

Vertex – Caller ID for VoIP

This device is completely compatible with any software application designed to use CallerID.com's "Whozz Calling?" products. The device can only be configured using the Ethernet "Management Port" port. The serial port connection is for software applications that do not accept Caller ID data via Ethernet.

Determine Your Type of VoIP

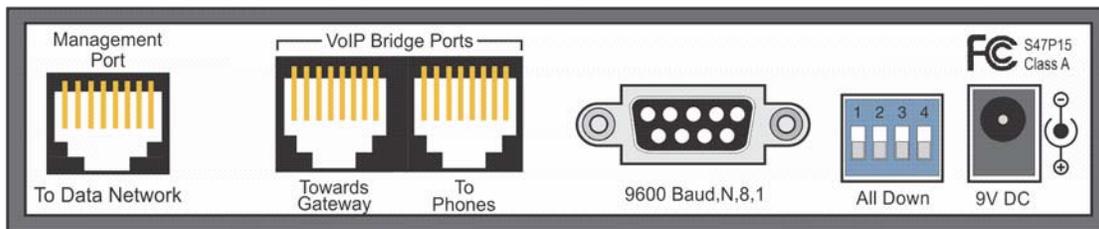
Hosted VoIP is defined by the service provider performing all voice switching, routing, messages on hold, call queuing, and other functions. In most cases, the end user needs only to connect VoIP phones to their network. Any significant programming and configuration is done by their service provider. Most smaller businesses use Hosted VoIP.

Managed VoIP involves additional equipment on site that handles most of the VoIP switching, routing, and call processing. If you have a Managed VoIP system, your IT person and/or telephone switch provider will know the details.

NOTE: The VoIP controlling protocol must be SIP (Session Initiation Protocol). Encrypted VoIP and proprietary protocols from specific devices/manufactures are not supported.

Basics

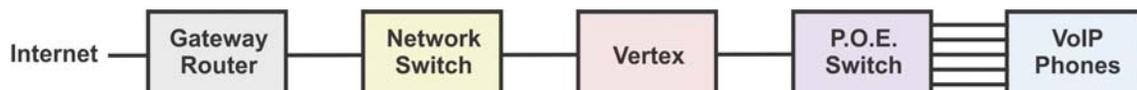
1. The Vertex has a Management Port used to configured the device. Data is sent out this port to software applications that have integrated Ethernet connected Caller ID devices. Plug this into the same subnet that your Ethernet enabled Caller ID application is running.



2. The Vertex has two Ethernet ports marked for "VoIP Bridge Ports". These are pass-through, monitoring ports that simply inspect data on VoIP control (SIP) packets. **All VoIP traffic must flow through these ports in order to be reported.**
3. To capture Caller ID and other telephony data from VoIP phone calls, call paths must travel through the VoIP Bridge Ports on the Vertex. In the diagram below, the Vertex is placed between the Router and the Main Network switch so that the path of all VoIP traffic goes through the Vertex.



It is recommended to connect the Vertex nearest to the VoIP telephones as possible and still be in-line with all VoIP phones of interest. The following diagram shows the Vertex between the network switch and a P.O.E. switch powering the phones.



Vertex Setup Instructions

1. Refer to Figs. 1-4 to decide which connection diagram best matches your VoIP Network architecture.
2. Make Vertex connections when no VoIP calls are in progress and internet traffic is at a minimum.
Note that the Vertex will not pass a Gigabit connection. If the Vertex is placed between 2 Gigabit endpoints, reboot each device to allow automatic negotiation to 100BaseT.
3. Power-up the Vertex and wait until power light remains steady on. The unit will attempt to negotiate DHCP in an effort to automatically obtain an IP address.
4. Check the other lights on the front panel. Amber lights on all three channels should be steady on, indicating a network connection. If any amber light is not on, refer to troubleshooting below. The green lights on each channel should flash, indicating data packets detected.
5. Close any software application on this computer that is meant to interface with the Vertex. For example, if you are running a Caller ID enabled POS or Taxi Dispatch application on this computer, close it now.
6. Download and install the Vertex Configuration Tool (VCT) at www.VCT.CallerID.com.
7. Launch VCT. Upon startup, VCT must detect the Vertex hardware. If not, turn off any third-party Firewalls or virus checking programs, re-check Ethernet connections, and try again.
8. Once the hardware is detected, select "Yes" to load parameters from the Vertex.
9. VCT will prompt you to run the Setup Wizard. **Run the Wizard and follow all steps carefully.** When completed, exit VCT.
10. Set the appropriate parameters within your software application to enable Caller ID pop-up screens.

