ViaSat-2/Viasat WiFi Gateway Point and Peak Job Aid

Go to: Viasat-2 Pointing and Peaking videos

Summary

This Job Aid covers:

Enter Installation Mode

Coarse Point Azimuth with Wait Sequence Peak Elevation with Wait Sequence

Peak Azimuth Push/Pull Test Finishing Installation

This Job Aid supports all technician audiences. This process supports the VS1300 antenna and mounts. If using the SB2 or SB2+ modem, see *ViaSat-1/SurfBeam 2 Point and Peak Job Aid*.

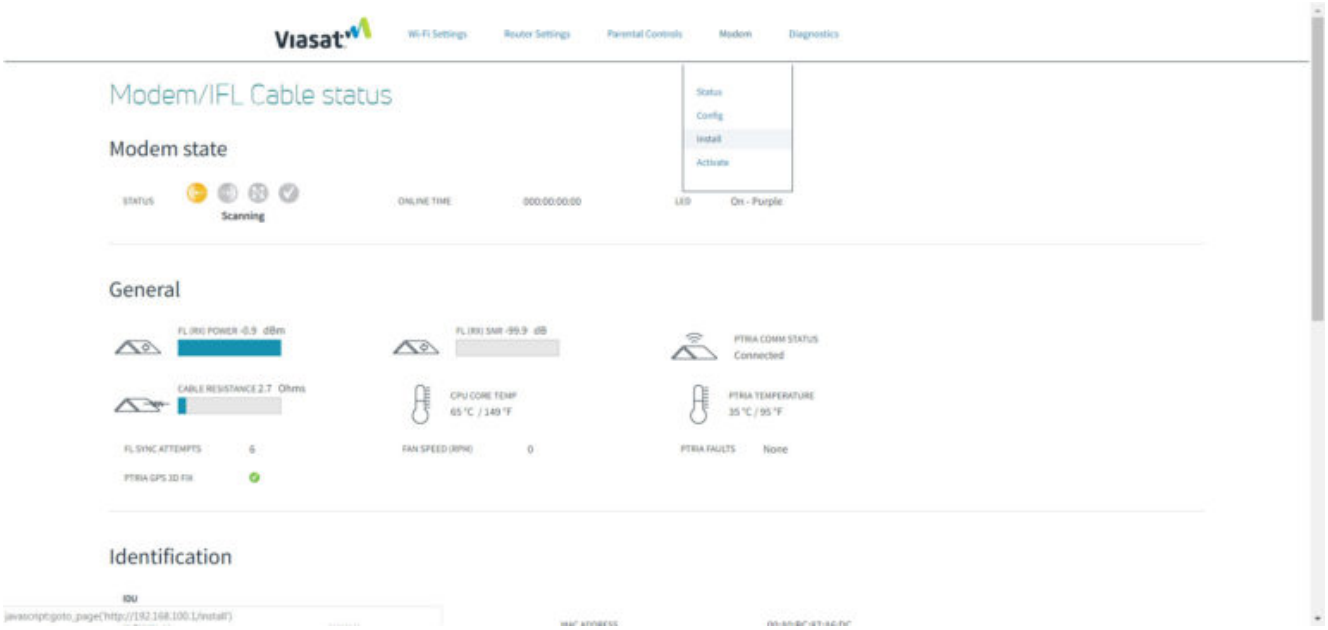
Enter Installation Mode

Open the computer’s web browser and type this URL into the address bar:

