

# BUSINESS VOICEEDGE™

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## TECHNICAL OVERVIEW

COMCAST  
BUSINESS

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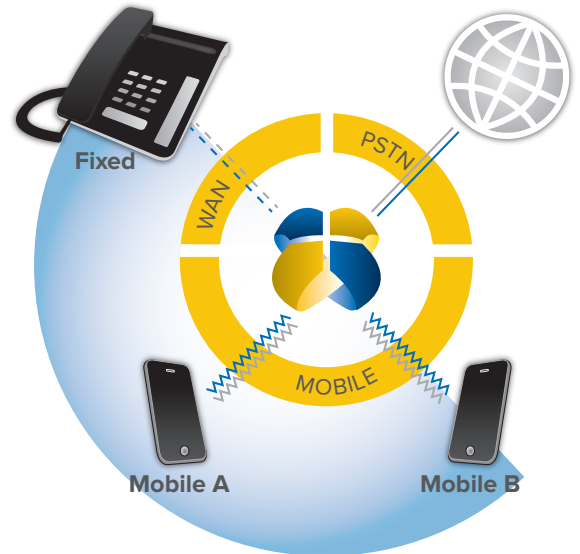
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## SUMMARY

Comcast Business VoiceEdge provides small and medium sized businesses (SMB) and enterprise customers with a business communication solution hosted in the cloud.

Business VoiceEdge provides users with a unified communication experience and advanced capabilities that can be accessed wherever they are: at their desks, on a mobile phone, or using a softphone on their PC – to help keep them connected. It can be installed for companies located within the Comcast Business footprint.<sup>1</sup>

Because the service is hosted in the cloud, businesses benefit from its advanced communication capabilities such as video calling, high definition (HD)<sup>2</sup> voice, unified messaging and more – all without having to maintain a hardware platform on site or invest in costly capital expenses. It gives large and small businesses alike a simple way to grow and integrate their business communications across multiple sites.



<sup>1</sup> VoiceEdge teleworkers and VoiceEdge softphone users can connect over-the-top using a third-party broadband connection that is outside the Comcast Business footprint.

<sup>2</sup> Polycom phones only.

# BUSINESS VOICEEDGE OVERVIEW

The following pages will provide details on the technical features and business benefits of Business VoiceEdge. Here are a few highlights:

- **The Business VoiceEdge Infrastructure** – Hosted in the cloud, Business VoiceEdge is geographically distributed and offers business continuity features. The infrastructure is operated and maintained by Comcast Business, and it is responsible for hosting users and enterprises, delivering unified communication services and routing calls.
- **The Comcast Network** – The Comcast converged IP network delivers Business VoiceEdge services to customers via a dedicated connection engineered to support traffic at the customer site, so Business VoiceEdge customers receive a high-quality communications experience.
- **On-The-Go Connectivity** – Business VoiceEdge service offers mobile workers access to their phones from wherever they are via a broadband connection over the public Internet. Services can be managed with a Comcast softphone, and/or a teleworker solution implemented in their home office.
- **Support & Training** – Business VoiceEdge customers can take advantage of a comprehensive support, training and online resources.
- **Scalability** – Companies can scale Business VoiceEdge to meet both current and future needs.

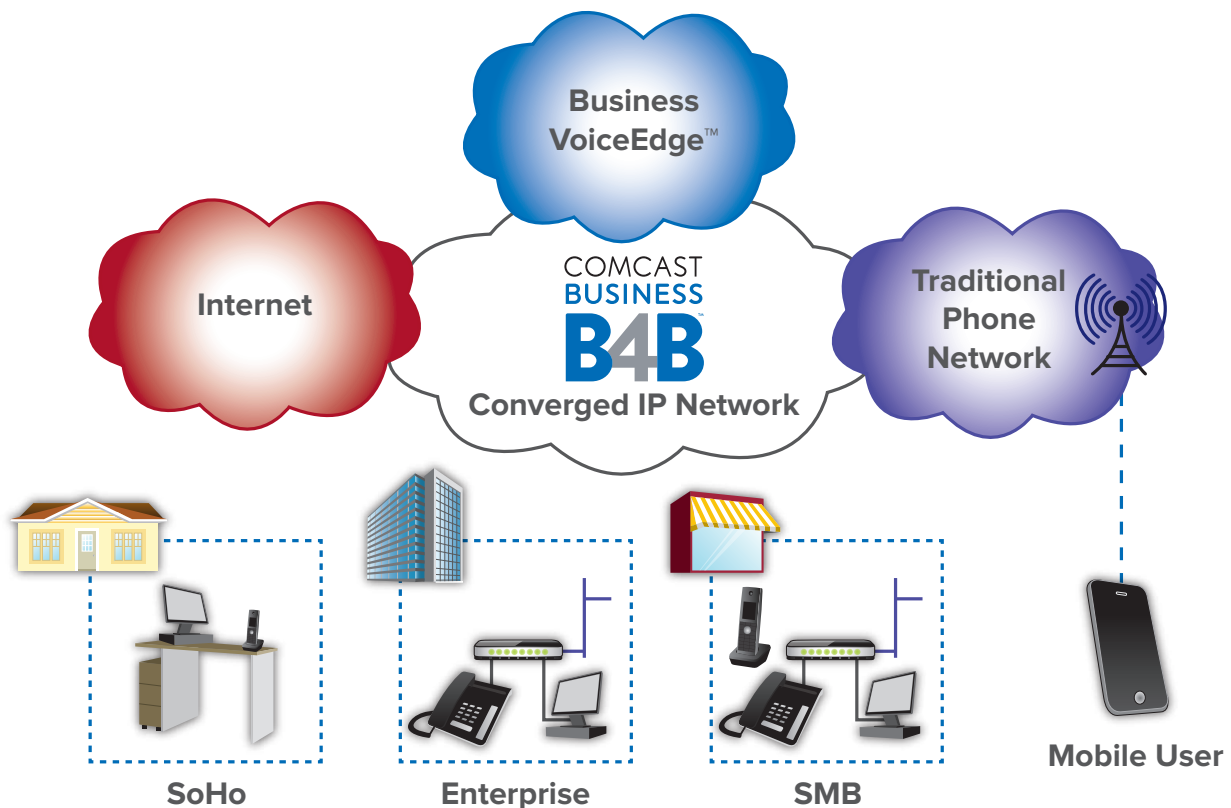


Figure 1. Comcast VoiceEdge Network

# BUSINESS VOICEEDGE TECHNICAL DESCRIPTION

This section describes the key components of Business VoiceEdge.