Setup Troubleshooting

Issue: Vertex Configuration Tool (VCT) will not detect the Vertex hardware.

Solutions:

- A. Check the Vertex Management Port lights. The amber light must be on and the green light flashing.
- B. Turn off any 3rd party Firewalls (i.e. Norton, McAfee, Trend Micro, etc.)
- C. If DHCP on the router is enabled, re-boot Vertex hardware in an attempt to negotiate DHCP.
- D. Check the router DHCP table to determine whether the Vertex is listed. If shown, something is blocking UDP broadcasts. Ping the address listed. If the Ping is successful, go to step F.
- E. If DHCP on the router is disabled, try to Ping the Vertex at the default IP address of 192.168.1.90.
- F. If Pinging the device is successful, you may have to use **File/Connection Manager** in VCT to communicate. If so, the VCT Wizard will be usable and you will need to set all parameters manually.

Issue: One or both amber lights on the VoIP bridge ports are not lit. Note that both amber VoIP bridge ports must be lit for the Vertex to operate correctly.

Solutions:

- A. If you are placing the Vertex VoIP bridge ports between 2 Gigabit endpoints, both endpoints may need to be re-booted to auto negotiate to 100BaseT.
- B. If step A has been accomplished, the network connection is working properly, and one or both amber lights are still not on, try connecting the Vertex to another location closer to the VoIP phones. This might involve adding another 10/100 network switch to the architecture.

Technical Support 770.263.7111
8:30 am - 5:00 pm, M-F, EST (Serial Number required)
Support@CallerID.com

Vertex Connections

Fig. 1 - Simple Hosted VoIP

Hosted VoIP is defined by the service provider performing all voice switching, routing, messages on hold, call queuing, and other functions. In most cases, the end user needs only to connect VoIP phones to their network. Any significant programming and configuration is done by the service provider. If you are not sure whether you have Hosted VoIP service simply contact your service provider.

A typical Hosted VoIP network architecture is shown below with a Vertex unit connected. If a separate gateway router and network switch is not present, most likely you will need to install a network switch. In order to see all the inbound and outbound VoIP traffic, the Vertex "VoIP Bridge Ports" must connect the gateway router and the network switch. The "Management Port" on the Vertex is connected to the network switch. Refer to the diagram below; green lines indicate new connections. Remove the dotted gray, original connection.