http://192.168.100.1

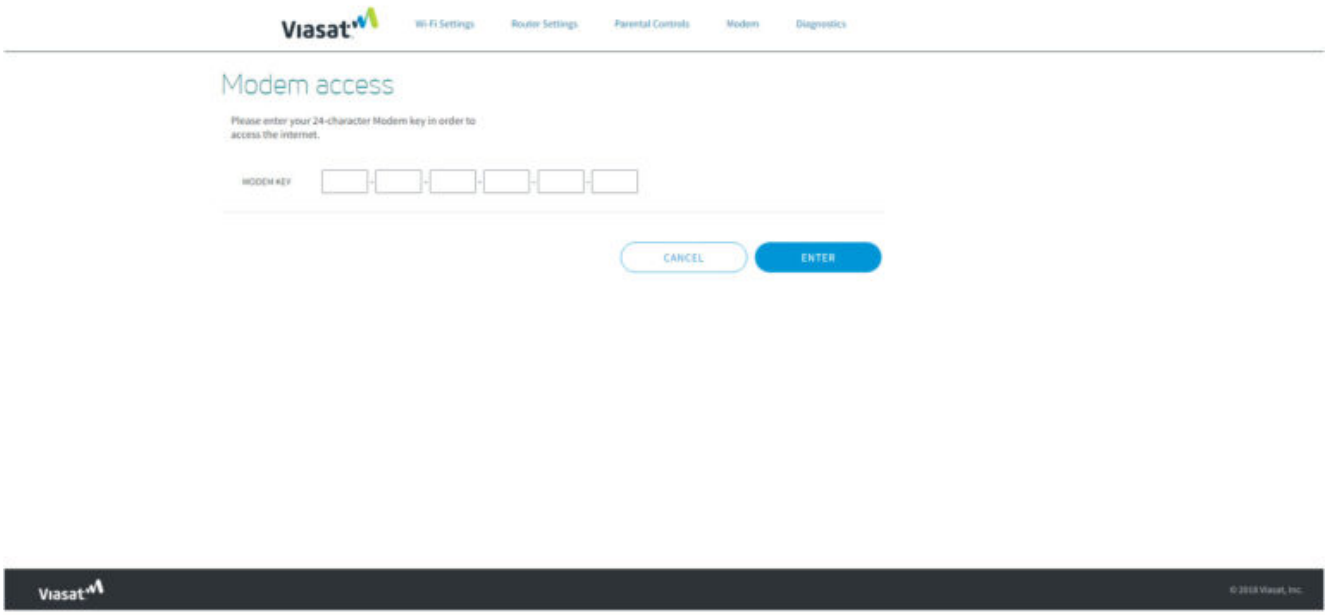
Click: Modem >> **Install**

The gateway enters the Modem Key Entry Mode.



Find the 24-digit Modem Key on the work order, and type it into the fields.

Click the Enter button in the lower right corner of the screen.



The system is now in Pointing and Peaking Mode.

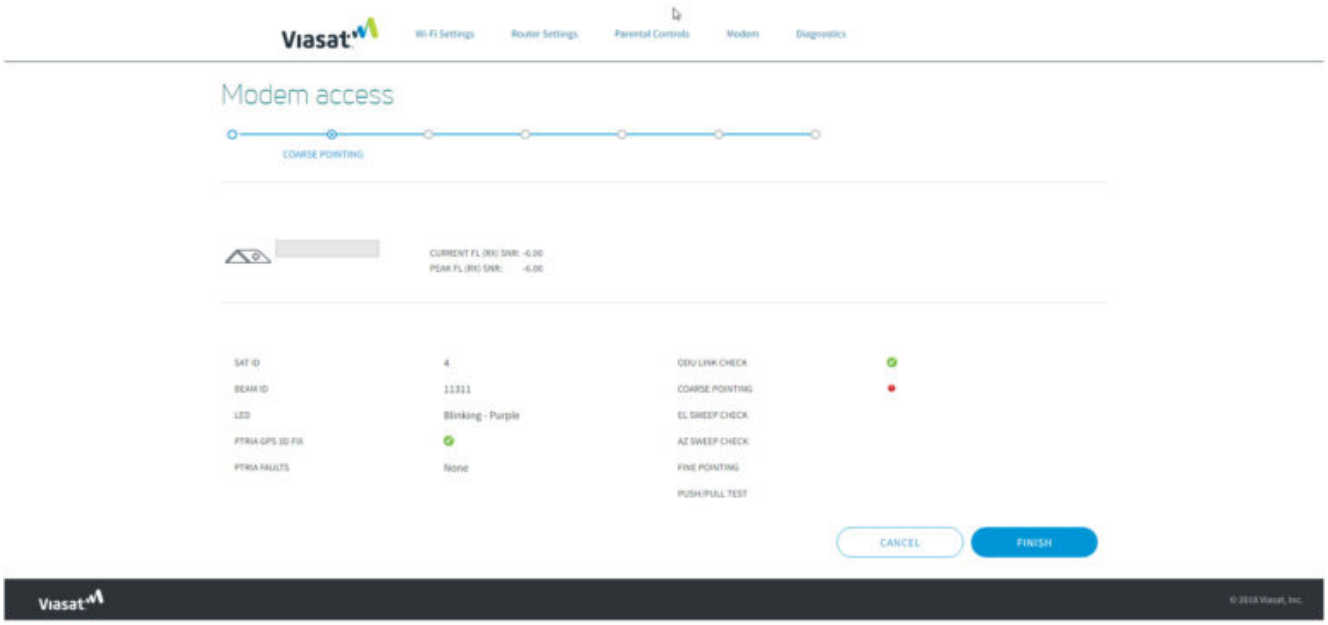
Confirm that the following are happening:

1. The gateway's light is blinking a purple color
2. **ODU Link Check** indicator is green. If not, wait up to 4 minutes This confirms that **the TRIA is connected to the gateway**
3. The pTRIA is emitting the **'heartbeat'** tone

Click play to hear the "Heartbeat" tone.

The gateway and pTRIA are ready for the Point and Peak process.

TIP! Use the Status indicators (below the ODU Link Check) to guide your alignment process.



Release Date: October 2018

Sweep 1: Coarse Point Azimuth with Wait Sequence

Follow these steps to point the Azimuth.

From behind the antenna sweep the antenna to the right, about 10 degrees away from the line- of-sight selected during the Site Survey.

Sweep 1: Reverse the direction of the adjustment, listening for the pTRIA to emit the '**ring ring**' tone.

Click play to hear the “Ring-Ring” tone.

Continue slowly sweeping the antenna toward the left, through several tones, until the pTRIA emits the ‘**beep-beep’** tone. This indicates that you have exited the beam.

Click play to hear the “Beep-Beep” tone.

You have 15 seconds to start your next sweep and re-enter the beam or the gateway will reset. If the gateway resets, begin the process from the beginning.

Sweep 2: Reverse the direction of the adjustment, listening for the pTRIA to progress through the tone sequence. Stop the sweep when the pTRIA emits the ‘**beep-beep**’ tone. This is the end of the second learning pass.

Click play to hear the “Beep-Beep” tone.

Note: Use a slow, consistent tension on the antenna during this sweep. Not all of the tones may be heard.

Begin the third sweep within 15 seconds.

Sweep 3: Slowly sweep the antenna toward the center. Stop when the pTRIA emits the ‘**high steady**’ tone.

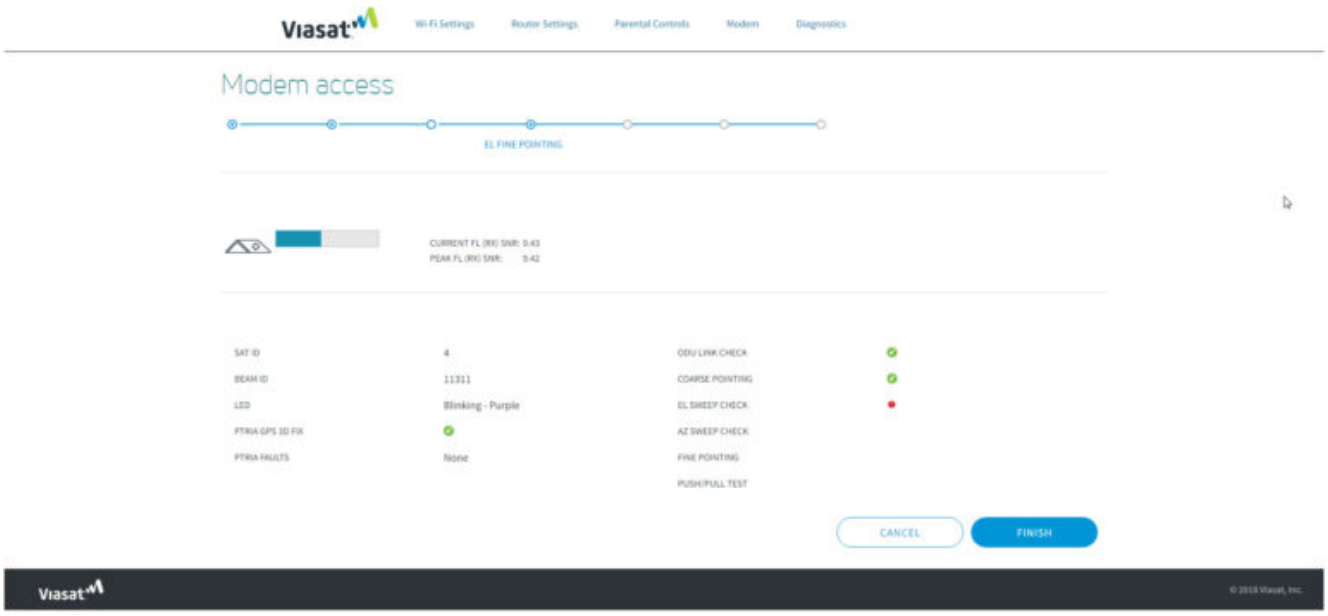
Click play to hear the “High Steady” tone.

