

Accelerated 6300-CX Configuration for Verizon One Talk Solution Guide

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Contents

- Accelerated 6300-CX LTE Router Setup** 4
 - ✓ Initial Setup 4
 - ✓ Site Survey 5
 - ✓ Remote Power Installation – Powering Option #1 5
 - ✓ Direct Power Installation – Powering Option #2 6
 - ✓ Understanding the 6300-CX LEDs 6
- One Talk Configuration with the Accelerated 6300-CX** 7
 - ✓ Identify the Primary Interface 7
 - ✓ Verify Desk Phone Connectivity 7

Configuration Quick List:

1. Complete a site survey for cellular signal strength and ideal placement location.
2. Deploy the Accelerated 6300-CX with an activated SIM.
3. Confirm connectivity: check for the blue status LED and optimal signal-strength LEDs.
4. Identify whether the One Talk phone will use a single- or dual-WAN router as its primary interface.

NOTE: Enable “router mode” on the 6300-CX if it will serve as the primary means of Internet access. No other configuration steps are required.

SINGLE-WAN

5. Disable DHCP services on the single-WAN router.
6. Enable “router mode” on the 6300-CX.
7. Run an Ethernet cable from the 6300-CX to a port on the back of the single-WAN router.
NOTE: Failover configuration assumes a primary uplink is obtained from the coaxial interface.
8. Add a new WAN interface to the 6300-CX using Accelerated View (or local configuration) for the router’s primary Internet uplink.
9. Configure Active Recovery within Accelerated View (or the 6300-CX’s local configuration UI) for the primary WAN interface.
10. Verify failover continuity.

DUAL-WAN

5. Confirm connectivity via the primary WAN port.
6. Run an Ethernet cable from the 6300-CX to the secondary WAN port.
NOTE: Failover configuration assumes a primary uplink is obtained from the primary interface.
7. Configure the failover interface to serve as a backup WAN uplink.
8. Define any required routes or policies to establish interface priorities – WAN 1 needs to take priority over WAN 2.
9. Establish interface monitoring.
10. Verify failover continuity.

NOTE: This document is intended to provide procedural guidance toward the interoperability of the Accelerated 6300-CX with a Verizon One Talk phone. Refer to the dedicated support resources included with either product for comprehensive documentation.

Overview

One Talk from Verizon is a Voice over Internet Protocol (VoIP) service capable of sharing a single telephone number across multiple lines. Users can then sync any supported Internet-enabled tablet or smartphone to a Verizon One Talk desk phone and seamlessly transfer calls from device to device. Additional features, such as mobile video calling, auto receptionist, mobile call management, and line hunting, are included with a One-Talk enabled phone line, many of which can be accessed from the One Talk Mobile App. The desk phone itself, however, requires an active WAN connection to maintain all VoIP and enterprise functionality.

The Accelerated 6300-CX LTE Router provides a reliable, high-speed cellular connection that is compatible with existing wireline infrastructure. While its 4G LTE speeds are capable of operating as a primary WAN uplink, the 6300-CX can also be configured as a backup. This network failover solution delivers the ultimate flexibility to minimize expenses when it comes time for upgrading equipment to the latest wireless standards.

Cellular data (4G LTE) bypasses wireline Internet service providers (ISPs) to facilitate the best redundancy possible. Additionally, in some situations it may be a challenge to acquire access to wired circuits or an event may call for temporary online access. For these reasons Accelerated Concepts extensively tests the 6300-CX LTE Router to ensure its interoperability with a wide variety of network appliances, including equipment issued by Verizon for its centralized VoIP service, One Talk.

Please refer to Verizon's [One Talk Support](#) page for more information, including a list of supported devices.

Interoperability Matrix

This section covers interoperability information of the hardware tested for this solution. It includes the firmware versions of both devices as well as the date of testing.

