

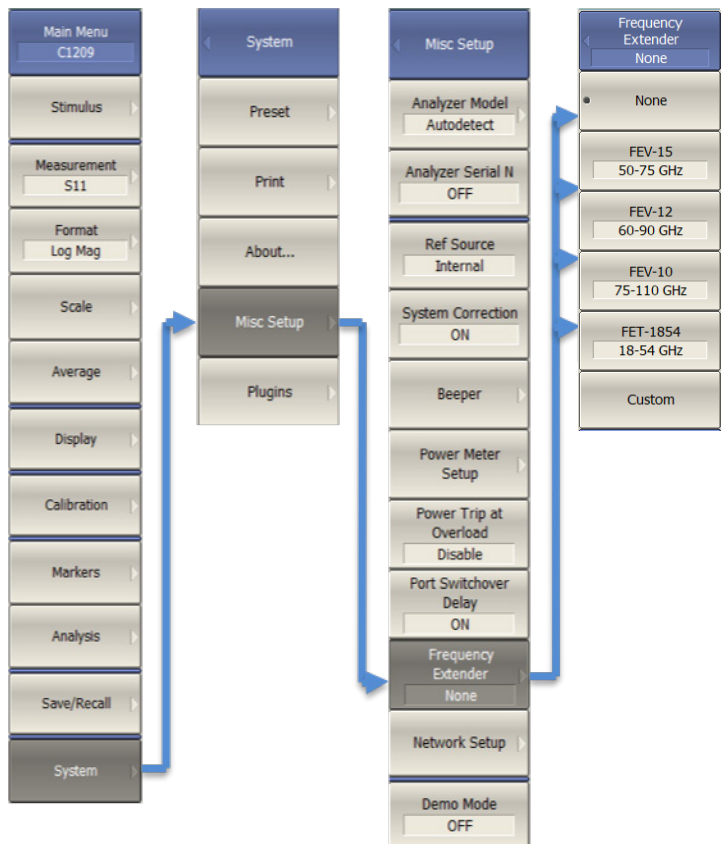
Launching and Operating CobaltFx



COPPER MOUNTAIN®
TECHNOLOGIES

Launching Software

1. Turn on computer and launch the S2VNA software application.
2. Turn on the Cobalt VNA.
3. Select System/Misc Setup/Frequency Extender and select the required system.
4. The system will re-launch and operate in the chosen band.
5. To shut down the system, turn off the VNA and shut down the S2VNA application.



Operating the Software

- All settings are available to the user from the top menu bar.

Trace/Channel Stimulus Response Display Calibration Markers Analysis Save/Recall System

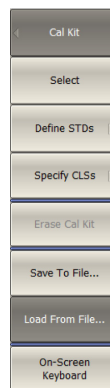
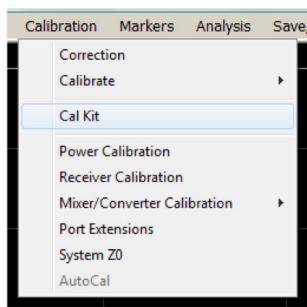
- Use low IF Bandwidths (<300 Hz) for when high dynamic range is required (high free space loss, high rejection filters, etc.).
- Use high IF bandwidths (> 100 Hz) for when speed of the measurement is priority (real time filter tuning, some antenna near, and far field measurements – 1 kHz typically).
- Set the stimulus power frequency range, IF bandwidth, and number of points before the calibration.
- Allow the system to warm up for at least 1h prior to calibration.

Calibrating CobaltFx



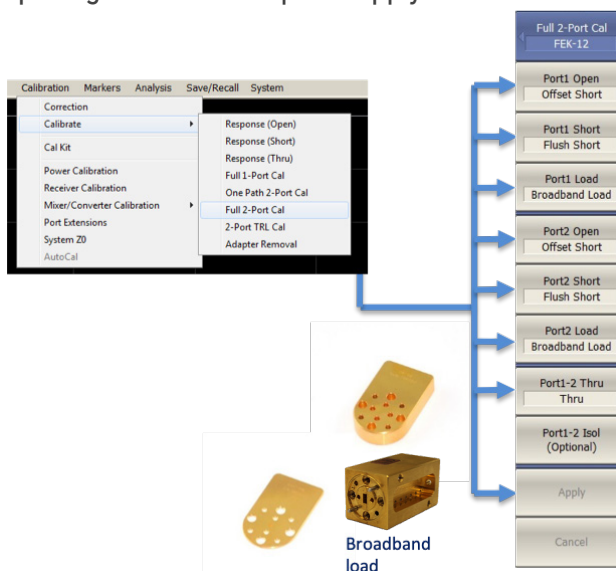
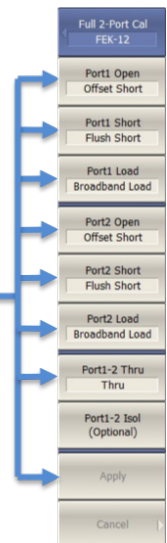
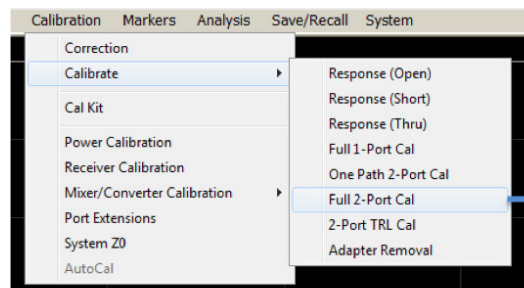
Calibrating the CobaltFx Frequency Extension System