Wait and listen for the pTRIA to emit the ‘wait’ tone. The

antenna needs to be stationary while the ‘**wait**’ tone emits, in order to calibrate itself.

Click play to hear the “Wait” tone.

A green check mark should be populated next to “Coarse Pointing” indicating you have completed this step in the process.



When the ‘**high steady**’ tone returns, finish this step by tightening the flange bolts, starting with the center flange bolt to maintain an even pressure on the tube canister.

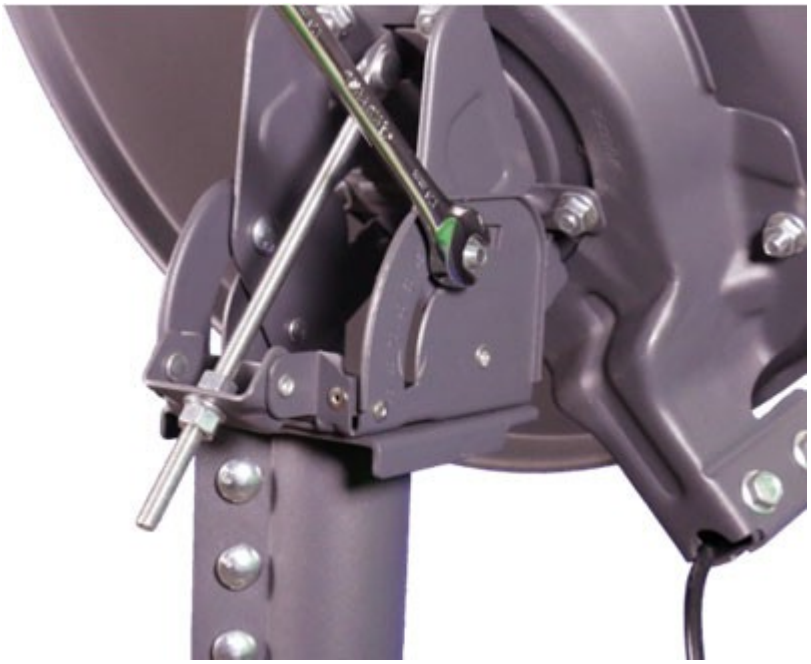
Click play to hear the “High Steady” tone.

Peak Elevation with Wait

Sequence

Follow these steps to complete the antenna elevation (fine) peaking process.

Slightly loosen the lockdown nuts in the arched slots on the sides of the elevation bracket. Next, turn the top 13mm nut on the elevation rod away from the top of the pivot casting.



Using the open wrench, adjust the lower nut on the elevation rod until the pTRIA lowers, and listen for the pTRIA to emit the ‘**low/slow**’ tone.

Click play to hear the “Low/Slow” tone.