- **Seats** – Seats are the core building blocks of Business VoiceEdge. Seats are associated with individual Business VoiceEdge users.
- **Services and Features** – Business VoiceEdge offers a rich set of Unified Communication capabilities and services including unified messaging, mobility, multimedia communication and call queues – all designed to help enhance enterprise productivity. By being hosted in the cloud, these capabilities can be offered transparently across customer locations, and to multiple user devices.
- **Equipment** – Business VoiceEdge is offered with a broad range of customer premises equipment to choose from, such as the Polycom VVX line of IP phones, Panasonic KX-TPA wireless IP phones, Audio Codes Analog Terminal Adapter (ATA), Edgewater and Adtran quality assurance devices, as well as the Comcast Softphone.

## Business VoiceEdge Seats

A seat is a combination of user services. Typically, a Business VoiceEdge seat corresponds to a physical user.

- **A Unified Communication (UC) Seat** is targeted at business users and provides a full suite of unified communication capabilities. The Unified Communication seat user features are listed in Appendix 1.

Each Business VoiceEdge seat includes the following services and features:

- A direct inward dial (DID) number
- Inbound calling
- Outbound local and domestic long distance for a fixed monthly price
- International long distance<sup>3</sup>
- Toll-free<sup>3</sup>
- Directory listing

Unified communication seats also have access to the group features listed in Appendix 2.

A complete description of all Business VoiceEdge services can be found online at:

<http://business.comcast.com/getstarted>.

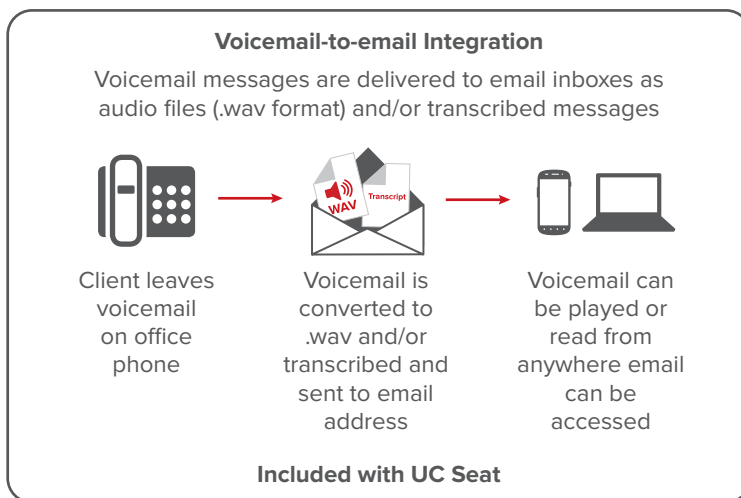
<sup>3</sup> Toll charges for international and toll-free services are billed as per Business VoiceEdge rate card.

## BUSINESS VOICEEDGE SERVICES AND FEATURES

Business VoiceEdge offers a range of PBX features and Unified Communication capabilities from the cloud. These features are available to users, groups, customer locations, and even across multiple customer locations.

### UNIFIED MESSAGING

Business VoiceEdge offers a unified messaging capability that allows users to either retrieve their voice message via a standard interface, or receive their messages in their email.



Business VoiceEdge unified messaging supports voice and video messages. A unified messaging mailbox is included with each UC seat. Readable voicemail, which transcribes your voicemail and emails into text form, is included with all Business VoiceEdge seats that have voicemail set up.

### SOFTPHONE CLIENT

Business VoiceEdge offers a softphone client allowing users to manage their communications from anywhere they can access a broadband connection, the same way they would from their desk. The softphone supports voice and video calling, call history and directory integration as well as a visual interface to manage the most commonly used features.

The Business VoiceEdge softphone is available for PCs and Macs and allows you to:

- Place and receive calls from your PC or Mac computer
- Change your service settings
- Easily transfer calls and perform other in-call functions
- Add video to your call
- Dial from your company directory

## SELF-SERVICE PORTAL

Business VoiceEdge offers a multi-level self-service portal allowing the Primary Manager, Service Manager or Service users to manage their services through a secure, powerful, user-friendly web portal.

<b>Robust web portal for service and feature management</b>
<b>Access levels</b>
<b>User</b> Personal feature management
<b>Technical Admin/Service Manager</b> Group feature access Password resets
<b>Customer Admin</b> Same as technical admin, plus invoice and billing access



## COMCAST BUSINESS APP

Comcast Business offers a mobile application that extends the power of your Business VoiceEdge service by accessing advanced phone services from your iOS and Android phones including:

- **Never Miss a Business Call**
  - Have your business calls follow you by ringing your mobile or other phones for incoming calls
  - Be alerted of new business calls and voicemail
- **Use Your Personal Phone to Make Business Calls**
  - Show your Business VoiceEdge business number when making calls from your smartphone
  - Dial quickly using your Business VoiceEdge directory, smartphone directory, business voicemail and your business call log
- **Business Voicemail at Your Fingertips**
  - Listen to business voicemail on your mobile device
  - Record and select your business voicemail greetings on your smartphone
  - Forward the business voicemail as an email attachment and/or a transcription using your personal smartphone

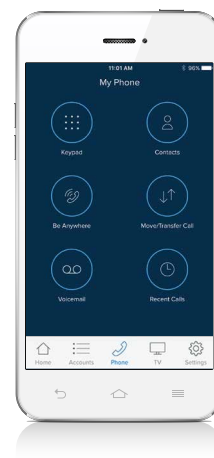
### **Puts your office phone system in the palm of your hand**

Alerts of new calls, voicemails at the office  
Check office voicemail from your mobile  
Set up Be Anywhere and other UC features on the go  
Initiate calls from your mobile that look like they are from your office line