- Select a blank position at the bottom of the calibration kit table.
- Load calibration kit definition file supplied on memory stick with calibration kit (Calibration/Cal Kit/Load From File...).
- The file will appear on the calibration kit file list at the bottom of the screen where you have selected.
- Check the box to select the required calibration kit.



33	T4311	RPC-2.92 40 GHz SOLT Cal Kit [Jack] (CMT)	<input type="checkbox"/>
34	Z5411	RPC-2.40 50 GHz SOLT Cal Kit [Jack] (CMT)	<input checked="" type="checkbox"/>
35	FEK-10	Farran Technology WR-10 Calibration Kit	<input type="checkbox"/>
36	FEK-12	Farran Technology WR-12 Calibration Kit	<input type="checkbox"/>
37	FEK-15	Farran Technology WR-15 Calibration Kit	<input type="checkbox"/>

- Select Calibration/Calibrate to start calibration.
- Connect one calibration kit standard at a time to the chosen waveguide port and click on associated softkey.
- Offset short is made up of flush short + offset piece.
- Each measurement will be confirmed with a tick mark.
- After completing full calibration press "Apply".

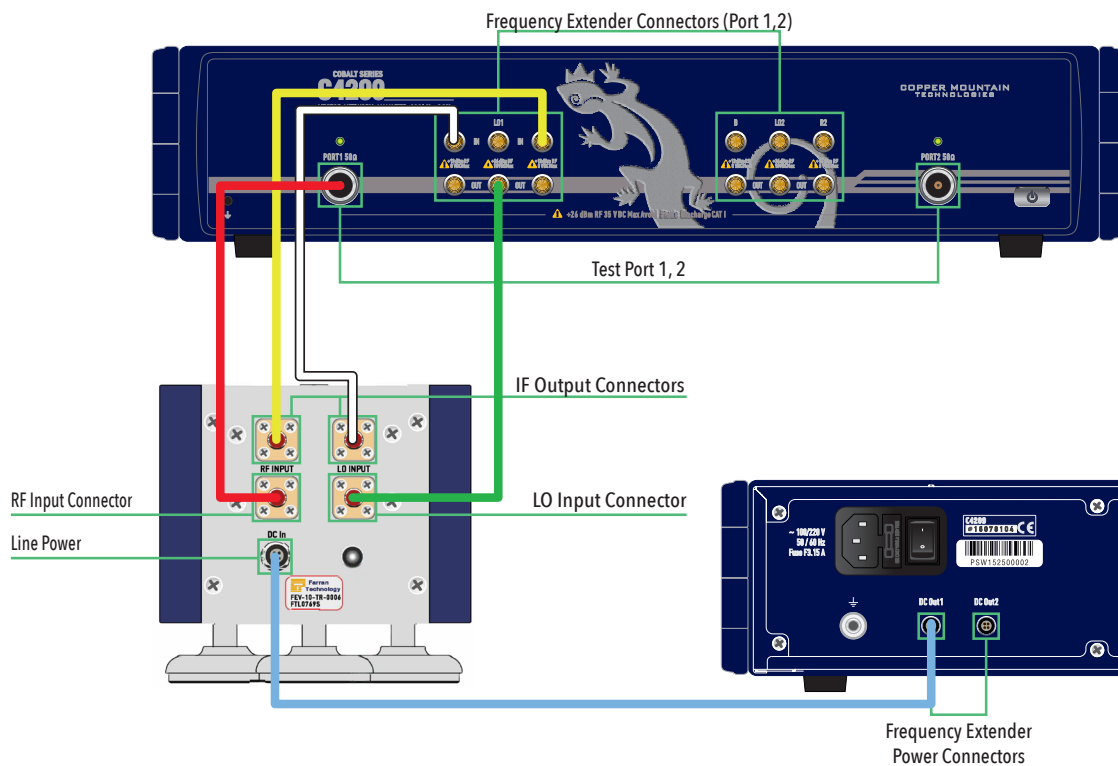


C4209 FEV Connection Guide



What's Required:

- C4209 with S2VNA_v16.1.3 or newer software
- (2) FEV-15, FEV-12, or FEV-10
- Set of RF cables (4 IF cables, 4 RF-LO cables)
- (2) DC cables
- WR-15, WR-12, or WR-10 cal kit
- Windows PC/Laptop



