6300-CX Troubleshooting Tree

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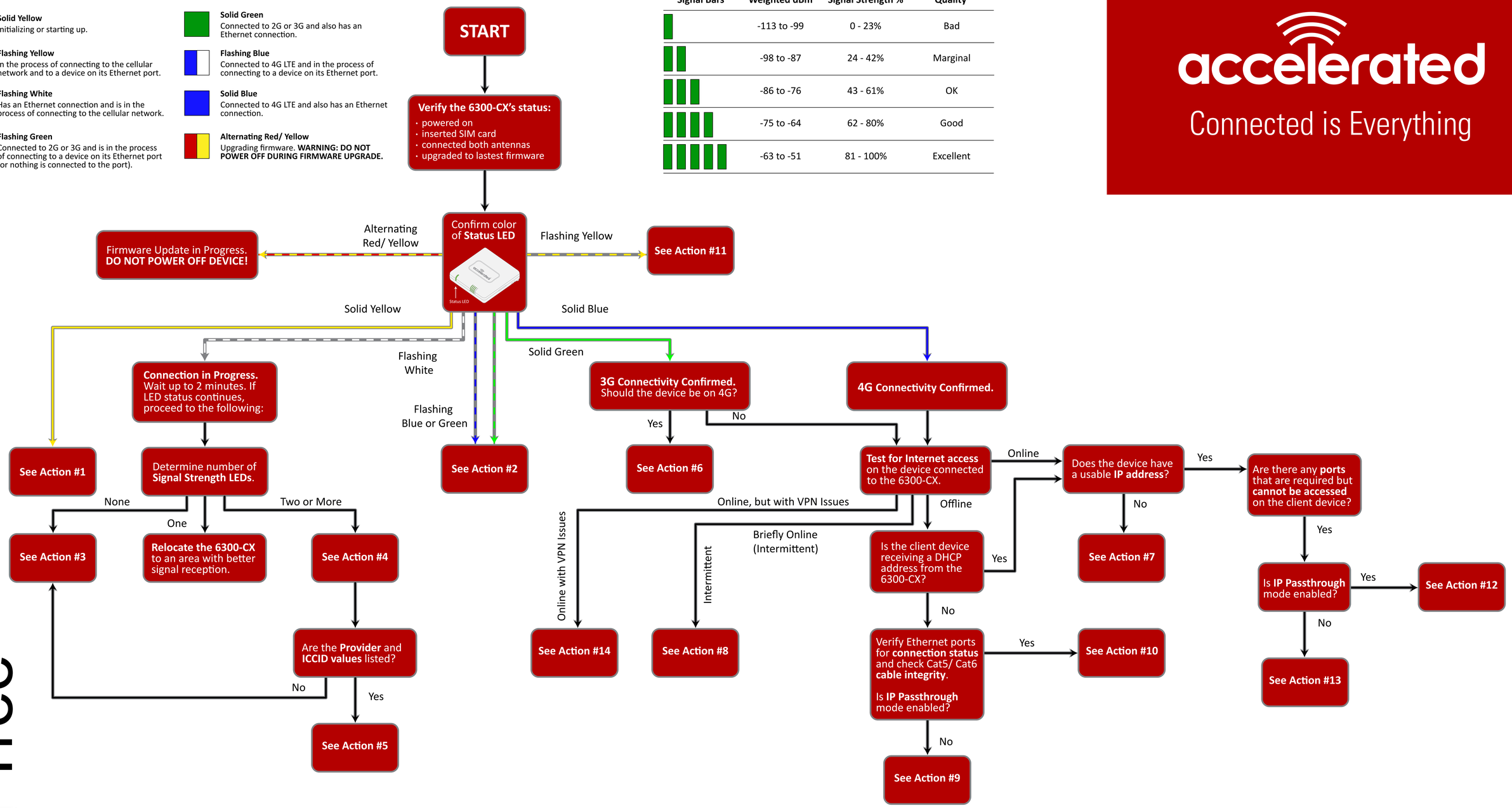
Connected is Everything

Network Status LED

- **Solid Yellow** — Initializing or starting up.
- **Flashing Yellow** — In the process of connecting to the cellular network and to a device on its Ethernet port.
- **Flashing White** — Has an Ethernet connection and is in the process of connecting to the cellular network.
- **Flashing Green** — Connected to 2G or 3G and is in the process of connecting to a device on its Ethernet port (or nothing is connected to the port).
- **Solid Green** — Connected to 2G or 3G and also has an Ethernet connection.
- **Flashing Blue** — Connected to 4G LTE and in the process of connecting to a device on its Ethernet port.
- **Solid Blue** — Connected to 4G LTE and also has an Ethernet connection.
- **Alternating Red/ Yellow** — Upgrading firmware. **WARNING: DO NOT POWER OFF DURING FIRMWARE UPGRADE.**

Signal Strength LEDs

Signal Bars	Weighted dBm	Signal Strength %	Quality
	-113 to -99	0 - 23%	Bad
	-98 to -87	24 - 42%	Marginal
	-86 to -76	43 - 61%	OK
	-75 to -64	62 - 80%	Good
	-63 to -51	81 - 100%	Excellent



Action #1:

- 6300-CX is starting up. If LED remains solid yellow for more than 2 minutes, CX may need to be replaced.

