

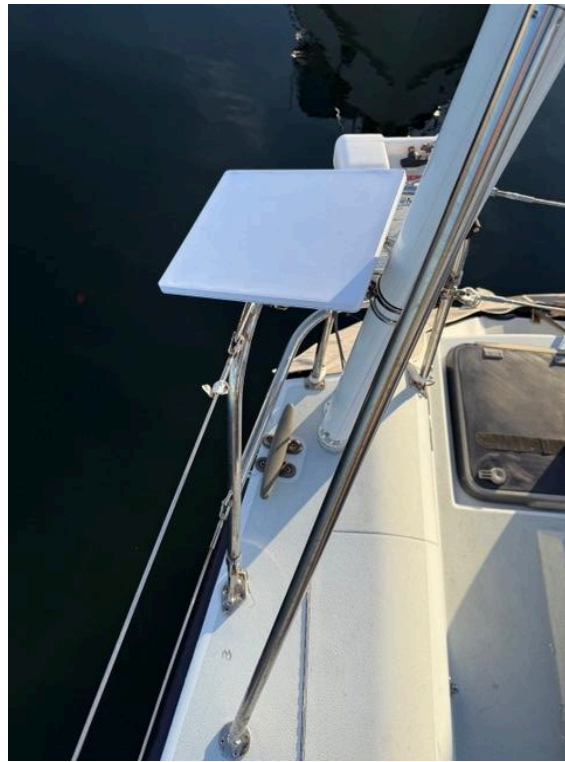
## Installing a Starlink Mini on S/V Surprise

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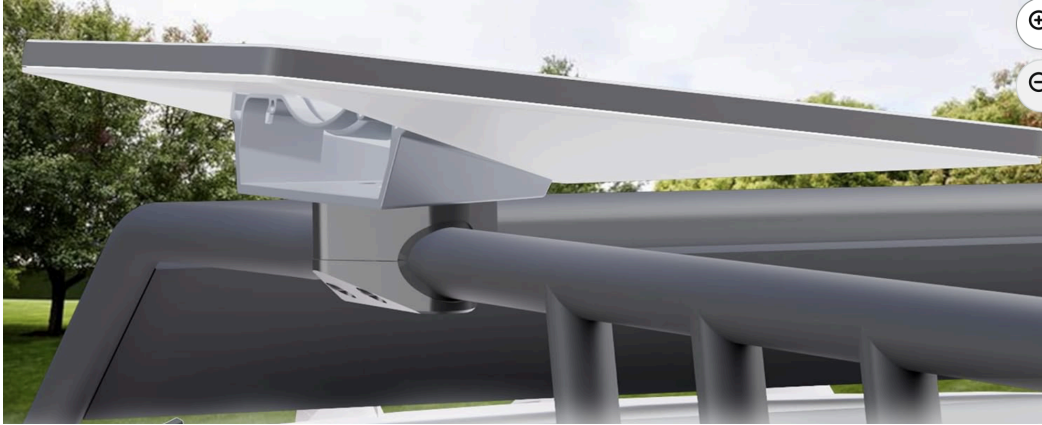
Last updated 23 November 2025.

This note describes what I did to install a Starlink Mini on Surprise. I picked the Mini because it is designed to run on DC and was relatively inexpensive. While the larger models are faster, they run on AC and require the use of an inverter. Overall power consumption will be higher. I purchased it at my local Home Depot on sale

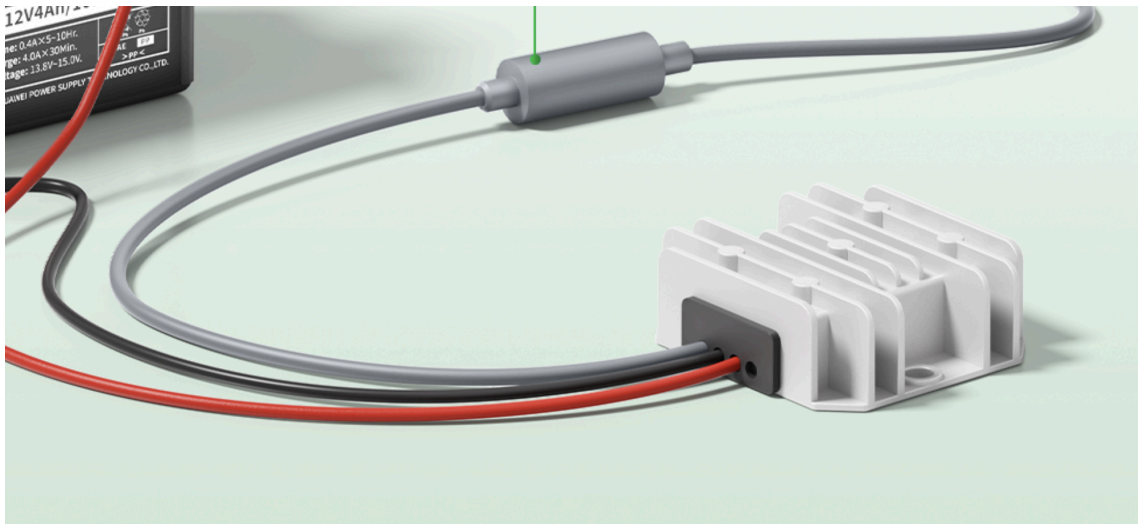
The Mini was mounted behind my radar pole on the rail. It turned out I didn't have too many open rail choices, but this seems to work fine. It's a pretty protected location.