IF TEST **CobaltFx** - A IN C4209, IF REF **CobaltFx** - R1 IN C4209 (blue SMA cables)
RF INPUT **CobaltFx**- PORT 1 C4209, LO INPUT **CobaltFx**- LO 1 OUT C4209 (blue 3.5 mm cables)
USB cable for C4209 - laptop (omitted here)

Connect 2" ruggedized waveguide sections to waveguide port of each frequency extender

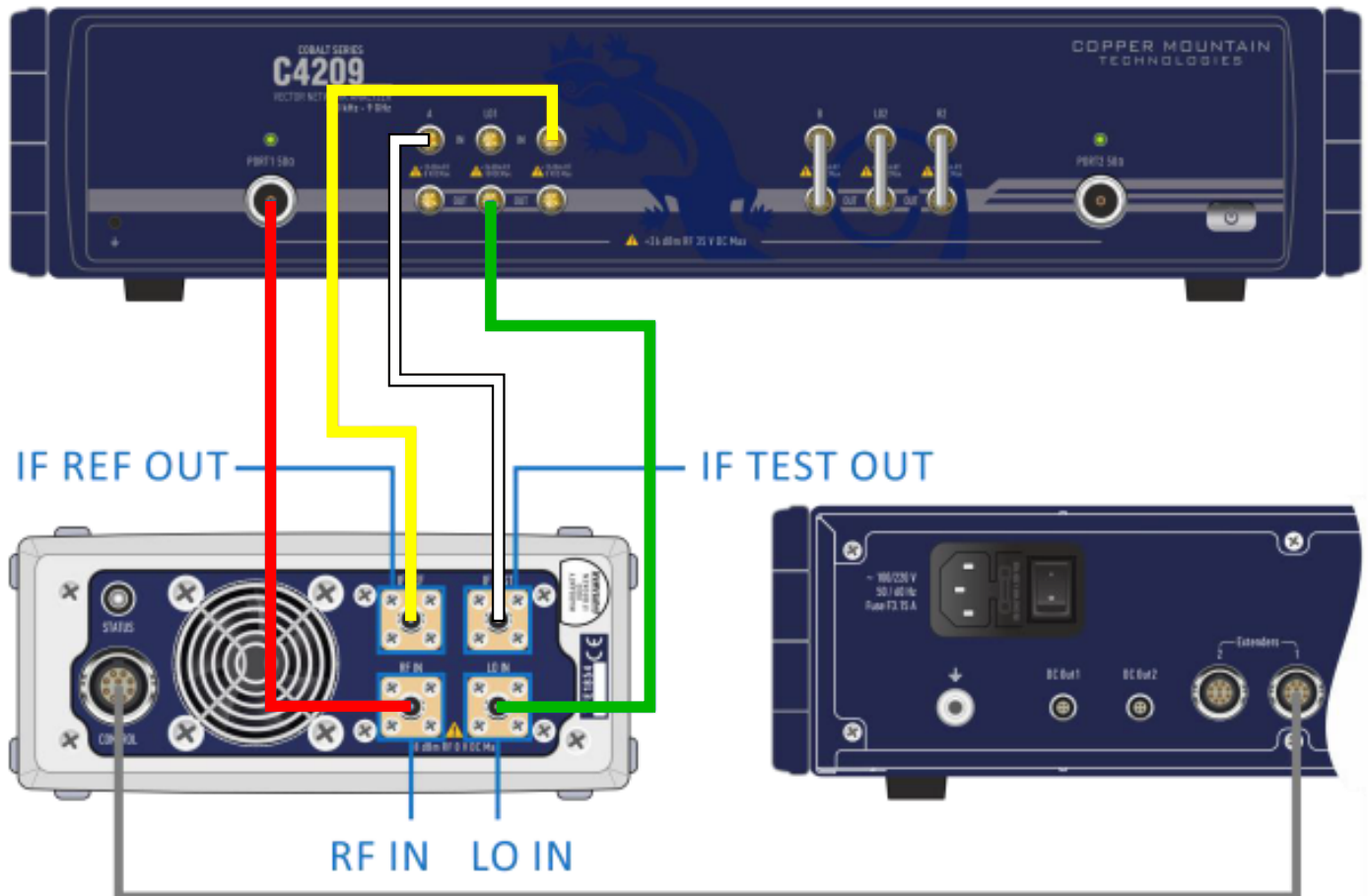
C4209 FET Connection Guide



COPPER MOUNTAIN
TECHNOLOGIES

What's Required:

- C4209 with S2VNA_v18.2.0 or newer software
- (2) FET1854 Modules
- Set of RF cables (4 IF cables, 2 RF cables, 2 LO cables)
- (2) DC cables
- T4311 or Z5411 calibration kit
- Windows PC/Laptop



IF TEST **CobaltFx** - A IN C4209, IF REF **CobaltFx** - R1 IN C4209 (blue N to SMA cables)

RF IN **CobaltFx** - PORT 1 C4209, LO IN **CobaltFx** - LO 1 OUT C4209 (blue SMA cables)