### **Simplify communications and enhance productivity with one-number lifestyle**

Integrates your work line and mobile device

**Free download for iOS and Android devices  
on Google Play or the App Store**

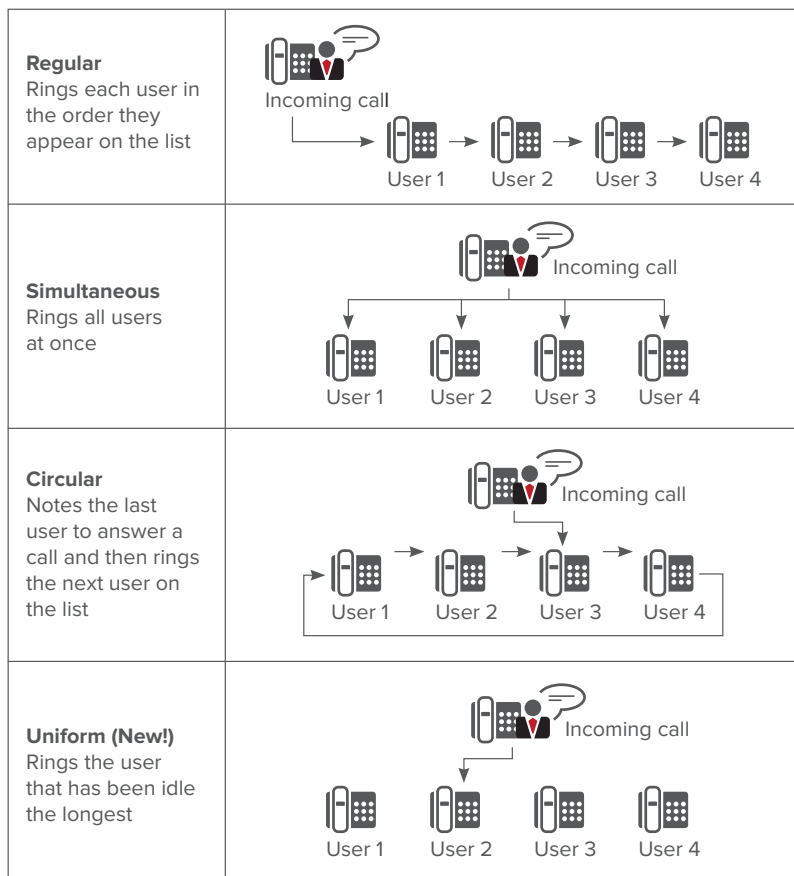


## CALL QUEUES

Business VoiceEdge offers a contact center capability via its Call Queue feature. The Call Queue dispatches calls to a set of agents according to a configurable hunting policy, and queues calls when all agents are busy. Calls in queue are played a welcome message, then hold music and periodic messages until an agent is available.

Call Queues support multi-site enterprises such that the agents in a call queue can be located in different geographical locations within the enterprise. The following capabilities are also supported:

- Display Inbound call information (Client and device)
  - Calling Party Name
  - Calling Party Number
  - Caller Wait Time
  - Number of Calls in Queue
  - Wait time of Longest Waiting call in queue
- Guard Timer – This is the time that the agent has to “wrap up” a call before they get another Call Queue call. The range for this is 1-25 seconds.
- Call Center membership
  - Activate/deactivate agents in queues (‘Join’)
  - Allow/disallow agents to change membership status
  - Allow/disallow Call Waiting for agents
- Distinctive Ring for queue calls (4 options)
- Agent Mobility
  - Deliver call to alternate device (Shared Call Appearance, Be Anywhere)



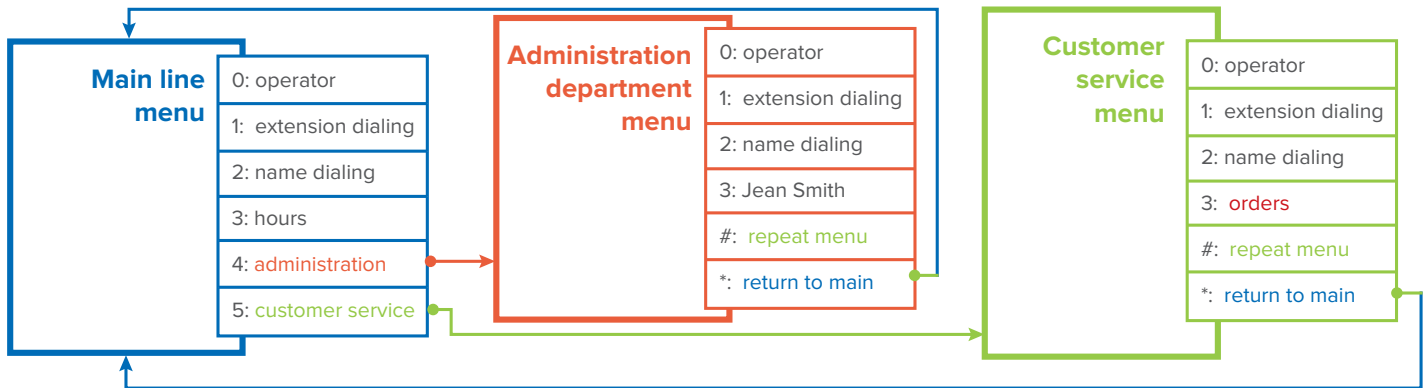
Call queues are licensed and sold based on the number of agents. The enterprise can create as many queues as desired with the licensed agents.



## AUTOMATED ATTENDANT

Business VoiceEdge allows businesses of all sizes to manage their incoming calls and project a professional image through the use of an Automated Attendant. The Automated Attendant enables building an interactive voice response menu to allow callers to reach the desired party or department (dial by name directory), or obtain information about the business such as the location, the business hours, and more.

Auto Attendants allows customers to build multi-level menus such as the one presented in the example below:



In addition to a set of standard function such as name dialing, extension dialing and operator, the Automated Attendants can be cascaded to create sophisticated menus.

Each Automated Attendant supports a business hours and an after-hours menu that can be customized to fit the specific needs of each business.