Date	T46G Firmware	6300-CX Firmware
12/2016	28.80.21.18	16.10.13

Caveats

The delivery of wireless services varies depending on the carrier and may lead to differences in the area of coverage, type of service (3G, 4G, LTE, etc.), available bandwidth, and IP address designation (Private or Public) among other factors. The interoperability test designed for this solution guide included LTE service, maximum coverage availability, and a public IP address assigned to each device.

Using the 6300-CX as a secondary connection assumes the availability of a primary WAN uplink. Failover implementation requires a series of configuration steps, both on the 6300-CX and the device supplying the primary connectivity, which is covered in the processes described herein. It requires the following:

- A single- or dual-WAN broadband router
- Available LAN ports, at least 1 for the desk phone and 1 for the 6300-CX's WAN interface
- Administrative access to the broadband router's local GUI

While administration portals may vary greatly, depending on the make and model of the router being utilized, the underlying configuration remains the same.

NOTE: If additional LAN ports are necessary for practical use, a switch can be introduced without requiring additional configuration. Connect the switch to an available LAN port and proceed with the processes described herein.

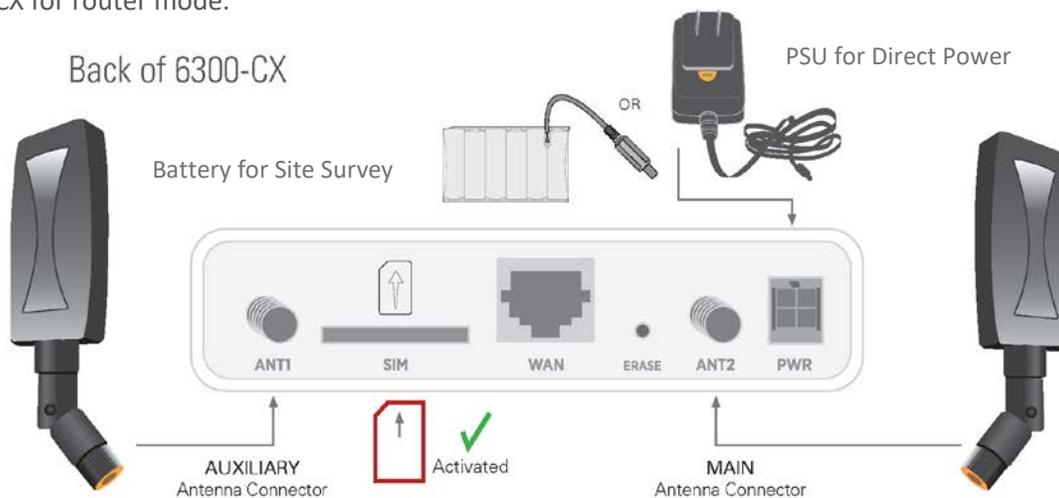
Accelerated 6300-CX LTE Router Setup

Initial Setup

Affix both antennas to the router and insert an activated SIM card before deploying the device. Be sure to select a location with optimal signal strength. For detailed instruction, refer to the tables that follow. Subsequent sections will outline site selection, powering options, and other device functionality.

Step-by-Step Guidance: Initial Setup

1. Insert the activated 2FF SIM card provided by your cellular network operator (putting the cut corner in first with metal contacts facing down). The card clicks into place when completely inserted.
2. Attach the two included antennas; both should be installed for optimal operation. Do this by gripping the metal connector section with your thumb and forefinger, tightening until secure. Do not tighten the antenna by holding any part of the plastic antenna housing.
3. To determine the optimal location for the 6300-CX, please see the “Site Survey” section.
4. Refer to the section(s) for Remote or Direct Power Installations when ready to connect the 6300-CX to the permanent power supply unit.
5. The 6300-CX uses DHCP with IP Passthrough by default, which satisfies the setup requirements for most environments. If required, please use Accelerated View™ or the 6300-CX local GUI to configure the 6300-CX for router mode.



Site Survey

If you are unsure of the available cellular signal strength, or are choosing between several locations, please follow the instructions to identify the ideal installation site.