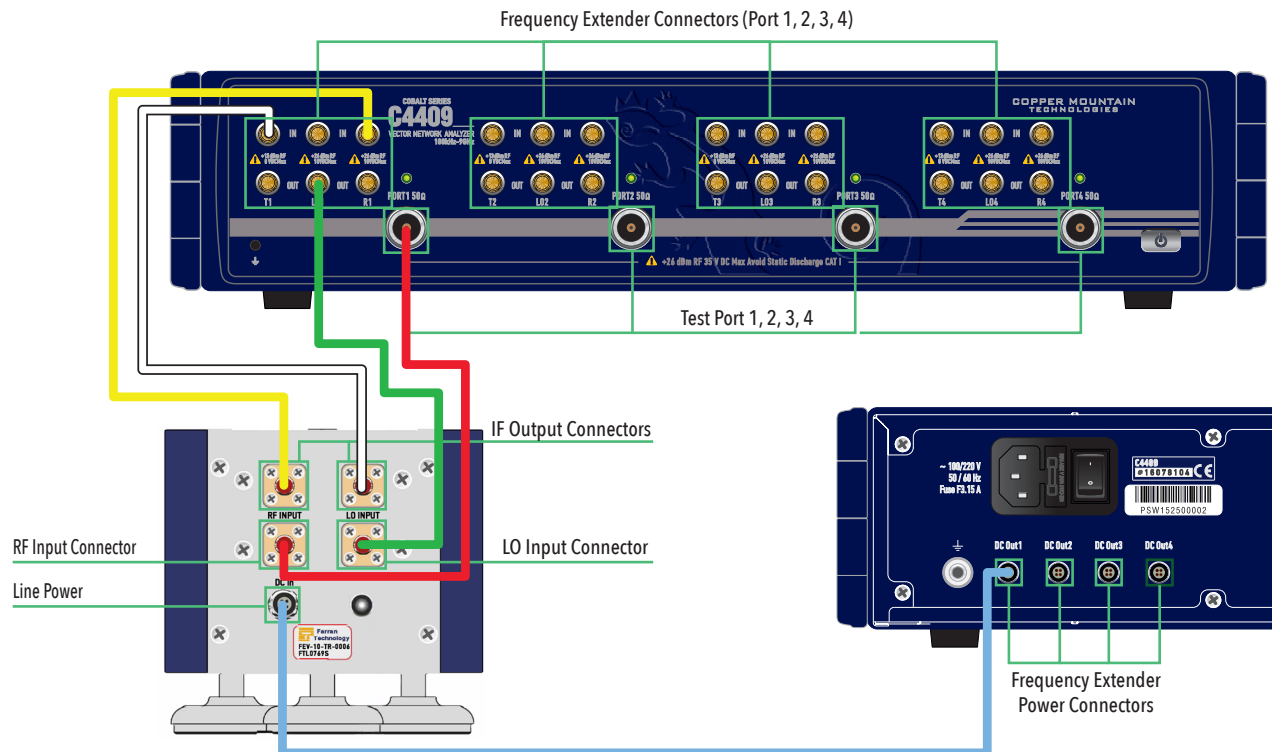
USB cable for C4209 - laptop (omitted here)

C4409 FEV Connection Guide



What's Required:

- C4409 with S4VNA_v16.1.3 or newer software
- (2) FEV-15, FEV-12, or FEV-10
- Set of RF cables (4 IF cables, 4 RF-LO cables)
- (2) DC cables
- WR-15, WR-12, or WR-10 cal kit
- Windows PC/Laptop



IF TEST CobaltFx - A IN C4409, IF REF CobaltFx - R1 IN C4409 (blue SMA cables)
RF INPUT CobaltFx- PORT 1 C4409, LO INPUT CobaltFx- LO 1 OUT C4409 (blue 3.5 mm cables)
USB cable for C4409 - laptop (omitted here)

Connect 2" ruggedized waveguide sections to waveguide port of each frequency extender