This is the far edge of its frequency set. Stop, as this is the end of the first fine-tune learning pass.

Important: Do not pass the ‘**low/slow’ tone** when peaking the antenna.

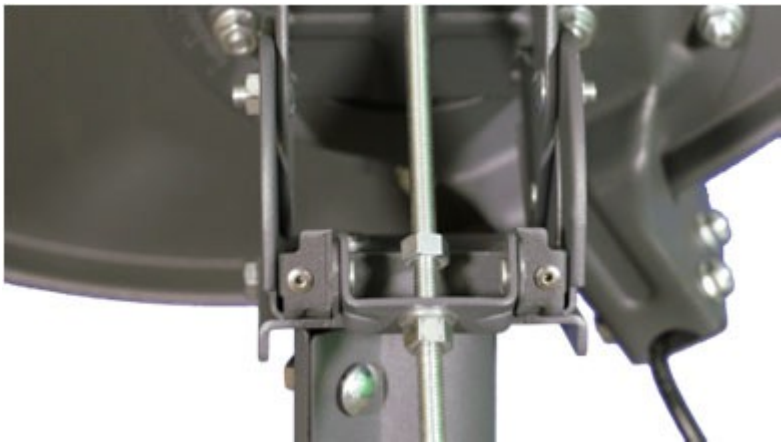
Reverse the direction of the adjustment, and listen for the pTRIA to progress through the tone sequence. Be certain you hear the ‘high steady’ tone during this sweep and continue until you hear the ‘low-slow’ tone.

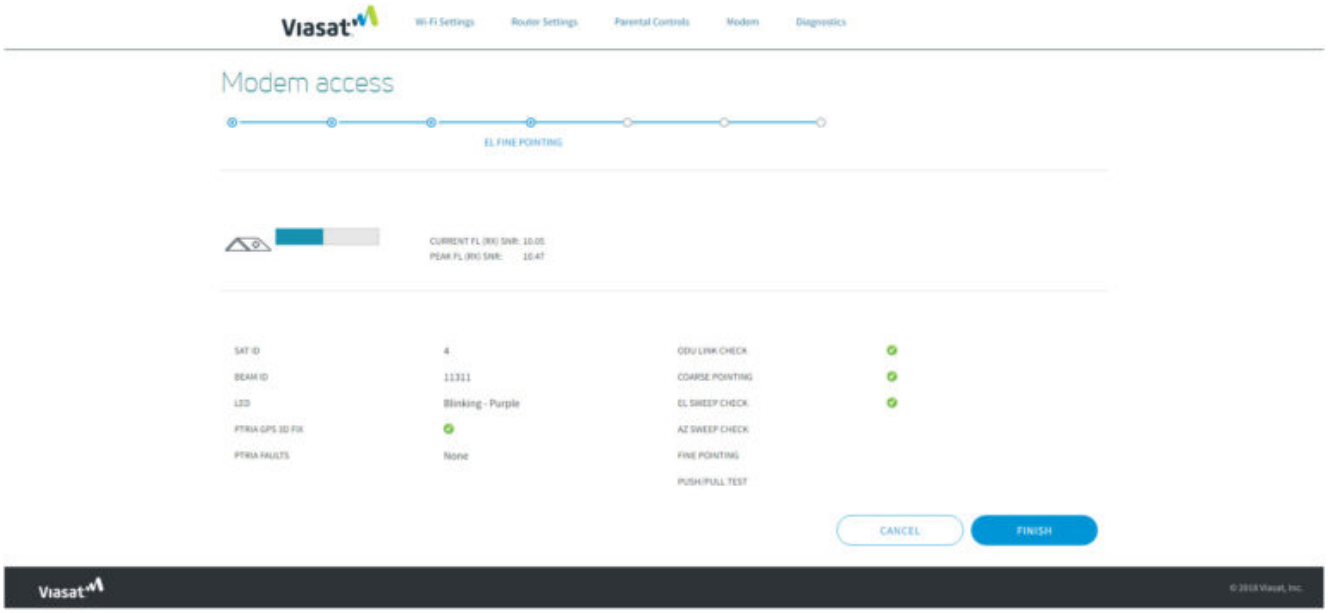
Stop the sweep when the pTRIA emits the ‘low/slow’ tone. This is the end of the second fine-tune learning pass.