Step-by-Step Guidance: Site Survey

1. After following steps 1 and 2 in the “Initial Setup” section, connect the battery pack to temporarily power the Accelerated 6300-CX. The charge lasts two to four hours – it is not rechargeable and should be properly disposed of after use.
2. Move the 6300-CX to different locations within your site to determine the best compromise between signal strength and installation constraints. Since cellular signal strength may fluctuate, it is important to **wait at each location for 1 minute while observing the signal strength indicator** on the front of the device. Minimum cellular signal strength for operation is 2 bars (3+ is preferred).
3. After determining the optimal location, remove the battery pack and connect the main power supply unit or Ethernet cable connected to the PoE injector (per the power option outlined below).

Remote Power Installation – Powering Option #1

The included Power-over-Ethernet (PoE) injector allows the device to be positioned away from power outlets to simplify its installation needs. The adaptor consolidates the DC power and Ethernet connections so that both can be run to the 6300-CX via a single Ethernet cable. Distances of 300 ft have been tested on CAT6 and 250 ft on CAT5e. Note that cable conditions and the number of splices will impact actual distance.

Step-by-Step Guidance: Remote Power Installation

1. Plug the 6300-CX’s power supply unit (PSU) into an AC power outlet.
2. Connect the end of the PSU into the DC input (4 pin connector) of the PoE injector.
3. Insert the male RJ45 connector of the PoE injector cable into the broadband router.
4. Connect an Ethernet cable from the RJ45 socket on the PoE injector cable to the Ethernet port of the 6300-CX. (See diagram.)

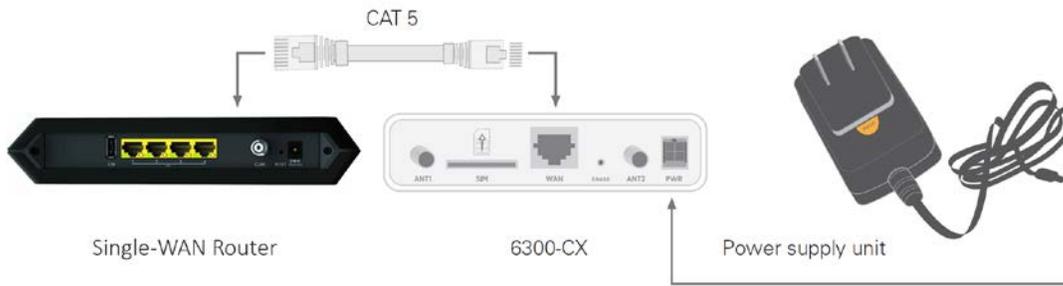


Direct Power Installation – Powering Option #2

If you plan to collocate the 6300-CX with the MX device, you can directly power the 6300-CX without the PoE cable.

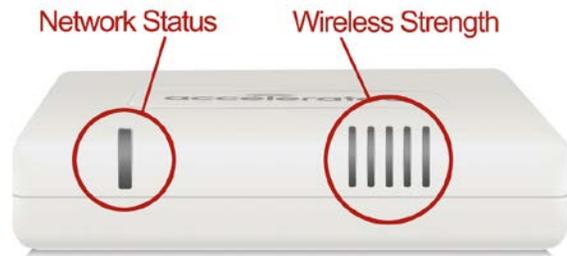
Step-by-Step Guidance: Direct Power Installation

1. Use an Ethernet cable to connect the 6300-CX to the router using the primary WAN port (to use the cellular network as the primary connection) or the secondary WAN port (to configure a failover).
NOTE: A single-WAN router may not delineate between primary and secondary ports. This will be handled during device configuration.
2. Plug the 6300-CX power supply unit (PSU) into an AC power outlet.
3. Connect the PSU into the 4-pin power connector of the 6300-CX. (See diagram.)



Understanding the 6300-CX LEDs

Once power has been established, your device will initialize and attempt to connect to the network. Device initialization may take 30-60 seconds. Indicator lights on the **Wireless Strength Indicator** show you the Cellular Network Signal Strength. The **Network Status Light** on the front left of the device displays connectivity information.