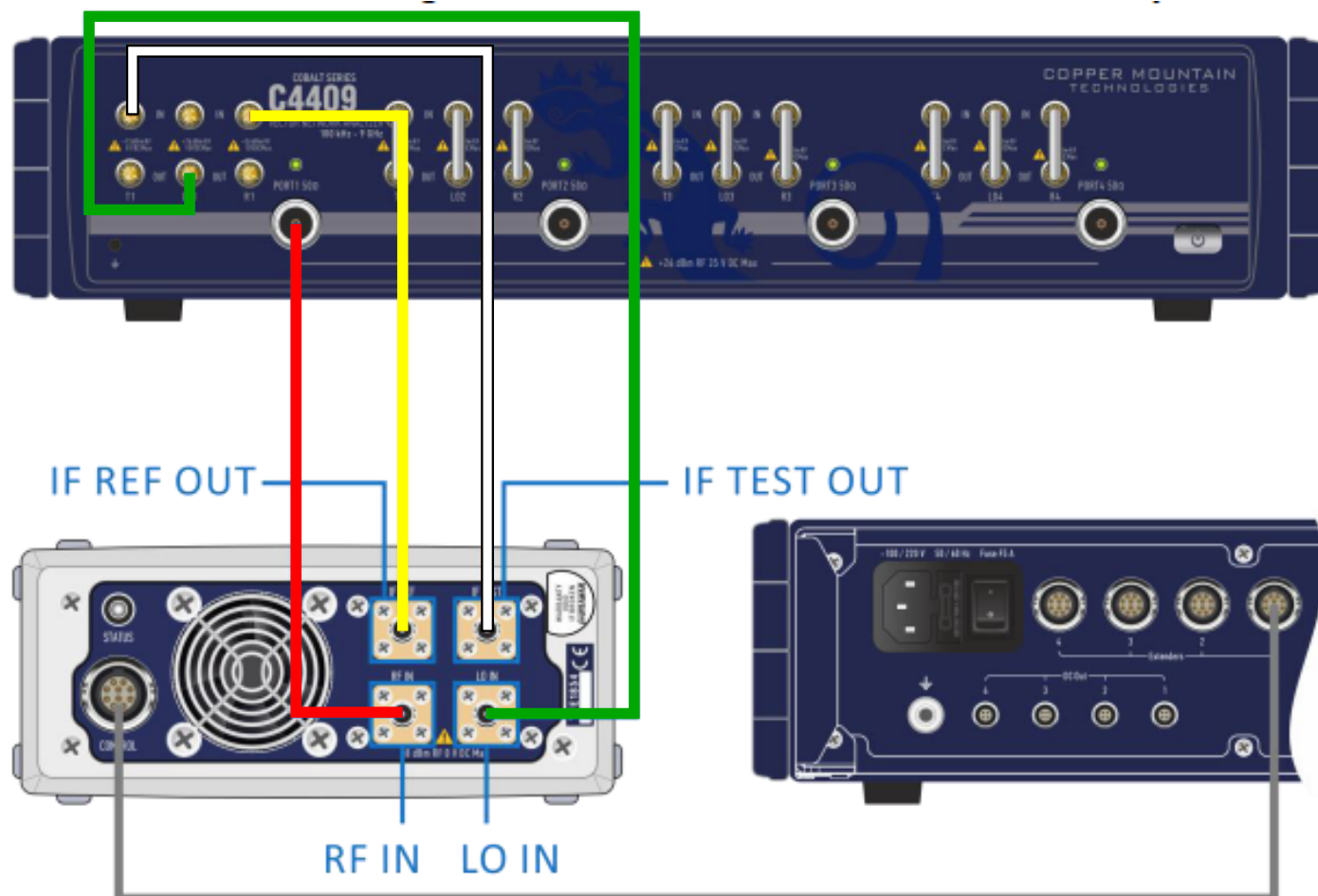
C4409 FET Connection Guide



COPPER MOUNTAIN®
TECHNOLOGIES

What's Required:

- C4409 with S4VNA_v18.2.0 or newer software
- (4) FET1854 Modules
- Set of RF cables (8 IF cables, 4 RF cables, 4 LO cables)
- (4) DC cables
- T4311 or Z5411 calibration kit
- Windows PC/Laptop



