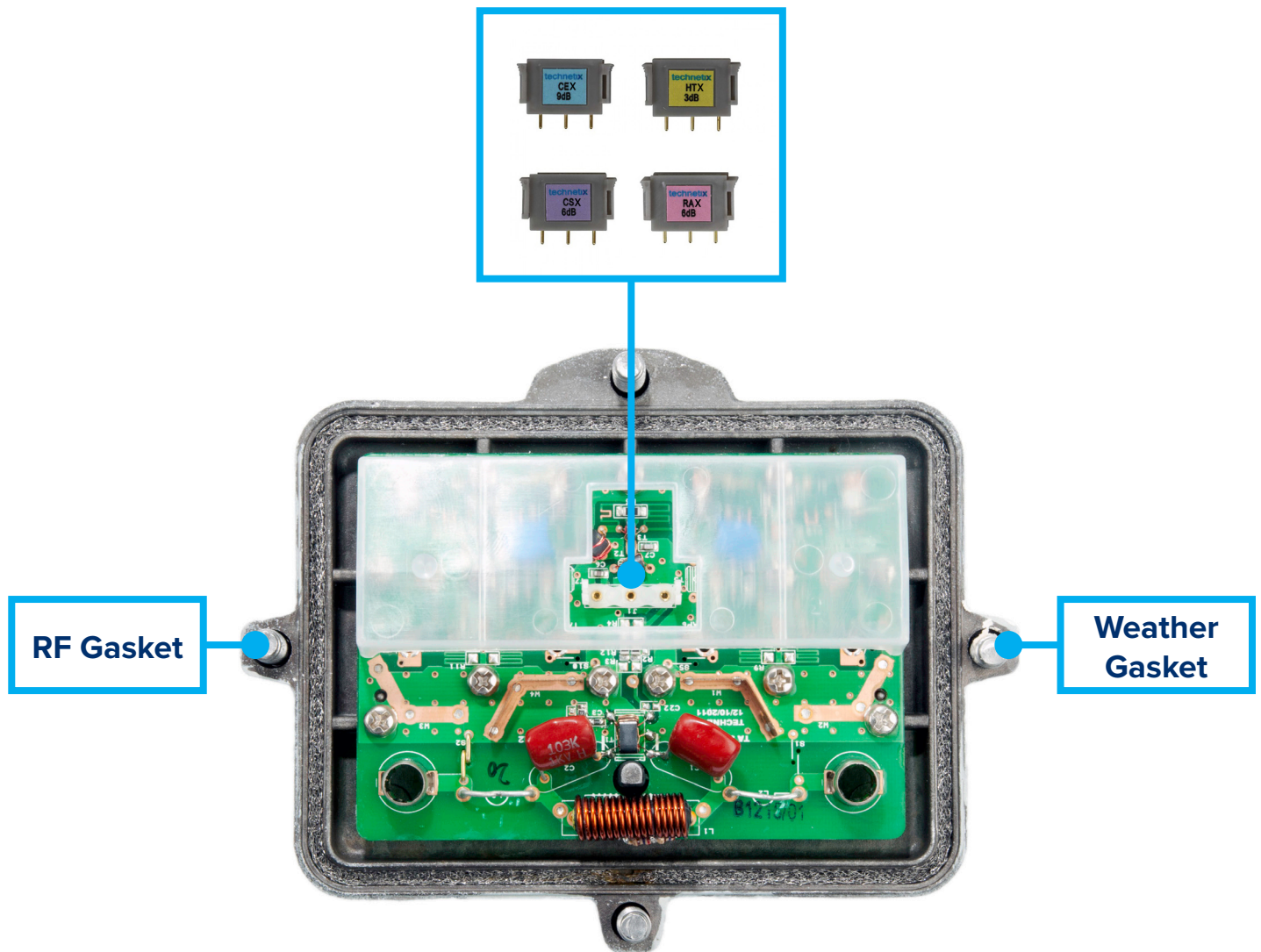


Figure 9: Plug-In modules

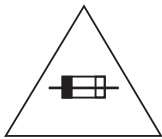
Special Symbols That Might Appear on the Equipment



This symbol indicates that dangerous voltage levels are present within the equipment. These voltages are not insulated and may be of sufficient strength to cause serious bodily injury when touched. The symbol may also appear on schematics.



The exclamation point, within an equilateral triangle, is intended to alert the user to the presence of important installation, servicing, and operating instructions in the documents accompanying the equipment.



For continued protection against fire, replace all fuses only with fuses having the same electrical ratings marked at the location of the fuse.

Note to CATV System Installer:

This reminder is provided to call CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close as possible to the point of cable entry as practical.

Statement of EEE Conformity

EEE Yönetmeliğine Uygundur.

Caring for the Environment by Recycling

When you see this symbol on an ARRIS product, do not dispose of the product with residential or commercial waste.

Recycling your Technetix Equipment



Please do not dispose of this product with your residential or commercial waste. Some countries or regions, such as the European Union, have set up systems to collect and recycle electrical and electronic waste items. Contact your local authorities for information about practices established for your region.

Statements of Compliance

FCC Compliance

This equipment has been tested and found to comply within the limits of FCC Part 76, Subpart K. These limits are designed to provide reasonable protection against harmful radio communication interference when the equipment is operated in a commercial environment. This equipment can radiate radio frequency energy, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Changes or modifications to this device not expressly approved by ARRIS may cause the operation of this device to violate Part 76 of CFR 47, voiding the user's authority to operate the equipment in the domestic US.

CE Compliance

This device conforms to the requirements specified in Table 1.1 on page 1-5 of Council directives 2004/108/EC (EMC), 2006/95/EC (LVD), and 2011/65/EU (RoHS).

Table 2 CE Compliance Requirements

Requirement	Description
EN50083-2	Cable networks for television signals, sound signals and interactive services — electromagnetic compatibility for equipment
EN55022	Information technology equipment — radio disturbance characteristics — limits and methods of measurement
EN61000-3-2	Electromagnetic compatibility (EMC) — limits — limitation for harmonic current emissions (equipment input current up to and including 16A per phase)
EN61000-3-3	Electromagnetic compatibility (EMC) — limits — limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection
EN55024	Information technology equipment — Immunity characteristics — Limits and methods of measurement
EN60950-1	Information technology equipment — Safety — Part 1: General requirements

Product Safety

This product conforms to the design safety criteria as detailed in IEC 60950-1. This criteria eliminates, or reduces hazards; appropriate labels or markings warn the user of hazards.

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