Reverse the direction of the adjustment, and listen for the pTRIA to emit the ‘**high steady’** tone. Wait and listen for the pTRIA to emit the ‘wait’ tone. The antenna needs to be stationary while the ‘wait’ tone emits.

Click play to hear the “High Steady” tone.

When high steady returns, add 1/8 turn to move the pTRIA slightly towards the center of the beam. Start by tightening the same nuts. Start with the elevation lock down bolts and then the top nut of the elevation rod.





A green check mark should be populated next to “EL Sweep Check,” indicating you have completed this step in the process.

Peak Azimuth

Follow these steps to complete the antenna Azimuth (fine) peaking process.

Loosen the Azimuth base plate bolts using a 13mm ratchet.

Using an open wrench, slowly turn the Azimuth fine-adjust bolt, listening for the pTRIA to emit the '**low/slow**' tone. This means that the antenna has found the far edge of its frequency set.

Click play to hear the "Low/Slow" tone.

Stop, as this is the end of the first fine-tune learning pass.

Important: Do not pass the '**low/slow**' **tone** when peaking the antenna.

Reverse the direction of the adjustment, and listen for the pTRIA to progress through the tone sequence.

Be certain you hear the ‘high steady’ tone during this adjustment and continue until you hear the ‘low-slow’ tone.

Stop the adjustment when the pTRIA emits the ‘low/slow’ tone. This is the end of the second fine- tune learning pass.

Reverse the direction of the adjustment again, now moving to the center, and listen for the pTRIA to emit the ‘**final high steady’** tone. The antenna is now in the center of the beam.

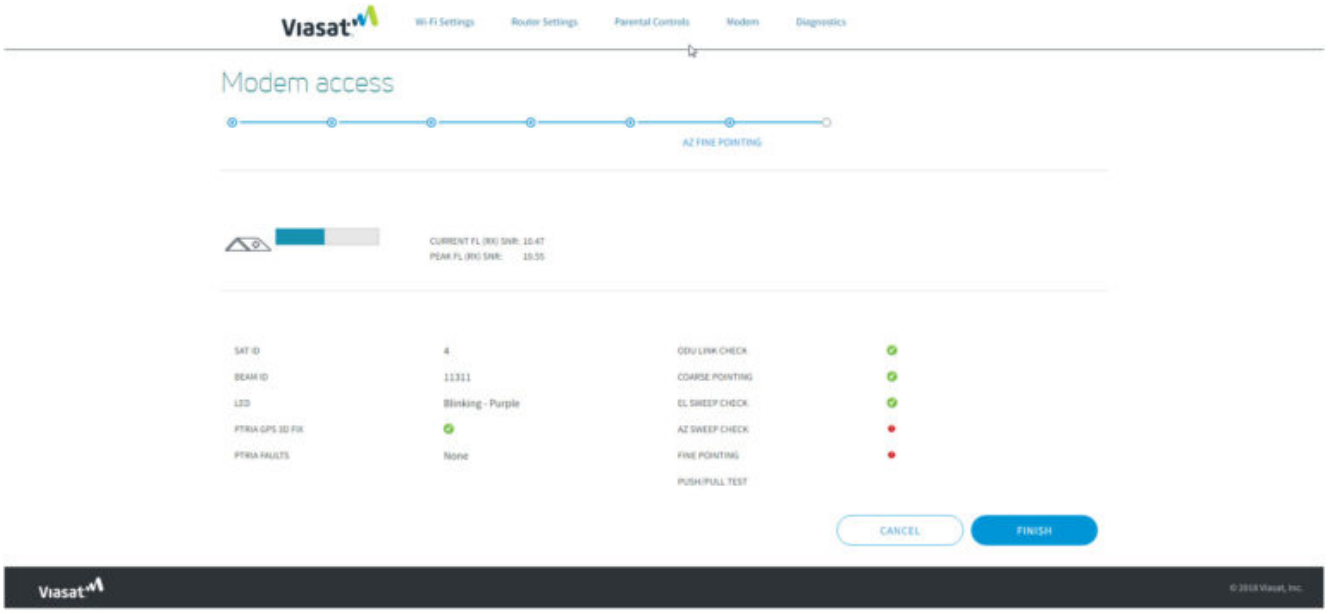
Click play to hear the “Final High Steady” tone.

