

# White Paper:

## **Q.HOME SMART – Communication Redundancy**

### Purpose

The purpose of this document is to explain the inherent communication redundancy of the Q.HOME SMART system platform from Qcells.

### Communication Redundancy

Depending on the system configuration, either the Q.HOME COMBINER or Q.HOME CORE G3 (ESS) product of the Qcells Q.HOME SMART platform is used as the communication input for a system site. Both devices have the ability to the cloud via Ethernet (LAN cable), Wi-Fi or Cellular.

If multiple communication channels are connected and the active channel is lost, these devices will fail-over to the next available communication method, and will prioritize Ethernet, then Wi-Fi, then Cellular; regardless of which communication channels are configured during commissioning.

### System Configurations

The device used as the communication link to the cloud depends on the system configuration:

- **Solar Configuration (PV only):** Q.HOME COMBINER
- **Grid Support Configuration (PV + ESS, no backup):** Q.HOME COMBINER
- **Backup Configurations (Whole-Home and Partial-Home):** Q.HOME CORE G3

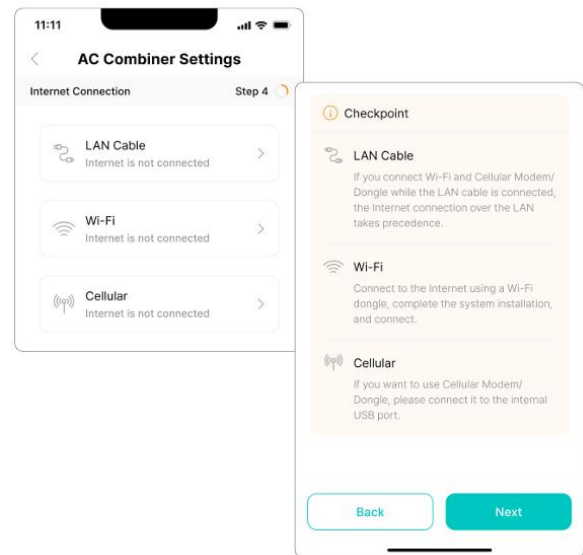
Both devices are shipped with the same Wi-Fi dongle product, though they use different cellular modem products.

- Q.HOME COMBINER - Cellular Modem Accessory (**PN: LTE-MT-MODEM-CAT4-TN5**)
  - Installed internally.
- Q.HOME CORE G3 - Cellular Dongle Accessory (**PN: CELLULAR-ZTE-DGASSY-CAT4-TN5**)
  - Installed externally; protected by same weatherproof cover provided with the ESS for the Wi-Fi dongle.

## Considerations

During the commissioning process, the installer is guided by the Qcells commissioning wizard to select and configure the internet connection for the site.

- Configuring the Wi-Fi connection requires selecting the homeowner's Wi-Fi network and saving the password.
- Configuring the Ethernet (LAN) connection *may* require configuring a static IP (if the homeowner utilizes a firewall on their local network).
- Configuring the cellular modem simply requires selecting it.



## NOTES

- When configuring both an Ethernet connection with a static IP address and a Wi-Fi connection, physically connect both, and select “LAN Cable” first to configure the Ethernet connection. Once that is configured, select “Back”, then select the “Wi-Fi” option to configure the homeowner’s wireless network details.
- The Q.HOME COMBINER may be connected using any combination of Ethernet, Wi-Fi, and Cellular.
- Because the Q.HOME CORE G3 only has one external USB port where both the Wi-Fi and Cellular dongle are connected, the ESS unit may only be configured with a maximum of two methods; Ethernet + Wi-Fi, or Ethernet + Cellular.
- The LTE Modem for the Q.HOME COMBINER cannot be re-used if expanding a Solar Configuration system to the Backup Configuration, as the modem cannot fit inside the dongle protective cover.

For more details on the Q.HOME COMBINER Cellular Modem, please refer to the [Q.HOME COMBINER Cellular Modem Installation Manual](#).

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