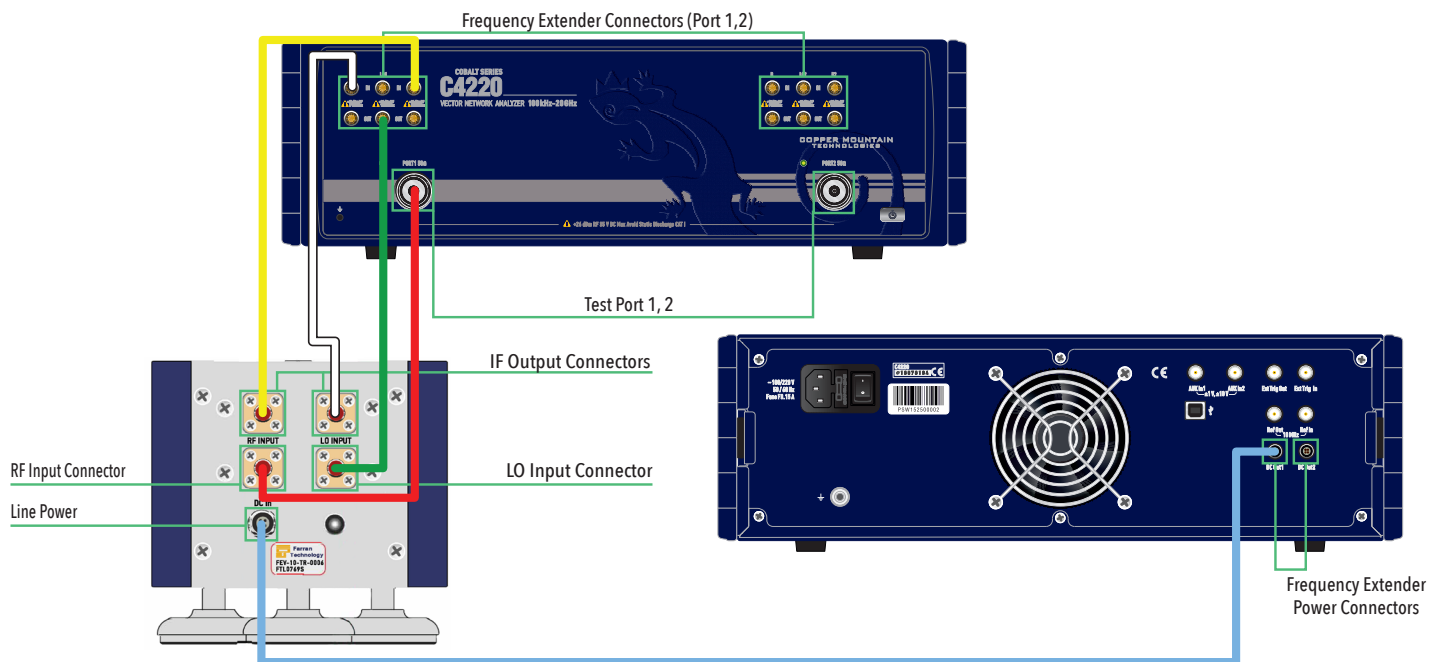
IF TEST CobaltFx - A IN C4409, IF REF CobaltFx - R1 IN C4409 (blue N to SMA cables)
RF IN CobaltFx - PORT 1 C4409, LO IN CobaltFx - LO 1 OUT C4409 (blue SMA cables)
USB cable for C4409 - laptop (omitted here)

C4220 FEV Connection Guide



What's Required:

- C4220 with S2VNA_v16.1.3 or newer software
- (2) FEV-15, FEV-12, or FEV-10
- Set of RF cables (4 IF cables, 4 RF-LO cables)
- (2) DC cables
- (2) PNMD3.5F Adapters
- WR-15, WR-12, or WR-10 cal kit
- Windows PC/Laptop



IF TEST **CobaltFx** - A IN C4220, IF REF **CobaltFx** - R1 IN C4220 (blue SMA cables)
RF INPUT **CobaltFx**- PORT 1 C4220, LO INPUT **CobaltFx**- LO 1 OUT C4220 (blue 3.5 mm cables)
USB cable for C4220 - laptop (omitted here)

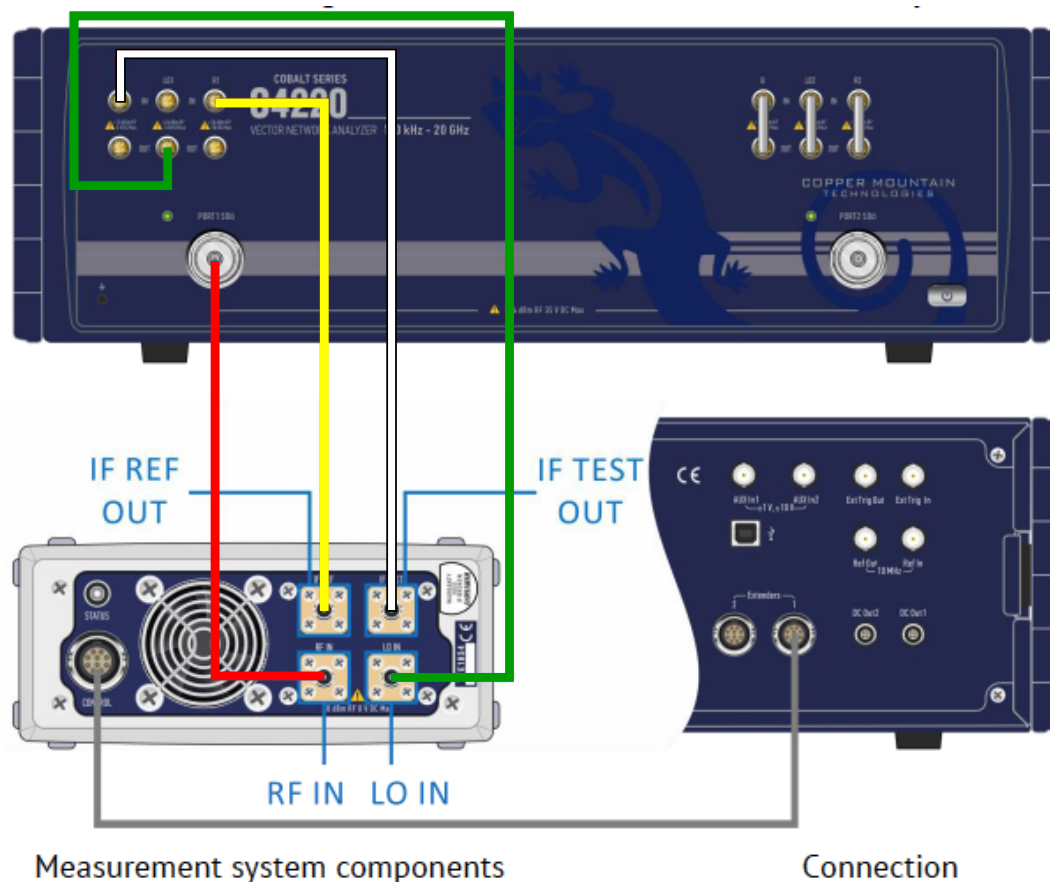
Connect 2" ruggedized waveguide sections to waveguide port of each frequency extender

