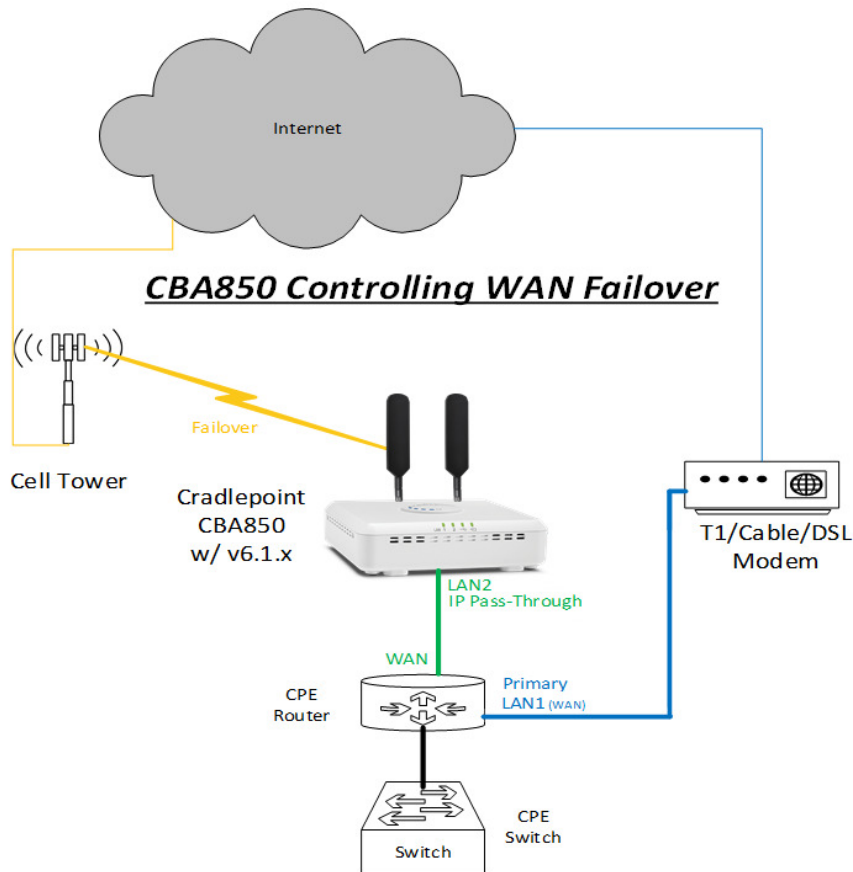




Scope of Services

We at Telspan understand the important role that communication plays in your business. For over 49 years Telspan has maintained high standards and superior customer service for our customers. To continue with those high standards Telspan will perform a full connectivity and speed test to properly assess the 4g capabilities of your business location. Prior to installation of a Cradlepoint solution, a field test will be performed to assess optimum physical location for deployment. Good signal quality is key to getting the best speeds available, we take the extra step to come to your office and test 4g connectivity at your location for signal strength and throughput. Using a test endpoint (our CBA850) we can assess which provider is the best for you! We have multiple demo SIM cards to test connection across several carriers so we can find the right fit for your enterprise. After determining which of the carriers have a steadfast signal, speed tests will be performed for an accurate reading of available bandwidth during future failover events.

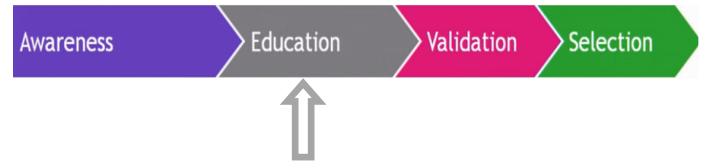
Cradlepoint 4G Signal Test Configuration



This is an example of a non-invasive connection without interrupting the network infrastructure. (This would not be used for a failover installation.)

This example temporary connection of the CBA 850 is to test for a location with the best 4G signal strength.

The CBA 850 can be plugged into a spare port of the CPE router or into a spare Ethernet port on a patch panel that is patched into the switch. This will allow the CBA 850 to be plugged into any spare data jack on the LAN (by a window)



Cradlepoint 4G Failover Solutions

During failover events, it's possible to keep the consumption of data in check by utilizing the data usage tools, allowing you to see what traffic is going to which device, as well as tracking overall consumption visible within a statistical chart that is easy to read and monitor. The ECM or Netcloud manager allows remote logs to be viewed on all your Cradlepoint devices at once. This is especially useful for tracking pooled data plans with the carriers across your SIM cards if multiple Cradlepoint devices are involved. The normal WAN which passes through the Cradlepoint also provides data on usage and can provide a dynamic for managing small to large scale network traffic.