Note: The ‘final high steady’ tone is a higher pitched tone

Finish this step by tightening the Azimuth base plate bolts. A green check mark should be populated next to:

- “AZ Sweep Check”
- “Fine Pointing” This indicates you have completed this step in the process.

Note: The ‘final high steady’ tone may dip while tightening the base plate bolts. If the tone does not return to the ‘final high steady’ tone, then restart the pointing and peaking process from the beginning.



Push/Pull Test

Important: Before finishing the alignment, always perform a Push/Pull test

From behind the antenna, gently push and pull each side of the antenna

Gently push and pull the top of the antenna

The test passes when: **every time** pressure is added to the antenna, the pTRIA's 'final high steady' tone dips **and** when the pressure is removed, the antenna **returns** to its '**final high steady**' state.

Click play to hear the "Final High Steady" tone.

If the tone rises, the alignment is not correct. You must repeat the pointing and peaking process from the beginning.

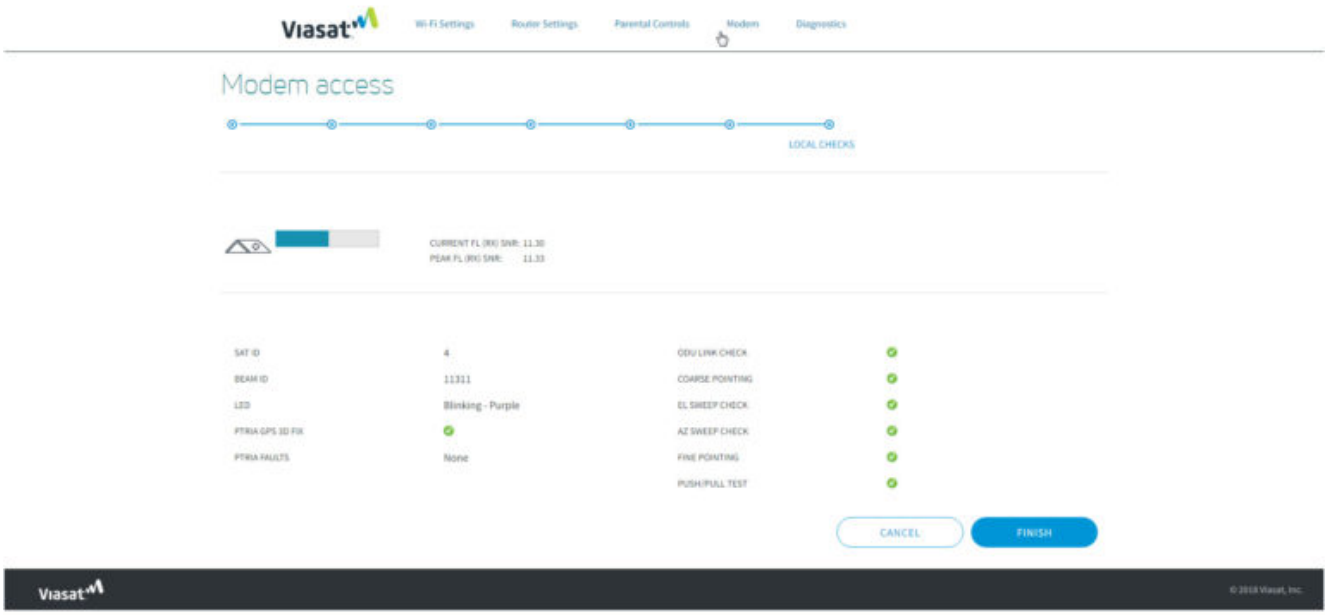
Finishing the Alignment

Once pointing and peaking are complete, the following steps are used to complete the alignment process and then provision (activate) the Viasat network.