C4220 FET Connection Guide



What's Required:

- C4220 with S2VNA_v18.2.0 or newer software
- (2) FET1854 Modules
- Set of RF cables (4 IF cables, 2 RF cables, 2 LO cables)
- (2) DC cables
- (2) PNMD3.5F Adapters
- T4311 or Z5411 calibration kit
- Windows PC/Laptop



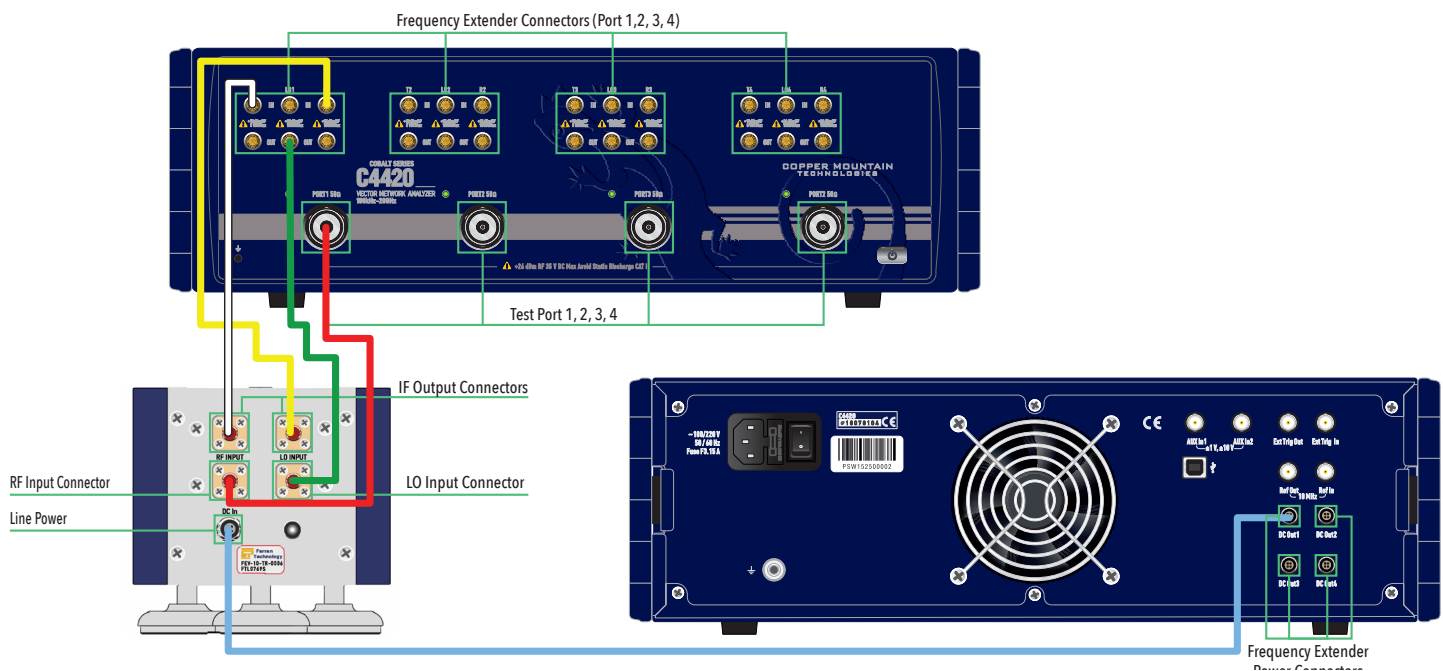
IF TEST **CobaltFx** - A IN C4220, IF REF **CobaltFx** - R1 IN C4220 (blue N to SMA cables)
RF IN **CobaltFx**- PORT 1 C4220, LO IN **CobaltFx**- LO 1 OUT C4220 (blue SMA cables)
USB cable for C4220 - laptop (omitted here)

C4420 FEV Connection Guide



What's Required:

- C4420 with S4VNA_v16.1.3 or newer software
- (4) FEV-15, FEV-12, or FEV-10
- Set of RF cables (8 IF cables, 8 RF-LO cables)
- (4) DC cables
- (4) PNMD3.5F Adapters
- WR-15, WR-12, or WR-10 cal kit
- Windows PC/Laptop



