Getting Started

If a cellular router is provided as the Internet connection, skip the Network Planning section of this document. It is also important that the Installer contact tech support and schedule an installation time so a technician can help with any questions if this is the first installation.

Network Planning

If you intend to use a corporate Local Area Network as the Internet connection, it is highly recommended that you contact the IT Manager before arriving at the job site. Make certain that the GRIDlink ADR will be able to operate as a DHCP client on the network by sending a letter explaining what is needed. See GRIDlinkADR.info “Letter to IT Manager”.

If DHCP will not be permitted then a static IP Address must be assigned. This is best done at the factory prior to shipment. If this is not possible, then it is recommended for the installer to make the change on a network that permits DHCP prior to arriving at the customer’s site. See GRIDlinkADR.info for Instructions “Change GL DHCP to Static IP”.

It is recommended to contact tech support and set up the GRIDview account. Using the Subscriptions you can add the installer’s phone number to receive alerts and test functionality before the VTN is set up. This way when the installer has successfully connected the GRIDlink, a text will be received confirming all is well.

On installation day, bring a laptop and CAT5E cable to troubleshoot the network if necessary.

Installation

After you have mounted your GRIDlink ADR either on a DIN rail or surface mount using the 2 mounting screw holes provided it is then a simple 3 step process.

1. **Connect your load shed relay.**
   
   Most Utilities use the **HIGH** relay for load shedding. Terminals: (-) 18  (+) 8

   **MODERATE** was created for a second tier lesser load shed but is rarely used so it is optional. In some special cases it is used for taking extra load prior to the Event for example "Pre-Cooling". Terminals: (-) 18  (+) 37

   **PENDING** (also optional) can be used to notify personnel that an Event is coming. The relay can be wire to a beacon for example. Terminals: (-) 18  (+) 8

2. **Connect 10-30VDC regulated power to the GRIDlink on terminals 24 & 25 from the power supply.**

   You should see the PWR LED illuminate. It can be blinking or solid depending on the network configuration.

3. **Insert the CAT5E cable from the LAN to the RJ45 port located on the top right of the controller.**

   You should immediately see the Ethernet 100 and ACT LEDs illuminate. This is an indication that the cable is good, it is seated properly in the port and it is connected to a network.

   GRIDlink supports DHCP so it will obtain it’s IP address automatically from the network. After about 2 minutes, the PWR LED should be ON solid. If it is blinking then the GRIDlink was not able to obtain an IP address.

   If the GRIDlink has been left on for several hours without a CAT5E cable connection it probably has not been able to acquire an IP address, it may need to be power cycled.
If the GRIDlink still does not acquire an IP address then check the trouble shooting Guide or contact the IT Manager.

Within 2 or 3 minutes of acquiring an IP address, the GRIDlink will connect to the Utility’s VTN or a test site and when successful the DO4 will illuminate.

If a Subscription was set up in advance, an SMS text will be received stating that the GRIDlink is ON LINE with GRIDview.

You are done!

Connection to the Utility Server

GRIDlink is generally shipped with a test account to the Utility’s server, so this connection does not need to be configured prior to installation. It serves to confirm a connection. No test Events will be sent from this account. When the account information is received from the Utility it can be loaded over GRIDview at any time. Contact support for any questions.
Trouble Shooting

The GRIDview Cloud connection provides a robust backend connection which communicates in a differently than the Open ADR protocol. As a second line of communication, GRIDview connects in most cases when the Utility’s server fails to do so. How each server connects or doesn’t connects provides vital information on where the problem lies.

CASE 1 – GRIDlink OFF LINE (with the Utility’s Server VTN) and ON LINE with GRIDview

1. The Utility’s VTN server connection that is the problem. This could be caused from:
2. The ini file within the GRIDlink that holds the URL, user name & password to the VTN is incorrectly configured.
3. The VTN has changed it’s SSL security file which will require a change in the GRIDlink certification to reconnect.
4. It is possible there is maintenance being done on the server.
5. In some cases a reboot might be required from GRIDview or power cycle locally.
6. Content filtering in the firewall where the VTN’s IP may need to be white-listed.
7. The network DNS server does not recognize the VTN’s URL so cannot resolve the IP address

CASE 2 – GRIDlink OFF LINE (with the Utility’s Server VTN) and OFF LINE with GRIDview

Wired to local network
This is the network, router settings or your Internet connection.

1. Check the GRIDlink and see that the PWR 100 ACT LED are all illuminated. If 100 ACT is OFF then check your cable and physical connection.
2. If the GRIDlink is set up for DHCP and was powered ON for some time without a network connection to the DHCP server, it might need to be power cycled. This is not uncommon that if the GRIDlink was powered some time before connecting the Ethernet cable, it failed to get an IP Address. This would be indicated by the Power LED blinking which should be solid.
3. If the GRIDlink was given a Static IP, perhaps the information was entered incorrectly through the Tool Kit or the IP to MAC Address binding in the network Router does not agree with the GRIDlink’s configured network settings. This would be indicated by the Power LED blinking as well. Re-check all settings.
4. If the GRIDlink is using DHCP and the router assigned an IP address which is paired to the MAC address (called IP to MAC Address resolution). Check for changes in the router.
5. If the local area network connection is OK, you should test to make sure there is an Internet connection. This can be done by plugging a laptop into the same cable used by the GRIDlink. Open a Command (CMD) screen and enter: ping 8.8.8.8 or other known Internet IP. It is possible that 8.8.8.8 is available but the network has its own DNS server. Tech support will provide the IP Addresses of the VTN and GRIDview to ping.
Open a Command (CMD) screen and enter: ping 8.8.8.8 or other known Internet IP as shown below.

4 replies without packet loss indicates a good Internet connection as shown here, otherwise contact the IT Manager.

Cell connection

1. If you are using a Red Lion cell router, check the WAN light to make sure there is a connection to the tower. This should be ON. See figure below.

2. Make sure the router is provisioned though your cell carrier.

3. Check the GRIDlink and see that the PWR 100 ACT LED are all illuminated. If 100 ACT is OFF then check your cable and physical connection to the cell router.

4. Make sure the antenna is connected properly and in a location free from EMI and able to receive a signal. Passing the antenna wire through a gland seal with an AC source such as a CT wire will cause interference.