AN-124: LTE DCAP FAQ

Including information about our Solar DCAP

All DCAPs now upload data to the cloud every 12-15 minutes. Keep this in mind if you are looking for the MDT you just installed. You can force an immediate upload by tapping the button on the MDT, just like you would do to force a transmission for a bucket test. For this to work the MDT must already be connected to the network. If you just powered an MDT up, wait for its LED to go solid for the 10 seconds then tap the button after the LED goes out to force the upload.

Q: Where is the Configuration and Monitor data stored?

A: The cellular DCAP is stored in our cloud system. You no longer directly access the DCAP.

Q: Can I use Ethernet or WiFi with an LTE enabled DCAP?

A: Yes, if you plug in an ethernet cable, the DCAP will prioritize the Ethernet for communications rather than the Cellular module. The data and configuration are still stored in the cloud when using the Access Code (AC) to connect. If you try to direct connect from the CIT using an IP address, this method is now *read-only* and you won't be able to save anything to the DCAP directly. You must connect using the AC to save configuration data in the cloud.

Q: What does the cellular service cost?

A: Tehama charges $20/month for the service using a monthly subscription service available within our Web App. If the DCAP's cellular has not been enabled, once you connect to the Site (in the cloud) you can activate the service and pay for it within the App. Note that it can take up to eight hours for the DCAP to start sending data over cellular. From the Web App you can also cancel the service.

Q: What carriers are supported?

A: Currently the cellular DCAP can work on Verizon and ATT networks. Unless otherwise specified at time of purchase, Verizon will be the default carrier.

Q: Can I enable the cellular service after the DCAP has been installed in the field?

A: Yes, if you purchase a cellular enabled DCAP, the service can be turned on at any time through our Web App. Or we can enable it at the time of purchase.

Q: Does the mobile app work with the cellular DCAP?

A: Yes it does!

Q: Why is the Status LED blinking on the Cellular DCAPs?

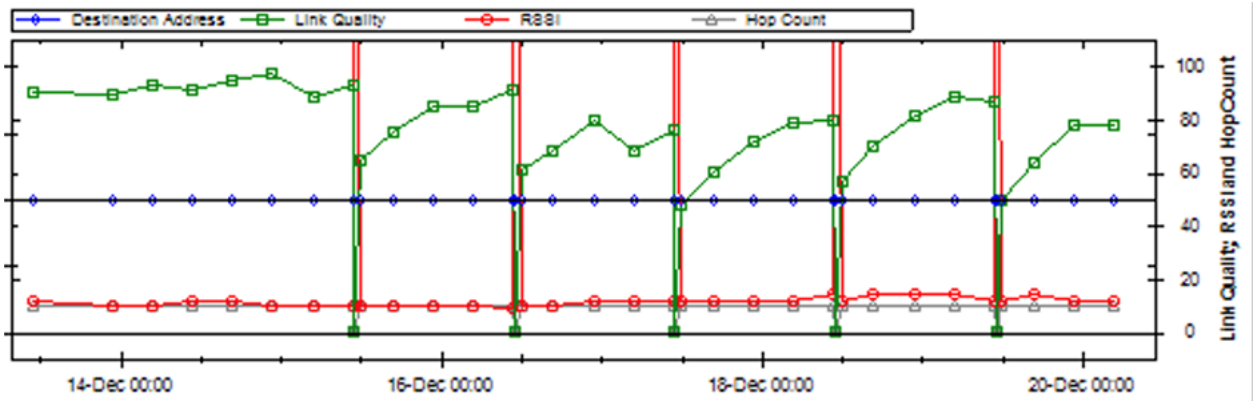
A: The Status LED behaves somewhat differently on a Cellular DCAP. In a working system with active cellular, the Status LED will be solid green as normal, but every 20 seconds the LED will blink off 1, 2, or 3 times to indicate Cellular signal strength. 3 blinks indicates the strongest signal, 1 is the weakest.

If the Cellular service has not been activated and the DCAP is not connected to Ethernet, then the Status LED will be orange but will still blink 1, 2, or 3 times every 20 seconds to indicated signal strength. The LED might also toggle between green and orange if the last attempt to send data over cellular had failed; this should self-correct within the hour.

When connected to Ethernet, the Status LED will behave as on previous DCAPs. That is, solid green if the DCAP is communicating with our system.

Q: Why do some MDTs lose sync with a Cellular (and Solar) DCAPs?

A: You may see link status graphs that look like this:



This is expected behavior as we need to turn off the DCAP radio when the cellular modem is active. This is a 30-60 second process that occurs every 12-15 minutes therefore the MDT timing could be just right and it wakes up and transmits during this window and subsequently loses sync. The MDT will however wake up at its next scheduled transmission time (usually one hour) and try again, having stored the prior data point so no MDT data will be lost.

Q: How to turn off a 12V cellular DCAP?

A: The regular DCAPs now contain a much larger energy storage battery that can keep it going through a power outage of up to 8 hours. Therefore, if you just unplug a 12V DCAP, **it will remain on**. To turn it off, remove the power then push the small blue button next to the Ethernet connection for 3 seconds. Exactly like with MDTs, the Power LED will blip off after holding the button for 3 seconds, telling you that you can release the button and the DCAP will then completely shut down.

Q: How does a solar DCAP behave differently vs 12V model?

A: A solar DCAP is running on limited power so it conserves energy as much as possible. At night the DCAP will shutdown the onboard processor, waking every hour to upload all collected data, or less often if the battery is low. Because of this intermittent operation, **it is NOT recommended** to use the Solar DCAP on sites with time-critical alerts such as standing water leak detection.

During the day, once the sun is up and the battery is sufficiently charged, the processor stays on and the DCAP sends data every 12-15 minutes like normal for DCAPs. Since the processor unit is off 95% of the time at night, a button press from an MDT after the sun has set will NOT trigger an immediate upload of data to the cloud. Please take this into account when troubleshooting at a property.

Q: How long can a Solar DCAP operate without sun?

A: The Solar DCAP will continue to collect data and keep the radio network alive for nearly seven days without the sun. When the battery is low, data will be uploaded to the cloud every four hours. When the battery is critically low, data will no longer be uploaded to the cloud but will continue to collect on the DCAP for another day or two until the 7 day limit is reached. At this point the DCAP is effectively unpowered. Once the sun returns, any collected data over the final few days on battery will be uploaded to the cloud.