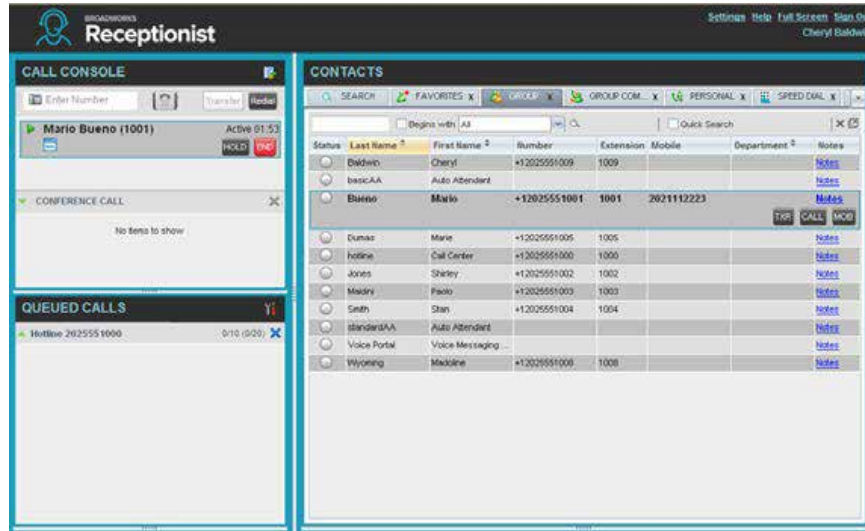
## TELEWORKER SUPPORT

Comcast Business VoiceEdge supports teleworkers. In this context, a teleworker is defined as a remote location of up to 4 seats, without the need for an enterprise SIP gateway (ESG). Business VoiceEdge teleworker support offers a simple, lightweight configuration allowing for users to work out of their home, or from a small remote location such as a shared remote office. Teleworkers have access to the same functionality as users located in the main enterprise location.

Teleworkers can connect to the Business VoiceEdge cloud using Comcast Internet or a 3rd-party broadband connection.

## SOFTWARE RECEPTIONIST CONSOLE

The Business VoiceEdge software Receptionist Console allows for monitoring and managing users in the enterprise via a graphical, user-friendly interface.



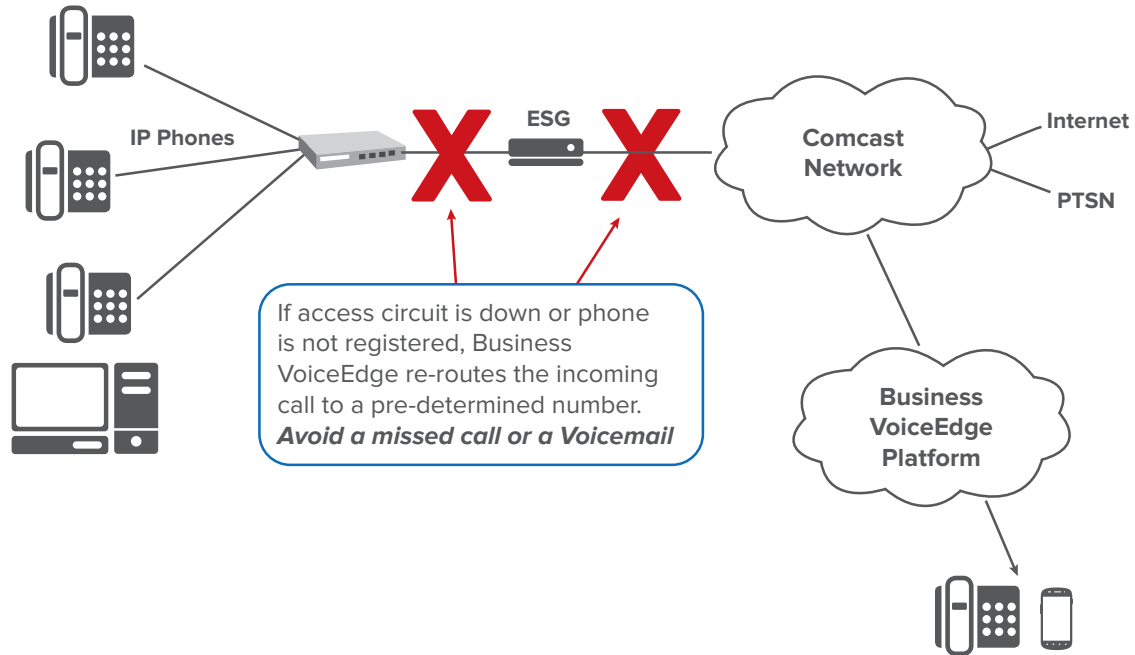
The Receptionist Console allows for:

- Viewing current switchboard activity
- Accessing the business directory – with phone status, alternate phone numbers, department, and room for notes
- Controlling calls – point-and-click to handle the call

## BUSINESS CONTINUITY

Business VoiceEdge offers business continuity features so calls can be rerouted to a destination designated by a customer when the connectivity to a customer location or to a specific user is lost due to a disaster such as an earthquake, a storm or any other unforeseen event.

Users and enterprise administrators have the ability to pre-configure how incoming calls should be handled when connectivity is lost with the network so calls are re-routed, thus allowing the business to continue its operations as usual.



# BUSINESS VOICEEDGE EQUIPMENT

Business VoiceEdge supports a broad range of equipment to match the needs of different types of users and situations. All Business VoiceEdge equipment must be procured through Comcast Business.<sup>4</sup>

Business VoiceEdge equipment includes:

- IP Phones: the latest line of Polycom VVX IP and Panasonic KX DECT phones.
- Comcast Softphone that can be deployed on Windows PCs and Macs.
- AudioCodes Analog Terminal Adapters (ATA) for supporting analog devices such as overhead paging.
- Adtran or Edgemark Enterprise SIP Gateways (ESG) are placed at the edge of the customer location and offer a range of monitoring and quality assurance tools to optimize the Business VoiceEdge customer experience.
- Modems and Optical Network Terminals (ONT) allow for connecting customer locations to the Comcast network.

## IP PHONES

Business VoiceEdge offers IP phones from Polycom and Panasonic. The following models are supported:

MODEL	FUNCTION	
Polycom VVX 310 / 311	<ul style="list-style-type: none"> <li>• Backlit LCD Display</li> <li>• Up to 6 line appearances</li> <li>• Ethernet 10/100o GigE</li> <li>• HD Voice</li> </ul>	
Polycom VVX 410 / 411	<ul style="list-style-type: none"> <li>• 3.5" Color Display</li> <li>• Up to 12 line appearances</li> <li>• HD Voice</li> <li>• Ethernet 10/100 or GigE</li> </ul>	
Polycom VVX Color Expansion Module	<ul style="list-style-type: none"> <li>• Compatible with VVX 410 / 411 VVX 500 / 501 and VVX 600 / 601</li> <li>• 28 multifunctional line keys* configurable as line registration call appearance speed dial DSS or BLF</li> <li>• Dual color illuminated LEDs for line status information</li> </ul> <p>*Total number of configurable line keys may vary by device type.</p>	
Polycom VVX 500 / 501	<ul style="list-style-type: none"> <li>• 3.5" Color Touchscreen Display</li> <li>• Up to 12 line appearances</li> <li>• HD Voice</li> <li>• Ethernet 10/100 or GigE</li> <li>• Supports USB camera (sold separately)</li> </ul>	
Polycom VVX Camera	<ul style="list-style-type: none"> <li>• Add-on camera for VVX 500 / 501 and 600 / 601 phones</li> <li>• Instantly turn your desktop device into a video conferencing phone.</li> <li>• Simple plug and play capability with USB power and no requirement for software drivers</li> </ul>	

<sup>4</sup> Business VoiceEdge only supports devices procured through Comcast Business. Devices subject to change. *Bring your own device* is not supported.