Please visit www.accelerated.com for additional information and troubleshooting tips.

Network Status LED

	Solid Yellow Initializing or starting up.		Solid Green Connected to 2G or 3G and also has an Ethernet connection.
	Flashing Yellow In the process of connecting to the cellular network and to a device on its Ethernet port.		Flashing Blue Connected to 4G LTE and in the process of connecting to a device on its Ethernet port.
	Flashing White Has an Ethernet connection and is in the process of connecting to the cellular network.		Solid Blue Connected to 4G LTE and also has an Ethernet connection.
	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).		Alternating Red/ Yellow Upgrading firmware. WARNING: DO NOT POWER OFF DURING FIRMWARE UPGRADE.

Wireless 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

One Talk Configuration with the Accelerated 6300-CX

Identify the Primary Interface

Before configuring the 6300-CX's 4G LTE uplink as a backup, first identify the primary source of Internet access. The vast majority of broadband connections use a router with a coaxial WAN interface to receive a signal that carries Internet data/ traffic. Network devices interface with this signal via the array of RJ45 sockets (Ethernet ports) located on the router's back panel.

These ports are sometimes designated as LAN interfaces, though they can often be configured to route WAN traffic as well. Most routers distributed by wireline ISPs are single-WAN; it is designed to interface with only a single WAN uplink at a time. A dual-WAN router will have two ports explicitly designated for WAN interfaces, which allows the device to recognize two WAN uplinks simultaneously and leverage advanced functionality such as load balancing.

The Accelerated 6300-CX can be configured as the failover uplink after identifying whether the network's primary Internet connection is coming from a single-WAN or dual-WAN router. (Assume the router is single-WAN unless the back panel features two ports clearly labeled for WAN interfaces – they will typically sit separate from the array of LAN ports.) After confirming the port layout of the primary router, please refer to the corresponding Solution Guide:

[6300-CX Configuration for Single-WAN Routers](#) | OR | [6300-CX Configuration for Dual-WAN Routers](#)

NOTE: New Solution Guides for third-party configurations are drafted as Accelerated continues interoperability testing. Check the [online resources repository](#) for proprietary device documentation (e.g. SonicWall's TZ series or Meraki's MX line of security appliances).

Verify Desk Phone Connectivity

The desk phone is ready to connect to the network once its primary and failover WAN uplinks are configured. To do so, plug the device into a power outlet using its included power supply and wait for the phone to initialize. Its onboard display will indicate that the IP phone is offline prior to connecting the Ethernet cable from the single- or dual-WAN router's LAN port to the RJ45 socket on the back of the phone designated for Internet. It is important to note that most desk phones have two Ethernet ports: one for WAN/ Internet connectivity and another to relay its network access to a PC – the VoIP service will not come online unless the WAN port is used.

Determining IP and MAC Addresses

1. Set up network per single- or dual-WAN doc
2. Power on and connect phone to network
3. Press the **OK** button physically located on the phone's directional pad
4. Take note of the **IPv4** address (a string of four numbers separated by periods)
5. Note the **MAC** as well (six alphanumeric pairs of characters)

Once online, the phone's onboard display features green icons to indicate that its phone lines are provisioned and ready for use. Confirm this by picking up the receiver. If there is a dial tone the account associated with the phone number has been successfully associated with the desk phone. If not, the device may still be online but an account has not been provisioned for it. Should this occur, take note of the desk phone's IP and MAC addresses and reach out to the service provider responsible for managing the phone lines used for One Talk.

IMPORTANT: The above guidance is for FAILOVER connectivity using the 6300-CX. This requires that an alternative means of Internet access is allocated for the primary WAN uplink. If there is no need to configure a backup connection via the 6300-CX, its 4G LTE network can be leveraged as the primary WAN by running an Ethernet cable from the phone's WAN port directly into the RJ45 socket on the back of the 6300-CX. Please note that the desk phone will not be able to relay the CX's Internet access to another device (via the phone's PC Ethernet port) unless the CX is [configured for router mode](#); its default setting is IP Passthrough.