IF TEST CobaltFx - A IN C4420, IF REF CobaltFx - R1 IN C4420 (blue SMA cables)
RF INPUT CobaltFx- PORT 1 C4420, LO INPUT CobaltFx- LO 1 OUT C4420 (blue 3.5 mm cables)
USB cable for C4420 - laptop (omitted here)

Connect 2" ruggedized waveguide sections to waveguide port of each frequency extender

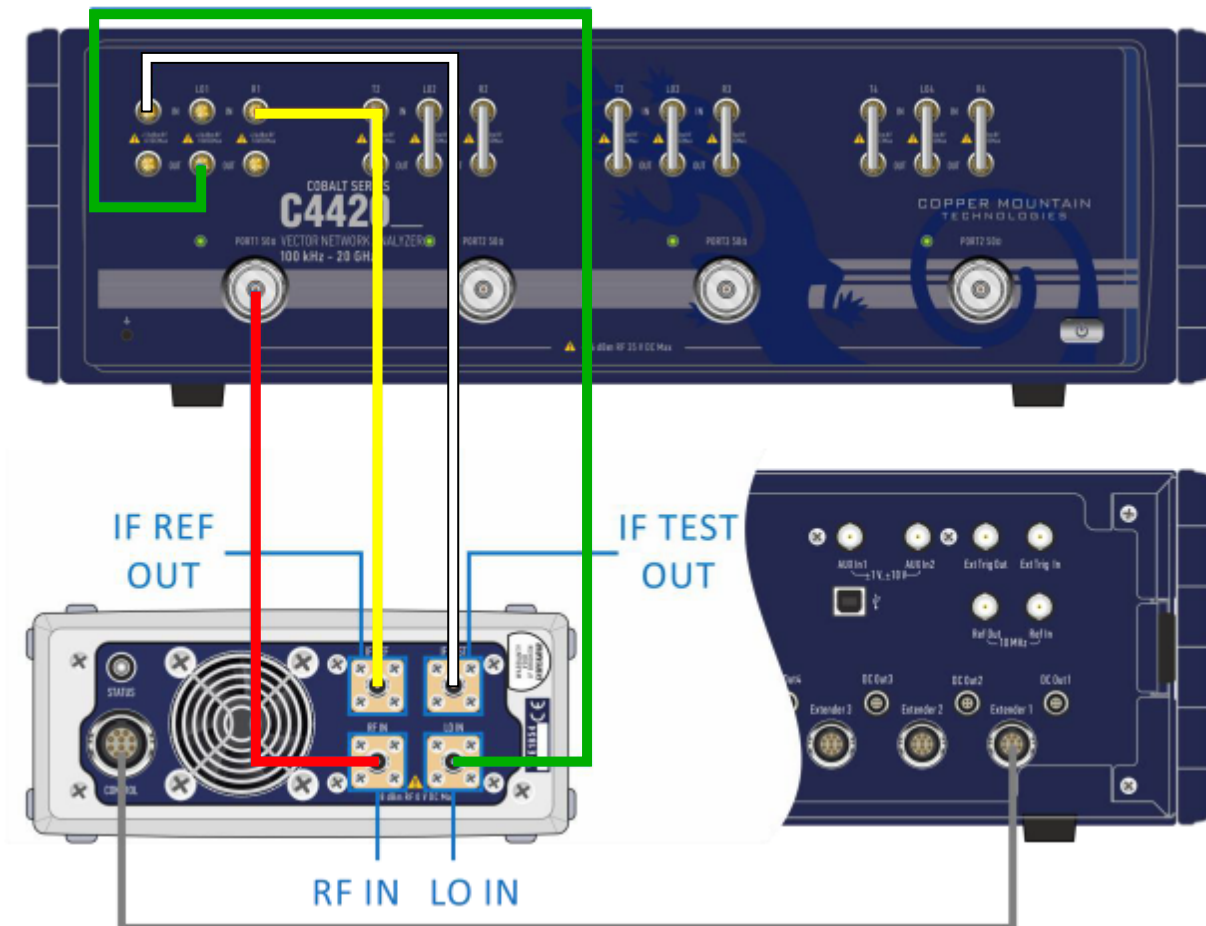
C4420 FET Connection Guide



COPPER MOUNTAIN®
TECHNOLOGIES

What's Required:

- C4420 with S4VNA_v18.2.0 or newer software
- (4) FET1854 Modules
- Set of RF cables (8 IF cables, 4 RF cables, 4 LO cables)
- (4) DC cables
- (4) PNMD3.5F Adapters
- T4311 or Z5411 calibration kit
- Windows PC/Laptop



IF TEST CobaltFx - A IN C4420, IF REF CobaltFx - R1 IN C4420 (blue N to SMA cables)

RF IN CobaltFx- PORT 1 C4420, LO IN CobaltFx- LO 1 OUT C4420 (blue SMA cables)

USB cable for C4420 - laptop (omitted here)