<p>Polycom VVX 600 / 601</p>	<ul style="list-style-type: none"> <li>• 4.3" Color Touchscreen Display</li> <li>• Up to 16 line appearances</li> <li>• HD Voice</li> <li>• Ethernet 10/100 or GigE</li> <li>• Supports Bluetooth connectivity</li> <li>• Supports USB camera (sold separately)</li> </ul>	
<p>Polycom VVX 1500 HD</p>	<ul style="list-style-type: none"> <li>• Touch-based user interface that is easy-to-use</li> <li>• Up to 6 line appearances</li> <li>• Ethernet 10/100 or GigE</li> <li>• Built in Video</li> <li>• Supports Bluetooth connectivity</li> </ul>	
<p>Panasonic KX-TPA60</p>	<ul style="list-style-type: none"> <li>• Color 1.8" Screen</li> <li>• Wireless handset for users who want to take the phone away from their desk</li> <li>• Easy Installation no LAN integration</li> <li>• No dedicated phone wiring required</li> </ul>	
<p>Panasonic KX-TPA65</p>	<ul style="list-style-type: none"> <li>• Color 1.8" Screen</li> <li>• Wireless DECT phone, easy installation no LAN integration</li> <li>• No dedicated phone wiring required</li> </ul>	
<p>Panasonic KX-TGP600</p>	<p>DECT wireless phone base station, required for use of the TPA65 and TPA60 phones</p>	
<p>Panasonic KX-A406</p>	<p>Wireless repeater for the Panasonic TGP600, TPA60 and TPA65 devices</p>	
<p>SoundStation IP 5000 HD</p>	<ul style="list-style-type: none"> <li>• White LED Backlight Display</li> <li>• HD Voice</li> <li>• Patented Polycom Acoustic Clarity technology</li> <li>• 7-foot microphone pickup and a small footprint designed for executive offices and smaller conference rooms</li> </ul>	
<p>SoundStation IP 6000 HD</p>	<ul style="list-style-type: none"> <li>• White LED Backlight Display</li> <li>• HD Voice</li> <li>• Polycom HD Voice technology, for high-fidelity calls</li> <li>• Microphone designed for small to midsize conference rooms, picks up voices up to 12 feet (3.5-meters)</li> </ul>	



## ANALOG TERMINAL ADAPTER

Business VoiceEdge supports an Analog Terminal Adapter (ATA) to allow customers to connect analog devices such as overhead paging systems:

MODEL	FUNCTION	
AudioCodes ATA MP-114	Multi-line DECT ATA	

## ENTERPRISE GATEWAY

Business VoiceEdge requires an Enterprise SIP Gateway at any premise with over 4 seats to provide traffic shaping, Mean Opinion Scores (MoS), device management and monitoring:



MODEL	FUNCTION	
Edgewater Enterprise SIP Gateway	Edgemark 4550 for small to mid-sized sites, supports up to 46 concurrent calls	
Adtran Enterprise SIP Gateway	Adtran 4430 for larger sites, supports 47-250 concurrent calls	

## MODEMS

Business VoiceEdge customers use Comcast broadband to connect to the network over coax or fiber, depending on their bandwidth needs, their location, or their existing configuration when signing up for Business VoiceEdge. In both cases, a separate network connection is deployed specifically for Business VoiceEdge to separate voice from data traffic.

Comcast Business delivers Business VoiceEdge to customers with a dedicated connection between the network and the customer location.

- When the service is delivered over a coax connection, it comes with a separate cable modem dedicated to Business VoiceEdge traffic. Business VoiceEdge provides DOCSIS 3.0 connections that support up to 40 simultaneous calls.
- When the service is delivered over a fiber connection, Comcast Business provides a dedicated, end-to-end connection to customers. Provisioning includes a separate port dedicated to Business VoiceEdge traffic on the optical network terminal (ONT). This type of connection supports up to 250 simultaneous calls.<sup>5</sup>

MODEL	FUNCTION	
Cable modem	The cable modem allows a customer location to connect to the Comcast WAN via coax.	 A black, rectangular cable modem with the ARRIS logo on the front panel and several status LEDs.
Optical Network Terminal	The fiber switch allows a customer location to connect to the Comcast WAN over Metro Ethernet (fiber).	 A silver, rack-mountable optical network terminal with multiple ports on the front panel, including fiber and Ethernet ports.

<sup>5</sup> This limit of 250 lines is tied to the capacities of the Enterprise Service Gateway.

# BUSINESS VOICEEDGE CAPACITY AND SCALABILITY

Business VoiceEdge is a business communication solution that scales to meet the needs of customers of different sizes and configuration. The minimum number of seats is 5, but there is no limit to the number of seats for larger enterprises. Because it is hosted in the cloud, it is particularly well suited for businesses with multiple locations.

## UPGRADES AND DOWNGRADES

Business VoiceEdge scales with the customer's business. It allows for adding and removing seats as the company evolves. Unlike premises-based solutions that require adding users in bulk via the addition of hardware line cards, Business VoiceEdge allows for adding and removing users as desired granularity, even one by one, without incurring any additional cost other than the additional seats themselves.

