

Commissioning Checklist:

Recommended Hardware:

Hotspot	Wire stripper/cutter
Ethernet cable	Network cable tester
Multimeter (capable of reading mV)	RS485 to USB converter Extra
Clamp meter	RS485 wire for external runs
Small and regular size flathead screwdriver	Computer (w/ admin permissions)
Cable testing tool	Small phillips head screwdriver

Please request an Emailed commissioning zip file if you have not received one yet or download here:
<https://kb.alsoenergy.com/admin/manage-articles.php?status=approved&sort=&order=>

If you are using third party/customer supplied hardware, please contact the OEM to ensure the device is configured for Modbus communication (Modbus enabled, unit id, baud/IP address if applicable), prior to calling AlsoEnergy Support.

- Stem Installation Manual Rev16 - <https://kb.alsoenergy.com/article.php?id=295&oid=148>
- Stem [Network Considerations Document](https://kb.alsoenergy.com/article.php?id=296) - <https://kb.alsoenergy.com/article.php?id=296>
- [AcquiSuite \(AQS\) Network Considerations](https://kb.alsoenergy.com/article.php?id=297) - <https://kb.alsoenergy.com/article.php?id=297>
- [Logging into an AcquiSuite](https://kb.alsoenergy.com/article.php?id=307&oid=148) - <https://kb.alsoenergy.com/article.php?id=307&oid=148>
- Cellular Modem ([RV50 Quick Install Guide](https://kb.alsoenergy.com/article.php?id=299)) - <https://kb.alsoenergy.com/article.php?id=299>
- [Apogee Wiring Colors](https://kb.alsoenergy.com/article.php?id=300) (if applicable) - <https://kb.alsoenergy.com/article.php?id=300>
- [Stem integrated Weather Station](https://kb.alsoenergy.com/article.php?id=301) - <https://kb.alsoenergy.com/article.php?id=301>
- [Weather Station Gain Guide](https://kb.alsoenergy.com/article.php?id=302) (if applicable for confirmation) - <https://kb.alsoenergy.com/article.php?id=302>
- [PowerLogger1000 Support Manual](https://kb.alsoenergy.com/article.php?id=303) (if applicable) - <https://kb.alsoenergy.com/article.php?id=303>

1) AC power with proper Voltage

- After supplying AC power to the monitoring enclosure(s), are power LEDs visible on the devices?
- Are all devices being supplied with proper voltage (typically 24 volts)?

2) Network confirmation

A) Cellular modem provided by Stem:

- Is Cellular Modem antennae installed correctly with small lead to GPS, two larger leads connected to Cellular and Diversity? [RV 50 Antennae Spec sheet](https://kb.alsoenergy.com/article.php?id=304) - <https://kb.alsoenergy.com/article.php?id=304>)
- Are there healthy LED lights on the Modem? (Use [RV50 Quick Install Guide](https://kb.alsoenergy.com/article.php?id=299) above and inform us of any issues prior to commissioning)
- Does Cellular Modem provide IPs via DHCP? (When computer is set to DHCP, connect computer to a Switch within main DAS enclosure, if applicable)

B) Customer provided internet:

- Are all IP's within Stem's [Network Considerations Document](https://kb.alsoenergy.com/article.php?id=296) are opened (ports as well if applicable)
- Is issue rooted at the Data Logger? [Testing a Network Connection](https://kb.alsoenergy.com/article.php?id=305) - <https://kb.alsoenergy.com/article.php?id=305>

3) Device Visibility on Local Network

- Are all Baud Rates/Addresses/Parity=None/StopBits=1/ confirmed on each RTU Device and reflecting the SLD provided for this site?
- When configured with DHCP IP, are devices responding to pings via your command prompt when connected to a Switch within the main DAS?
- Do you retrieve OK confirmations within AQS or when port scanning via a PowerLogger1000 (page 38 in [Stem Installation Manual Rev16](#)) for all RTU connected devices?

4) Inverter communications

- Are the inverters connected to a 3rd party (inverter manufacturer) data logger or gateway? – If so, are the inverters communicating with the 3rd party logger/gateway? (this needs to be confirmed before data will be collected by the Stem provided Gateway)
- Are inverters addressed correctly per the SLD provided for this site?
- Are inverters daisy chained per the manufacturer's manual specifics?
- Does the inverter daisy chain require a terminating resistor?
- Are inverters communicating with the logger within monitoring platform?

5) Meter Data Confirmations

- Has an Electrician verified the programmed CT and PT Ratios within the meter to correspond with what is connected on site?
- Are CT shorting pins disengaged if present? (*Image of shorting pins on Page 21 within [Stem Installation Manual Rev16](#)*)
- Is the power (kW) a positive value on each phase? (If not, confirm CT polarity)
- Are the power factors (PF) on each phase approximately 1.0 or -1.0 during peak performance hours?

6) Weather Data Confirmations

A) Stem Integrated Weather Station

- Is the Weather Station 'ON' LED illuminated?
- Are Stem Integrated Weather Sensors connected? (page 31 in [Stem Installation Manual Rev16](#))
- Toggled *Learn* switch to up to 'ON' position for 10 seconds, then back down to 'OFF' position after sensors were connected
- Internal gains confirmed to physically be set in correct orientation according to [Weather Station Gain Guide](#)?
- RS485 connection is wired plus+ to plus+ and minus- to minus- ?
- Are Receive and Transmit LEDs flashing?

B) Other Weather Stations

- Are the correct wire colors per the manufacturer's manual connected to an I/O?
- If connecting a digital device (ie: IMT, SMP3) - Is DC voltage connected to that sensor per manufacturer specs?

7) AlsoEnergy Confirmation

- Has valid data been confirmed by Stem.