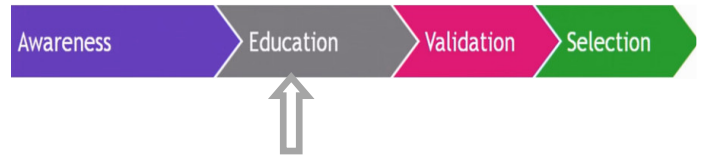
Several of the Cradlepoint endpoint options are equipped with Wireless radios. These endpoints broadcast on the 2.4 and 5.0 GHZ bands and may utilize 802.1x authenticated dual-band concurrent capable a/b/g/n/ac technologies. Depending on the device, multiple SSID may be configured with up to 128 simultaneous clients. Each SSID is protected with WEP, WPA, WPA2 or WPA2 Enterprise security measures and may also have a captive portal configured.

By default, the 4G wireless SIM modem connections are not always on. When the On-Demand mode is selected a connection to the Internet is made as needed. When On-Demand is not selected a connection to the Internet is always maintained, consuming more monthly data but allowing for faster failover. Failover times are very fast and variations in configurations may impact

Load balancing allows multiple WAN to balance usage, additionally it can make it easier to manage multiple SIM cards by keeping them at the same usage for easier account management with the carriers. This can be used in conjunction with multiple WAN and SIM cards or only between SIM during failover to prevent constant data usage on the 4G carrier when not needed. If this is enabled, the router will use multiple WAN interfaces to increase the data transfer throughput by using any connected WAN interface consecutively. Selecting Load Balance will automatically start the WAN interface and add it to the pool of WAN interfaces to use for data transfer. The router will make a best effort to keep data usage between interfaces at a similar percentage of the assigned data cap in the data usage rule for each interface, rather than distributing sessions based solely on bandwidth. For proper functioning, you need to create data usage rules for each WAN device you will be load balancing.

While a Cradlepoint configured for failover does not normally use the SIM data, it can be configured to supplement your bandwidth with the SIM cards if you hit a scalable minimum threshold. This can be used to maintain a more reliable connection if so desired to better maintain services like VOIP or video conferencing. Rules should be implemented in this scenario to limit consumption of data from the SIM to keep costs at a minimum. The ECM netcloud management tool allows real time tracking of usage and visual graphs for easy referencing.

It is also possible to, during a failover event, limit where traffic will go and what types of traffic are allowed. Much like a normal firewall Cradlepoint features content filtering and blocking of ports or specific IP or even MAC addresses. This enables the filtration of certain undesirable traffic such as streaming video or downloading etc. Also, it ensures that while the core components of the business remain functional and intact, while not consuming exorbitant amounts of data. It is also important to keep in mind which devices will be allowed what speeds as the total available bandwidth may be allocated amongst connected users in a multitude of ways. This can be important to prevent one or two data hogs to limit the speed and connectivity of the others.



The modem is removable by taking off the plate housing around the antenna then pulling gently on the antenna connection. The modem should slide out of its USB and the slot for the SIM card will be on the opposite side from the antenna.

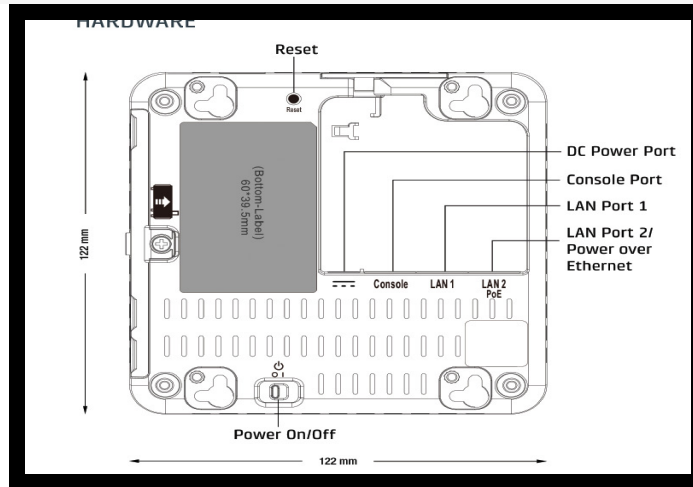
The lights on the top provide a general signal strength indicator, for better details go into the web UI or ECM.

