



QUICK START GUIDE



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Cabling the Cisco uBR10-MC5X20S/U/H Cable Interface Line Card with Universal Cable Holder—UCH1

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Warning

Only trained and qualified personnel should be allowed to install, replace, or service this equipment.



Caution

Use an ESD-preventive wrist or ankle strap during the line card installation.

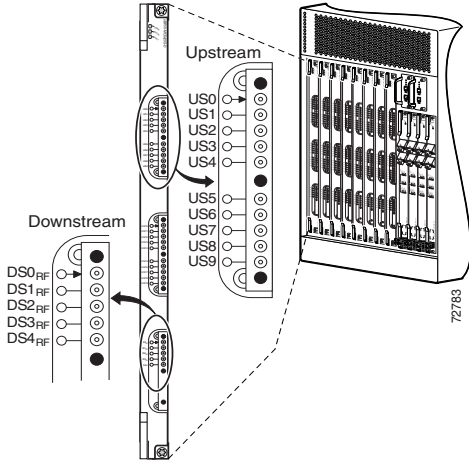
1 Feature Description

The Cisco uBR10-MC5X20S, U and H cable interface line cards use 75-ohm precision video coax cables and 75-ohm MCX connectors to connect to the CMTS.

This document describes how to install and remove cables and the first generation universal cable holder (UCH1).

Figure 1 shows the cards in a Cisco uBR10012 router.

Figure 1 Cisco uBR10-MC5X20S/U/H Cards



The cables come in kits that consist of cable sets and spare F connectors.

The MC5X20 dual-shielded cable kit includes:

- Two 10-bundle MCX to “F” conn., 3-m cables
- One 5-bundle MCX to “F” conn., 3-m cables
- 5 spare F connectors

The MC5X20 quad-shielded cable kit includes:

- Five 5-bundle MCX to “F” conn., 3-m cables
- Five spare F connectors

The cable kits do not contain the universal cable holders; however, the UCH is available with line card accessory kits and spare cards. Or, the UCH2 is available as a spare.



Note In European markets only, you must use the quad-shielded cable kit with the Cisco uBR10-MC5X20H.

Tools required for cable installation include:

- 1/4-in. slotted screwdriver and T-10 TORX driver
- Cable extractor tool

Also see “Tool Manufacturers and Part Numbers.”

2 Installing the Cables

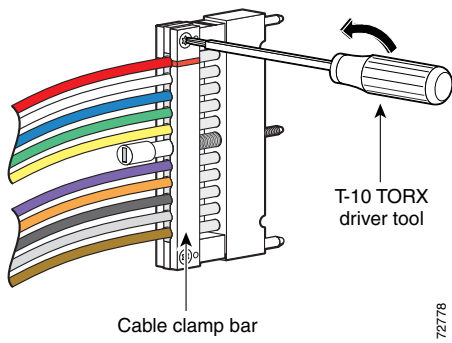
The UCH must be used for all Cisco uBR10-MC5X20S/U/H line card cable connections. Failure to use the UCH may cause permanent damage to the line card connectors and result in low or no RF output.



Caution Do not attempt to remove or install cables in the UCH1 if the UCH1 is attached to the faceplate.

Step 1 Remove the cable clamp bar from the UCH1. See Figure 2.

Figure 2 *Removing the Cable Clamp Bar*



Step 2 Remove the ESD cap from a cable, and insert it into the UCH. See Figure 3. We recommend that the cables be installed in the UCH as shown in Table 1.



Caution

If using quad-shielded cables, make sure there is no heat-shrink wrap on the ends by the MCX connectors.

Table 1 *Port—Dual/Quad-Shielded Cable Colors*

US0–US9	US0 to US9—red, white, blue, green, yellow, violet, orange, black, gray, brown, respectively.
US10–US19	US10—grey; US11—brown; US12 to US19—red, white, blue, green, yellow, violet, orange, black, respectively.
DS0–DS4	DS0 to DS4—red, white, blue, green, yellow, respectively.

Table 2 *Port—Legacy 5-Color Quad-Shielded Cable Colors*

US0–US9	US0 to US9—red, white, blue, green, yellow, red, white, blue, green, yellow, respectively.
US10–US19	US10 to US19—red, white, blue, green, yellow, red, white, blue, green, yellow, respectively.
DS0–DS4	DS0 to DS4—red, white, blue, green, yellow, respectively.

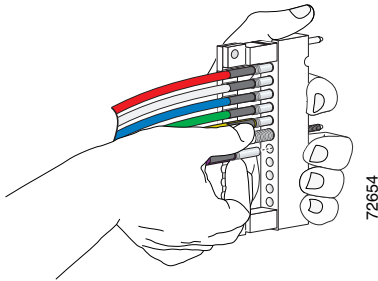
Step 3 Wiggle the cable until you feel the connector click into place in the UCH.



Caution

Be sure to not kink the cables.

Figure 3 *Inserting a Cable in the UCH1*



- Step 4** Repeat this procedure for all of the cables.
- Step 5** Align the cables with the slots in the UCH1 and clamp bar, and then replace the clamp bar.
- Step 6** Using the T-10 TORX driver tool, tighten the screws on the clamp bar (maximum torque—10 in-lbs). See Figure 2.

3 Installing the UCH

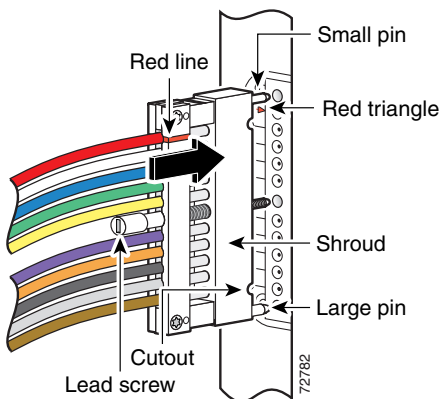
After the cables are installed in the UCH, follow these steps to prevent ESD damage to the line card.