## MULTI-SITE BUSINESSES

Business VoiceEdge allows enterprises to grow in a variety of ways:

- Add new seats to their current location.
- Add new sites to their enterprise. Business VoiceEdge can be deployed to additional locations within the Comcast footprint while being fully integrated with the main site:
  - Share the same dialing plan
  - Common corporate directory
  - Central management by the enterprise administrator, and locally by the site administrator
  - Group services apply to all users in the enterprise and can span users in multiple sites<sup>6</sup>

## ANYWHERE COMMUNICATIONS

Business VoiceEdge provides users with a communication environment that follows them where their business takes them:

- Supports teleworkers by providing them with a business communication environment at home that's integrated with their enterprise, as if they were working from their desk.
- Extends employee communications to mobile devices. The Comcast Business app is available on iOS and Android mobile phones and allows users to handle and manage their business communications from their mobile device from anywhere, as if they were working from their desk.
- The softphone client lets employees communicate through their PCs, allowing them to communicate anywhere they have a broadband connection including hotel rooms, cafes, and airports in a transparent fashion.

<sup>6</sup> Shared call appearances are limited to the users inside of a specific site/location.



# BUSINESS VOICEEDGE NETWORKING

Networking allows Business VoiceEdge to deliver a high-quality experience. It consists of the following components:

- Business VoiceEdge Access – How Business VoiceEdge locations are connected to the network.
- Business VoiceEdge LAN Configuration & Physical Environment – The design of the customer LAN.
- Business VoiceEdge Installation – How Business VoiceEdge is installed at the customer location.

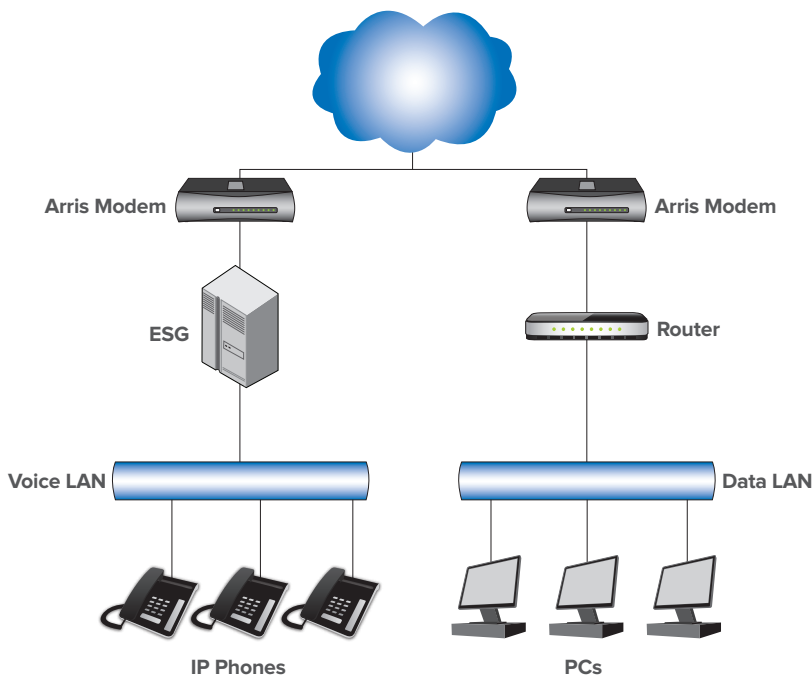
## BUSINESS VOICEEDGE ACCESS

Business VoiceEdge is delivered to a customer location over a dedicated Comcast Business broadband access connection.<sup>7</sup> This broadband connection is included in the price of the Business VoiceEdge service and does not need to be purchased separately.

Based on the number of seats for a customer site, the Comcast Business sales engineer determines the amount of bandwidth that is required to adequately support the expected Business VoiceEdge traffic.

The Business VoiceEdge call traffic is always handled on its own dedicated wide area network (WAN) connection that is separated from the data traffic.<sup>8</sup> Hence, the bandwidth for a site strictly depends on the number of seats and does not need to take into account the enterprise data traffic, which is routed through a separate dedicated path on your network connection. This configuration ensures that the customer call traffic is processed with a higher priority and is not negatively impacted by the fluctuations of the site data traffic.

Depending on the customer location, construction may be required to extend the Comcast broadband access to the customer site.



## BUSINESS VOICEEDGE LAN CONFIGURATION & PHYSICAL ENVIRONMENT

Business VoiceEdge is supported over two common LAN configurations to provide great call quality while being flexible enough to accommodate most customers.

*Note: With a Panasonic-only environment, a customer does not require a LAN*

<sup>7</sup> Teleworkers and Business VoiceEdge softphone users can connect to the network over-the-top using a third-party broadband connection.

<sup>8</sup> This statement does not apply to the Business VoiceEdge teleworkers configuration where the same broadband connection can be used for Business VoiceEdge and data traffic.

During the sales process, Comcast Business sales engineer pre-qualifies the customer LAN for Business VoiceEdge. The pre-qualification verifies the following:

- The customer LAN uses a full-duplex Ethernet switch supporting 100BaseT or Gig-E (minimally).
- All user locations have CAT5 cable connectivity.
- All user locations have at least one RJ-45 jack available. For users with a single RJ-45 the phone and PC may be daisy chained.
- There is rack or shelf space available to deploy the Enterprise SIP Gateway (ESG).
- A power outlet is available for the ESG.
- Power outlets or PoE switches are available to power the phones at each user location or for any Analog Telephone Adapters (ATAs).

In addition to these checks, the technical sales representative also assesses the best network configuration based on the existing LAN topology. The following topologies are supported:

- Converged LAN – A single CAT5 drop per user location is shared between the PC and the phone. This configuration is supported with and without VLAN.
- Segregated LAN – There are separate CAT5 drops for the phone and the PC at each user location.

In the case where the customer LAN is not already suitable for Business VoiceEdge, the technical sales representative provides specific instructions to the customer to upgrade the LAN as needed. These changes need to be carried out before the Business VoiceEdge installation.

## **BUSINESS VOICEEDGE INSTALLATION**

Business VoiceEdge is installed by a team of Comcast Business professionals. This process ensures that at the completion of the Business VoiceEdge installation, the solution is fully installed, tested and ready to be used.

- A Comcast Business field technician performs the physical installation and connection of the ESG, wireless range extenders, any ATAs and the phones.
- Once installed, the Comcast Business field technician tests the Business VoiceEdge solution in collaboration with a Comcast Business Installation Engineer.
- If you are porting numbers, the technician will work with the Advance Voice Install Team to activate your numbers on the new service.
- Once the solution is installed and tested, the field technician makes sure the user has their welcome letter, then takes the customer through how to take or place a call, access the Business VoiceEdge web site for downloads (mobile app, receptionist console, softphone) and locate the user guides and training.
- The default for installation of a home office/teleworker site is self-installation. Professional installation for teleworker sites is available upon request, but only inside the Comcast footprint.