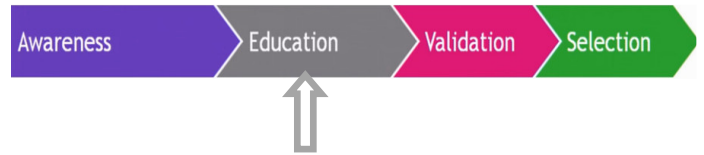
NEXT GENERATION OUT-OF-BAND MANAGEMENT:

- + Secure cloud access
- + No static IP required, even during an outage
- + 4G LTE connectivity
- + Combined with best-in-class 3G/4G/LTE to Ethernet Bridge
- + Adaptive to any networking environment (e.g. Cisco, Juniper, etc.)

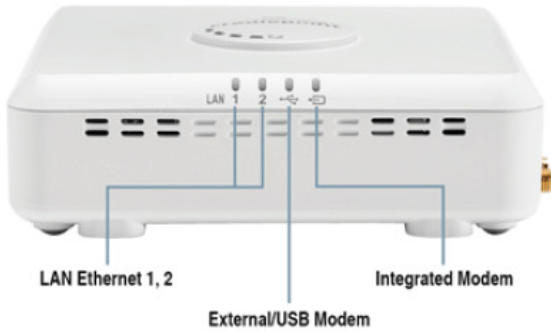
KEY FEATURES:

- + Plug-and-play overlay failover
- + Cloud-managed
- + Integrated 3G/4G/LTE
- + Integrated Multi-Carrier Software-Defined Radio
- + Out-of-Band Management
- + Power-over-Ethernet (PoE)
- + External antenna options
- + IPv6 support
- + RJ45 serial console port for direct out-of-band management

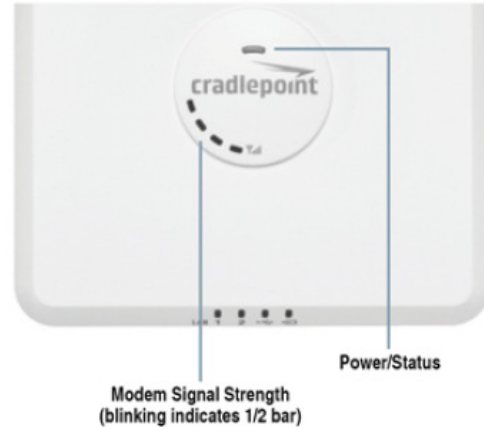




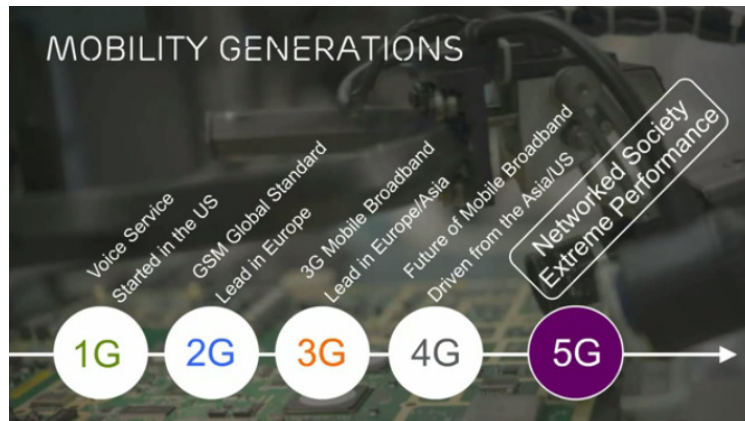
LEDS



- INTEGRATED MODEM KEY:**
- Connected
 - ⚡ (blinking) Connecting
 - Not active / may be engaged in failover process
 - ⚡ (blinking) Connection error
 - ⚡ (blinking) Modem resetting



- MODEM SIGNAL STRENGTH KEY:** Blinking indicates 1/2 bar
- POWER/STATUS COLOR CODE:**
- 4G
 - 3G
 - Attention



Unit	Symbol	Description
Bytes per second	Bps or B/s	1 Bps = 8 bps
Kilobytes per second	KBps or KB/s	1 KBps = 1,000 Bps
Megabytes per second	MBps or MB/s	1 MBps = 1,000 KBps
Gigabytes per second	GBps or GB/s	1 GBps = 1,000 MBps