Note Before proceeding, remove the protective sticker covering the line card DS ports.

- Step 1** Make sure that you are grounded using an ESD-preventive wrist or ankle strap.
- Step 2** Attach a jumper cable to the ground point on the chassis.
- Step 3** Briefly touch each cable's center connector with the jumper cable to remove any built-up ESD potential.
- Step 4** Align the red line on the UCH with the red triangle on the faceplate.

Figure 4 *Installing the UCH*



- Step 5** Align the end pins with the pin holes in the faceplate, and guide the UCH onto the faceplate.
- Step 6** Hold the cables and UCH in place while finger tightening the leadscrew. Do not bend the cables at right angles.
- Step 7** Use the flathead screwdriver to tighten the leadscrew 10 in-lbs, (maximum torque 15 in-lbs).



Caution Torquing the leadscrew to more than 20 in.-lbs can cause the leadscrew to fail.

The UCH1 is fully engaged when the retractable shroud is aligned with the black lines. See Figure 5.

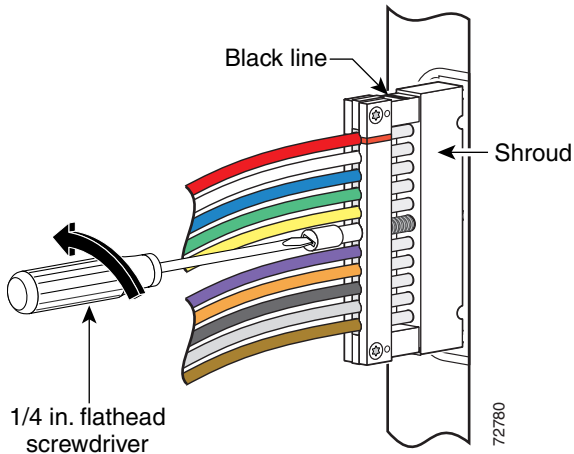
4 Removing the UCH

- Step 1** Make sure that you are grounded using an ESD-preventive wrist or ankle strap.
- Step 2** Loosen the lead screw (counterclockwise) until it disengages from the faceplate.
- Step 3** Gently pull the UCH straight away from the faceplate.



Note If the UCH does not easily pull away from the card, loosen the lead screw until it completely disengages from the faceplate.

Figure 5 Removing the UCH



5 Removing the Cables

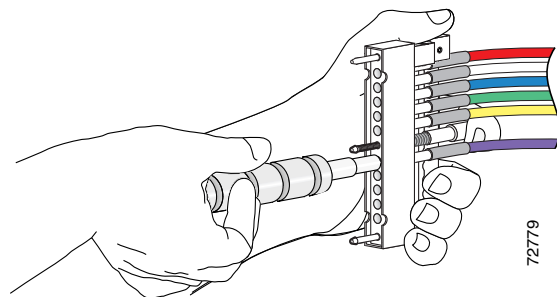
- Step 1** Use the T-10 TORX driver tool to remove the cable clamp bar.



Caution Be careful not to bend the cables.

- Step 2** Hold the UCH1 in your hand and place the extraction tool over the connector that you are removing. See Figure 6.
- Step 3** Carefully push down on the extraction tool, turning slightly to disengage the spring.
- Step 4** Push the cable out of the hole. There is a click when it disengages from the UCH1.

Figure 6 Using the Cable Extraction Tool



6 Troubleshooting

Check the following:

1. Verify that the lead screw is tight.
2. Verify that the shroud fits snugly against the faceplate (the cutouts are closed).
3. Verify that the cables are properly seated and secure in the UCH.

If downstream RF power measurements are made, use these ESD precautions to prevent damage to the product:

1. Check for a proper ground on the equipment and chassis before connecting any cables.
2. Ensure that there is a common ground between all the test equipment that you are using and the unit under test.
3. Keep test cables as short as possible to limit static buildup.
4. Before attaching any test cables to the unit under test, momentarily ground the center pin of the test cable to remove any ESD potential that may be present.

Contact Cisco TAC for further information:

<http://www.cisco.com/tac>

Tool Manufacturers and Part Numbers

Table 3 Tool Part Numbers

Cisco Systems	
MC5X20 dual-shielded MC5X20 quad-shielded UCH2	CAB-RFSW520TPMF= CAB-RFSW520QTPMF= CAB-520-UCH2
White Sands Engineering, Inc.	
Cable extraction tool	PN-REMTTOOL
F and MCX crimper tool	PN-ACT-483
MCX connector strip tool: Dual-shielded cables Quad-shielded cables	PN-CPT-7538-125 PN-CPT-7538-200Q
75-ohm precision miniature video cable: Dual-shielded single cable Quad-shielded five pk	YR-46940 YR-50386 (red, white, blue, green, yellow) YR-52310 (violet, orange, brown, black, gray)
MCX fixed pin conn: Dual-shielded cable Quad-shielded cable	PN-MCXFP PN-MCXFPQ
F connector: Dual-shielded cable Quad-shielded cable	PN-ASFP PN-ASFPQ
Dual-shielded F connector strip tool	CPT-7538
Quad-shielded F connector strip tool	CPT-7538Q
Johnson Components	
Univ. cable holder (UCH1)	PN-133-8447-026

7 Related Documentation

- *Cisco uBR10-MC5X20S/U/H Cable Interface Line Card for the Cisco uBR10012 Router:*
<http://www.cisco.com/univercd/cc/td/doc/product/cable/ubr10k/ubr10012/frus/index.htm>
- More Cisco cable products information:
<http://www.cisco.com/warp/public/44/jump/cable.shtml>



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