I used a Starlink Mini Mount <https://a.co/d/6sH6XSB> to mount it on the rail. It appears to be pretty sturdy and has some locking screws.



Instead of using a direct connection to my 12 volt system, I used a "Starlink Mini 12V Adapter DC Step Up Converter 12V to 30V" <https://a.co/d/8ksE3YA> I found on Amazon. The Starlink power cable plugs in directly. This should avoid any issues if the battery system gets low.



Overall, it appears to work very well. I initially saw 66Mbps downloads with my current router and Ethernet switch. The Starlink app says it is using about 20 watts of power. I get a little sky interference on one side from the radar dome, but it gets a pretty clear sky overall. It will probably work better outside of the Marina.

I upgraded my router to a GL.iNet GL-MT3000 that has Wi-Fi 6, 1G LAN port, and 2.5G WAN port. Note the Starlink only supports 1G Ethernet. See <https://a.co/d/5mwEf8l>



The Starlink is set up in bypass mode to allow the GL.iNet to function as the router and WiFi AP. This turns off the Starlink's built in router and AP. This requires setting up a static route in the router.

The router is powered via this <https://a.co/d/2ilm2Dh> 12V/24V to 5V 3A USB Type-C converter.



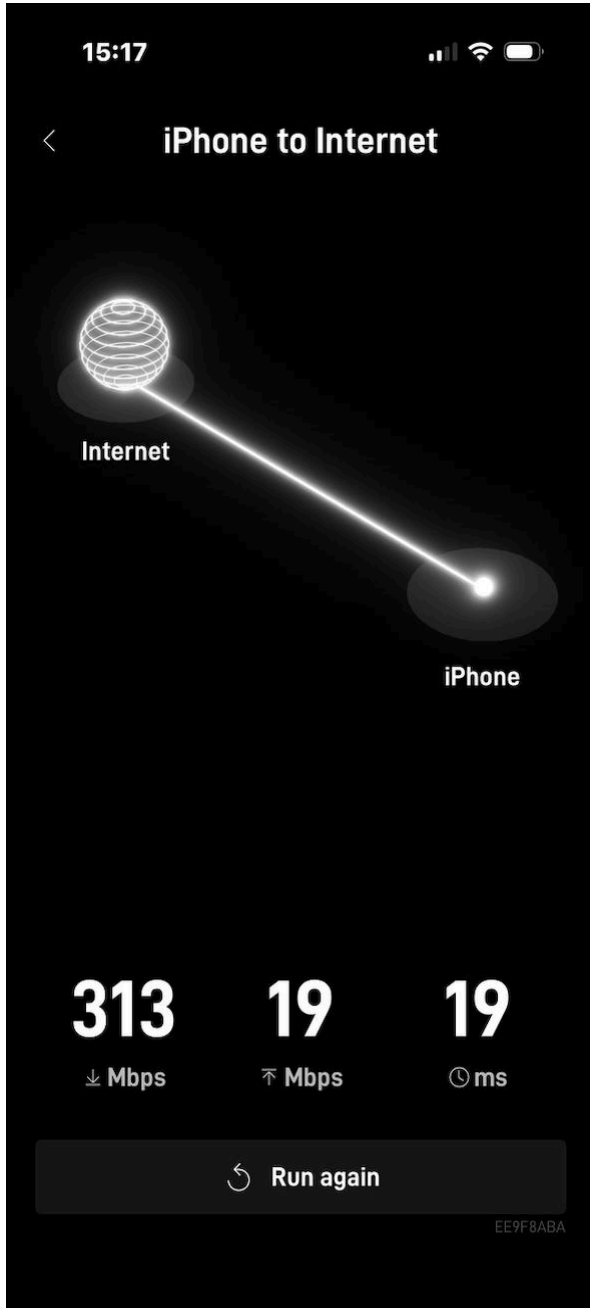
I also replaced my old 10/100 ethernet switch with a NETGEAR 5-Port Gigabit switch <https://a.co/d/96q3xjT> .



Since it is 5 volts, I powered it from a USB port using this adapter <https://a.co/d/iJp2GYP> from an open USB-A port.



The great news is that my speed test performance went from ~65Mbps with the old router and ethernet switch to about 200 to 300 Mbps from my phone connected to the 5GHz SSID on the router. Very impressive.



The most challenging part of doing the install was running and securing the cables from the nav station to where the Starlink was mounted and making the thru deck connections with thru-deck cable seals.