# BUSINESS VOICEEDGE SUPPORT AND TRAINING

Comcast Business makes the following tools available to Business VoiceEdge customers after installation is completed:

- Suite of product documentation and training videos available to customers about Business VoiceEdge services, features and devices. The documentation and videos are available online at **business.comcast.com/getstarted**.
- Multi-level access to the Business VoiceEdge web portal to allow users to manage their services and features and check their bills online:
  - User access – allows users to manage their messages and features online.
  - Site or enterprise Technical Administrator/Service Manager access – allows site or enterprise administrators to manage the site and group features online.
  - Administrator access to the billing portal for checking bills online.

## TRAINING

<b>GETTING STARTED</b>	Visit <b>business.comcast.com/getstarted</b> for additional resources, including more robust user guides, tutorial videos and access to the Business VoiceEdge portal where you can manage your individual features.
<b>HELP &amp; SUPPORT</b>	Visit <b>business.comcast.com/help</b> for a searchable knowledge base that contains how-to guides about your service and account. You can also learn about the My Account portal.
<b>BUSINESS VOICEEDGE CUSTOMER PORTAL</b>	Go to <b>voiceedge.comcast.com</b> to access the Business VoiceEdge portal where you can manage your individual features like call forwarding options.
<b>INTERACTIVE SESSIONS WITH A TRAINER</b>	Visit <b>business.comcast.com/getstarted/webinars</b> to sign up for weekly live sessions with a Business VoiceEdge Trainer. Access to these sessions are free to all users.
<b>VIDEO TUTORIALS</b>	Visit <b>business.comcast.com/getstarted/voiceedge-self-help-videos</b> .
<b>CUSTOM TRAINING</b>	A free custom training webinar is provided for customers with 15+ seats. Onsite training or a free custom training webinar is available for customers with 50+ seats. For customers who are under 50 seats, onsite training is \$750 for the first location and \$500 for each additional location.

Training can be scheduled during the onboarding process with your Service Delivery Project Manager prior to installation, on the day of install or after depending upon your business needs. After installation, you can also speak to a Comcast care representative about your training options or to schedule training.

## SUPPORT

Still have questions? The Comcast care team is available 24/7 on the phone to answer questions and resolve any issue related to Business VoiceEdge.

## APPENDIX 1 – USER FEATURES

SERVICE	DEFINITION
Alternate Number	Enables users to have up to ten phone numbers and/or extensions assigned to them. The usual ringing is provided for incoming calls to the primary phone number and users have the option of enabling a distinctive ring for calls to their second and third phone numbers.
Anonymous Call Rejection	Enables a user to reject calls from anonymous parties who have explicitly restricted their Caller ID.
Automatic Callback (intragroup)	Enables users who receive a busy condition to monitor the busy party and automatically establish a call when the busy party becomes available.
Automatic Hold/Retrieve	Enables users to automatically hold and retrieve incoming calls without requiring the use of feature access codes. This feature is especially useful for attendants managing a large volume of incoming calls by enabling them to hold calls by simply transferring them to dedicated parking stations.
Barge-in Exempt	Users with this service assigned cannot have their calls barged in on by other users.
Basic Call Logs	Provides the user with the last 20 dialed, received and missed calls.
Be Anywhere	The Be Anywhere user service allows the user to define one or more network locations, such as mobile phones, which can be used as extensions to the user's profile. The user can then make and receive Business VoiceEdge calls on these locations.
Busy Lamp Field	Enables a user to receive the call state information on monitored users. This information supports busy lamp field operation for IP attendant console phones and devices.
Call Forwarding Always	Enables a user to redirect all incoming calls to another phone number.
Call Forwarding Busy	Enables a user to redirect calls to another destination when an incoming call encounters a busy condition.
Call Forwarding No Answer	Enables a user to redirect calls to another destination when an incoming call is not answered within a specified number of rings.
Call Forwarding Not Reachable	Allows for configuring a location (for example, a mobile) where a call should be redirected when the main device is unreachable (for example, desk phone).
Call Forwarding Selective	Enables a user to define criteria that causes certain incoming calls to be redirected to another destination.
Calling Line ID Delivery Blocking	Enables a user to block delivery of his/her identity to the called party.
Call Notify	Enables a user to define criteria that cause certain incoming calls to trigger an e-mail notification. If an incoming call meets user-specified criteria, an e-mail (or short message to a cell phone) is sent to the notify address informing the user of the details of the incoming call attempt.
Call Park	The Call Park service allows a "parking" user to park a call against a "parked against" extension. The "parked" user is placed on hold until a user retrieves the parked call. If the call is not retrieved within the provisioned recall time, then the parked call is reverted and presented to the "recall" user.
Call Pickup	Enables a user to answer any ringing line within their pick-up group. A pick-up group is a group administrator-defined set of users within the group, to which the Call Pickup feature applies.