Action #2:

- 6300-CX is connected to the 3G/LTE network, but doesn't see anything connected to its Ethernet port.
- Check the Ethernet port, verify the client device (router, laptop, etc.) is connected via CAT5/6 to the 6300-CX, and the Ethernet port on the client device is enabled.

Action #3:

- Power off the 6300-CX, swap the antennas on the back of the 6300-CX, and power on the 6300-CX. If this resolves the connectivity and the 6300-CX displays two or more bars of signal strength, this may indicate that one of the antennas is faulty. You can continue to use the 6300-CX, but we suggest that you eventually order a replacement set of antennas to improve signal strength even further.
- If swapping the antennas did not resolve the issue, verify the SIM card is inserted properly. Power cycle the 6300-CX after re-inserting the SIM card. If inserted but 6300-CX still shows no signal strength bars after 30 seconds, the 6300-CX unit cannot detect the SIM and may be need to be replaced.

Action #4:

- Verify embedded cellular modem firmware of 6300-CX matches carrier type.
- Check the SIM card and the Modem section of the 6300-CX config to verify both are setup with the proper APN.
- Login to web UI. Open the Status page and click on the Cellular Details tab.

Action #5:

- If Carrier is not listed, then contact cellular provider to check SIM card activation.
- Try pressing the Erase button (no longer than half a second) to restore default settings on the 6300-CX device. If the SIM card requires a custom APN to connect, you will have to manually reconfigure that on the 6300-CX.
- If resetting the configuration on the 6300-CX did not resolve the issue, check if the SIM card is provisioned properly. If it it, then there may not be coverage for the desired network in your area.
- Try moving the CX to a different location or using a different cellular provider's SIM card.

Action #6:

- Verify 4G coverage is available in the area.
- Check embedded cellular modem firmware of 6300-CX. Does it match the type of carrier?
- Check Modem section of 6300-CX config. Verify Access Technology is set to Auto.
- Contact carrier to verify SIM card supports 4G LTE. SIM card may need a custom APN for 4G.

Action #7:

- If the client device is expecting a publicly reachable and/or static IP address, check the SIM card and the Modem section of the 6300-CX configuration to verify both are setup with the proper APN.

Action #8:

- Disconnect Ethernet cable from CX; power cycle. Wait for CX to fully connect, then reconnect Ethernet port.
- Verify the 6300-CX is using the correct APN (e.g. on Verizon the 6300-CX may connect with the standard vzwinternet APN, but the SIM card is meant to connect with a static APN such as ne01.vzwstatic)
- If that didn't fix the issue, try removing the 192.168.210.254 IP address from the Network → Interfaces → Default IP → Default Gateway option in the 6300-CX's config.
- If that didn't fix the issue, try disabling any/all connectivity tests in the 6300-CX's configuration profile (labelled "ping monitoring" or "connectivity monitoring" in the config).
- If that didn't fix the issue, contact the cellular provider to check the SIM card's activation and provisioning status.

Action #9:

- Verify the Network → Interfaces→ LAN section of the 6300-CX config is setup with a static IP and the DHCP server is enabled.

Action #10:

- Clear DHCP leases by waiting 5 minutes, then reboot the 6300-CX.
- If clearing DHCP leases didn't fix issue, check that the passthrough IP works with a /30 subnet.
- If not, contact carrier to change IP on SIM card (may just need a reboot if using a standard APN).

Action #11:

- 6300-CX is trying to setup cellular modem. Wait up to 2 minutes to allow 6300-CX to finish. If status LED continues to flash yellow after several minutes, continue with below step(s).
- Login to web UI. Open Configuration page. Verify the Modem -> Enable checkbox is selected.
- If 6300-CX continues to flash yellow for more than 5 minutes, consult the troubleshooting steps for a flashing white status LED.

Action #12:

- Check the Services section of the 6300-CX's configuration. Verify none of the services are reserving the ports needed to access the client device.

Action #13:

- Check the Firewall -> Port Forwarding section of the 6300-CX configuration. Verify that the desired ports are forwarded to the appropriate IP addresses.

Action #14:

- Reduce the Modem → MTU option in the 6300-CX's configuration to 1400.
- Alternately, if you have control of the router connected to the Ethernet port of the 6300-CX, change that router's WAN MTU setting to 1400.