Important: The modem's Current SNR ***must*** be within .3 dB of the Peak SNR in order to pass QOI. If it is below this value, restart pointing and peaking from the beginning.

TIP! Notice that the indicators are all green, confirming that all steps are complete.

From the Modem GUI, click the Finish button. This will capture the results of the install process for reporting to the back office.

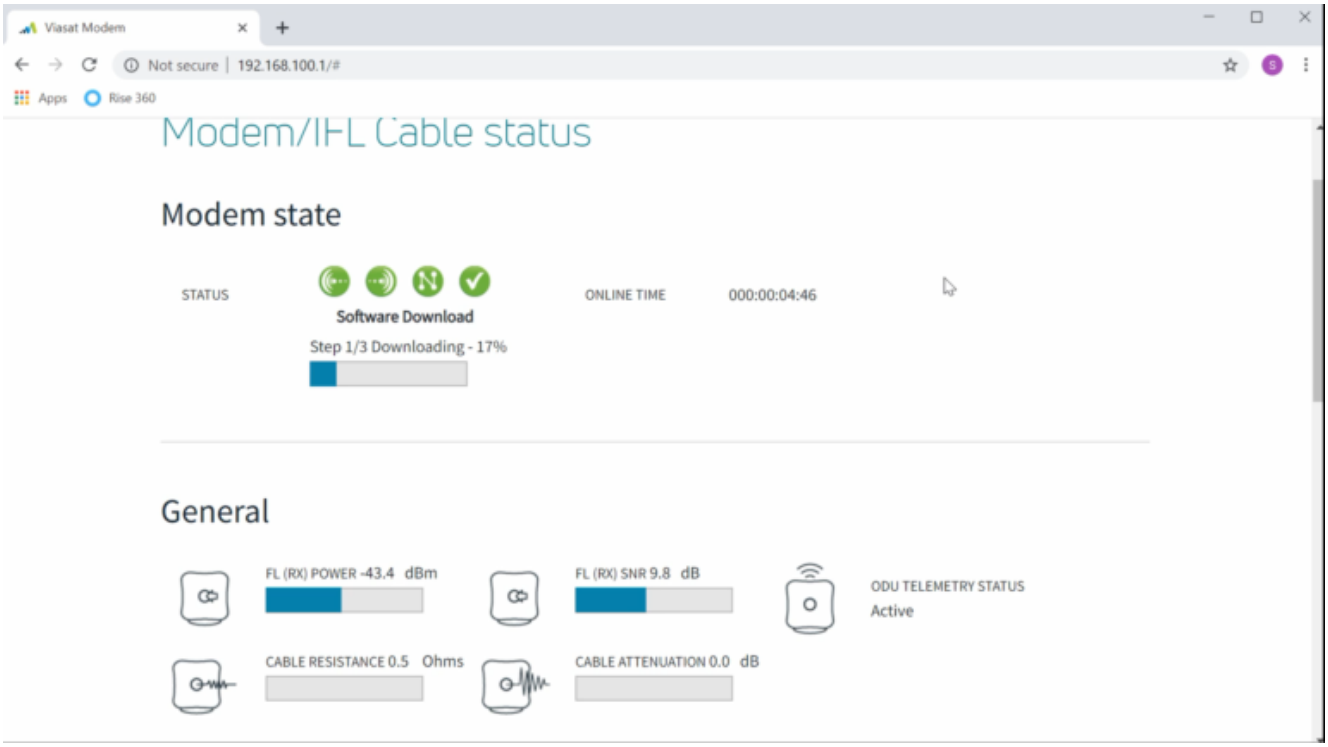


From the Modem/IFL Status page, watch for the gateway to go Online. Wait to see if a software download begins.

Important! Wait up to 10 minutes. Does a software download begin?

- **If yes,** WAIT. The gateway is completing a required firmware upgrade. Do not interrupt the upgrade.
- **If no,** continue to the next step.

When the download is complete, the gateway will reboot. Wait for the status to show Online.



To begin Provisioning, click the **Activate** link on the top of the Modem/IFL Status page.