Call Return	Enables a user to call the last party that called, whether or not the call was answered.
Call Transfer	Allows a user to transfer a call to another number. You can transfer calls in two ways, a blind transfer and a consultative or warm transfer. A blind transfer sends the call to the party you are transferring to along with the caller ID of the caller. A consultative transfer allows you to speak to the person you are transferring the call to before connecting the call. When you transfer using consultative transfer, the caller ID of the calling party will not show up on the recipient's phone, instead they will see your caller ID.
Call Waiting	Enables a user to answer a call while already engaged in another call.
Comcast Softphone	The Softphone is a computer-based interface that complements Business VoiceEdge and allows for inbound and outbound calling in addition to unified communications features voice calling, video calling, voice messaging and some core service management functions. The Soft phone provides an alternative way of using Business VoiceEdge from any location where a customer has a broadband connection and a computer.
Directed Call Pickup	Enables a user to answer a call directed to another phone in their group by dialing the respective feature access code followed by the extension of the ringing phone.
Directed Call Pickup with Barge-in	In addition to the ability to pick up a call directed to another user in the same customer group, this version of the Directed Call Pick-Up service (listed below under group services) also enables the user to barge-in on the call if already answered, thereby creating a three-way call.
Directory Number Hunting	Directory Number Hunting (DNH) is a service extension that allows a caller to reach a hunt group or call center (HG/CC) by calling the number of one of the HG/CC agents. When DNH is enabled and a caller calls an agent's number, the HG/CC directs the call to the called agent first. If that agent is unavailable, the HG/CC then applies its normal Distribution policy.
Diversion Inhibitor	When features like BeAnywhere, Simultaneous Ring, Sequential Ring or Call Forwarding, this feature prevents your business calls from being redirected to your cellphone voicemail. Note: this service does not work with all wireless carriers.
Do Not Disturb	Allows users to set their station as unavailable so that incoming calls are given a busy treatment.
External Calling Line ID Delivery	Allows for delivering the calling line ID of an external party to the user.
Flash Call Hold	Enables users to hold a call for any length of time by flashing the switch-hook on their phone and dialing the respective feature access code.
Hoteling Guest	The Hoteling service enables users with guest privileges to log in to a host account, and use the host phone to make and receive their calls as usual, while retaining their own user profile.
Hoteling Host	The Hoteling service enables users with guest privileges to log in to a host account, and use the host phone to make and receive their calls as usual, while retaining their own user profile.
Hunt Group <sup>9</sup>	Allows users within a group to be included in a specified sub-group to handle incoming calls received by an assigned Hunt Group's phone number. Group administrators can choose from any of the following "hunt" schemes, each of which rings the specified phones in a different manner.

<sup>9</sup> Business VoiceEdge includes one hunt group per seat.

Incoming Calling Plan	Enables administrators to block specified incoming calls to their company, department, and/or individual users.
Intercept Group	Enables group administrators to intercept calls routed to any user in a group with informative announcements and alternate routing options.
Intercept User	Enables group administrators to intercept calls routed to a non-working internal line with informative announcements and alternate routing options.
Internal Calling Line ID Delivery	Allows for delivering the calling line ID of an external party to the user.
Last Number Redial	Enables users to redial the last number they called.
Multiple Call Arrangement	Enables a user to make and receive multiple calls simultaneously on their different shared call appearance (SCA) locations.
N-Way Call	Enables a user to make a three-way call with two parties, in which all parties can communicate with each other.
Outgoing Calling Plan	Enables administrators to block users from making certain types of outgoing calls, such as long distance, toll, or premium.
Priority Alert	Enables a user to define criteria to have certain incoming calls trigger a different call waiting tone (that is, alert) or a different ringing cadence than normal calls.
Privacy	Allows users to exclude themselves from the group and directory listings visible to other users.
Push-to-Talk	Enables user-to-user intercom service across an enterprise. When a user dials the respective feature access code followed by the called party's extension, the system requests that the called station answer automatically.
Remote Office	Enables users to access and use their BroadWorks service from any end point, on-net, or off-net (for example, home office, mobile phone).
Selective Call Acceptance	Enables a user to define criteria that causes certain incoming calls to be allowed. If an incoming call meets user-specified criteria, the call is allowed to complete to the user. All other calls are blocked and the caller is informed that the user does not wish to receive the call.
Selective Call Rejection	Enables a user to define criteria that cause certain incoming calls to be blocked. If an incoming call meets user-specified criteria, the call is blocked and the caller is informed that the user is not accepting calls.
Self-Management Portal	The self-management portal is a web interface that allows Comcast Business VoiceEdge users to configure their services and features.
Sequential Ring	Enables users to define a "find-me" list of phone numbers that are alerted sequentially for incoming calls that match specified criteria. While the service searches for the user, the calling party is provided with a greeting followed by periodic comfort announcements.
Shared Call Appearance	Allows for incoming calls to ring on up to 35 additional phones simultaneously, connecting the first phone to be answered. If one of the phones is already hosting an active call under the line ID, incoming calls are delivered to the active phone and any outgoing calls from another phone using the same line ID are blocked.
Speed Dial 8	Enables users to dial single digit codes to call up to eight different numbers, such as frequently-dialed numbers or long strings of digits that are hard to remember.
Speed Dial 100	Enables users to dial two-digit codes to call up to 100 frequently-called numbers.
Two-Stage Dialing	Allows users to leverage enterprise dialing and other Business VoiceEdge services from their cell phones or PSTN landlines.

Unified Messaging	Enables users to record messages for incoming calls that are not answered within a specified number of rings, receive busy treatment, or are transferred directly to voicemail. Incoming callers are given the options to review and change their message and get a warning tone if their message is about to reach the maximum configured length. Voicemail messages can be forwarded to your email as an attachment, a notification, or a readable transcription.
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## APPENDIX 2 – UNIFIED COMMUNICATION SEAT GROUP FEATURES

SERVICE	DEFINITION
Enhanced Outgoing Calling Plan	Enhanced version of the basic Outgoing Calling Plan provides administrators with a greater degree of control over outgoing calls made from within their group. In addition to “blocking” or “allowing” given call types and digit strings, administrators have the following options for configuring the outgoing calling profile of their group, department, and individual users: <ul style="list-style-type: none"> <li>- Authorization Codes</li> <li>- Sustained Authorization Codes</li> <li>- Call Transfer</li> </ul>
Music On Hold	Enables group administrators to upload an audio file (.wav file containing music, advertising, and so on) onto the system to be broadcast to held parties. This service can be used in conjunction with the following services: Call Centers, Call Hold, and Call Park.

## APPENDIX 3 – ADDITIONAL BUSINESS VOICEEDGE GROUP FEATURES

SERVICE	DEFINITION
Automated Attendant <sup>10</sup>	The Automated Attendant serves as an automated receptionist that answers the phone and provides a personalized message to callers with options for connecting to the operator, dialing by name or extension, or connecting up to ten configurable options (for example, 1 = Marketing, 2 = Sales, and so on).
Call Queue Agent Basic	Enables business groups to set up a basic Call Center with incoming calls received by a single phone number distributed among a group of users, or agents.
Receptionist Console	The Receptionist Console is a carrier class Internet Protocol (IP) Telephony Attendant Console, specifically developed for hosted environments. It is used by “front-of-house” receptionists or telephone attendants, who screen inbound calls for enterprises. The Receptionist Console enhances business processes and delivering rich services in a user-friendly way.

<sup>10</sup>Upon ordering an Automated Attendant, instances can be cascaded to build multi-level interactive voice-response menus, or configured to fit their specific needs. Customers can record their Automated Attendant greetings on their own.