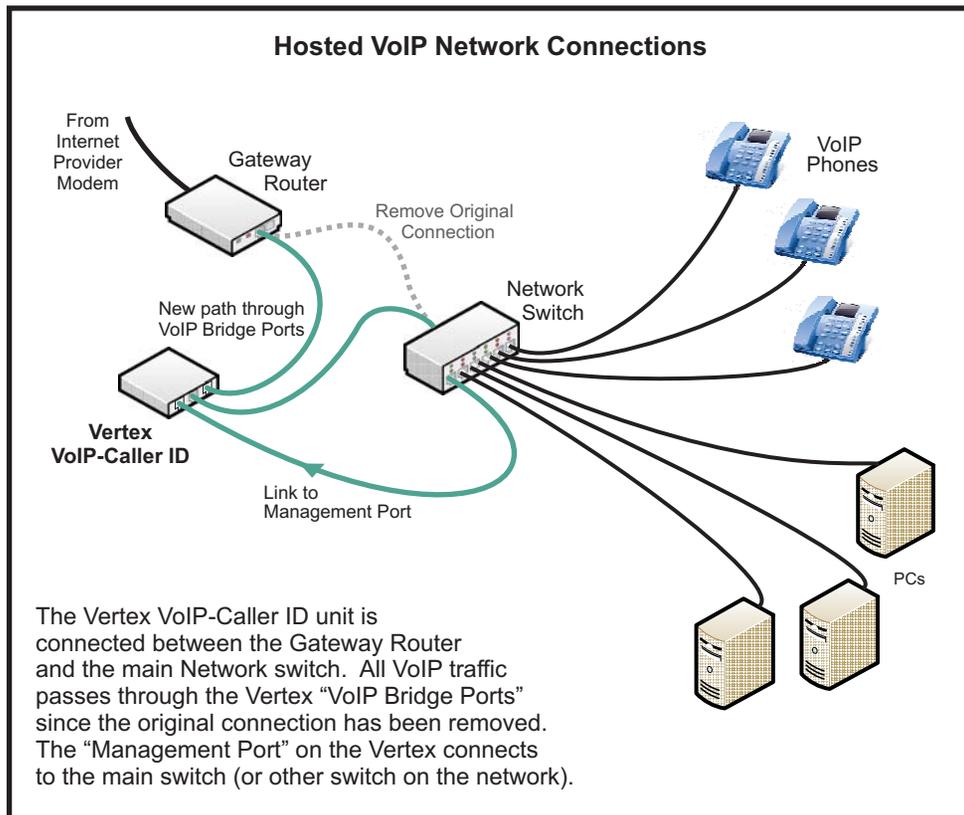
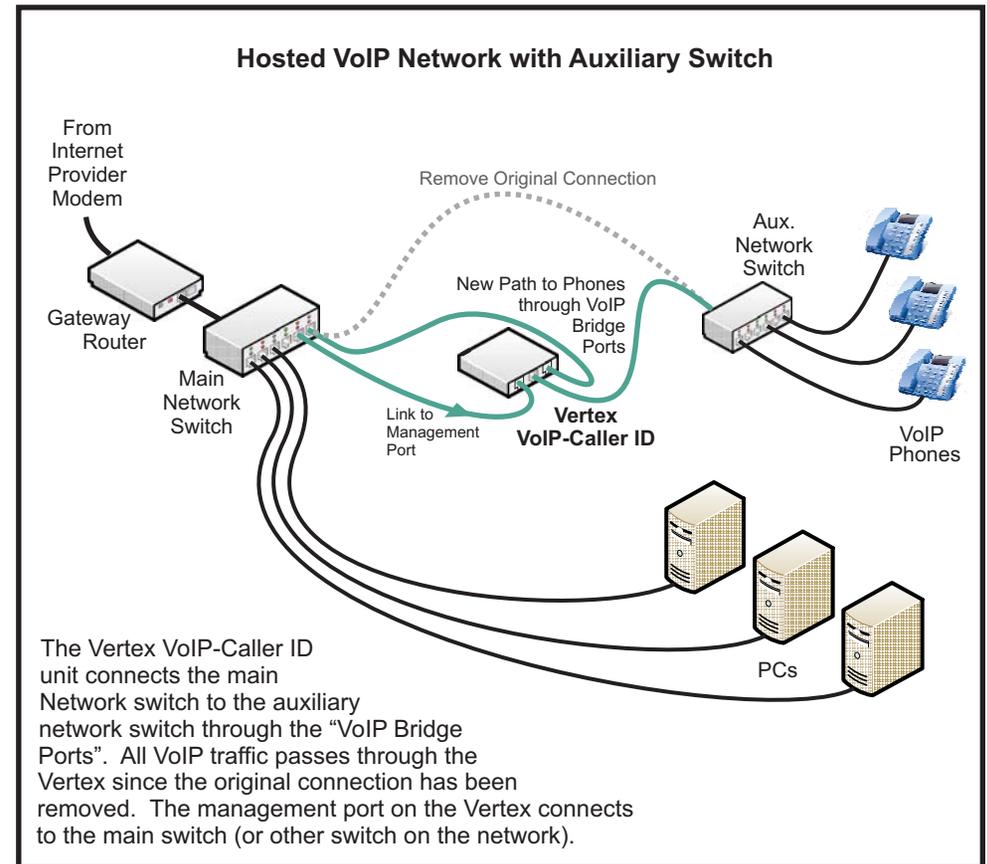


Fig. 2 - Hosted VoIP with Auxiliary Switch

For Hosted VoIP using an auxiliary network switch connection to the phones, we recommend installing the Vertex between the auxiliary switch and the main switch. Removing the original connection allows all VoIP traffic to flow through the Vertex "VoIP Bridge Ports". The Vertex "Management Port" can be connected to any switch on the network. Green lines indicate new connections below. Make sure to disconnect the original connection.

Depending on your application software, the data output will be delivered via the Management Port connection or the serial port.



Vertex Connections (continued)

Fig. 3 - Hosted with Separate VoIP & Data Network

This architecture is primarily seen with Hosted VoIP, but a Managed VoIP system may also use a separate VoIP and Data Network. Remove the original connection (dotted line below). Route the connection carrying all VoIP traffic through the two Vertex “VoIP Bridge Ports”. The Vertex “Management Port” connects to the data network switch enabling configuration with a PC.

The Vertex will need both the Voice (SIP) Gateway MAC and Data Gateway MAC addresses to operate properly. Normally, these can be discovered using the Wizard built in to Vertex Config. Tool. If the Vertex does not negotiate DHCP the Data MAC will have to be specified.

Depending on your application software, data output is sent via the Management Port connection or the serial port.

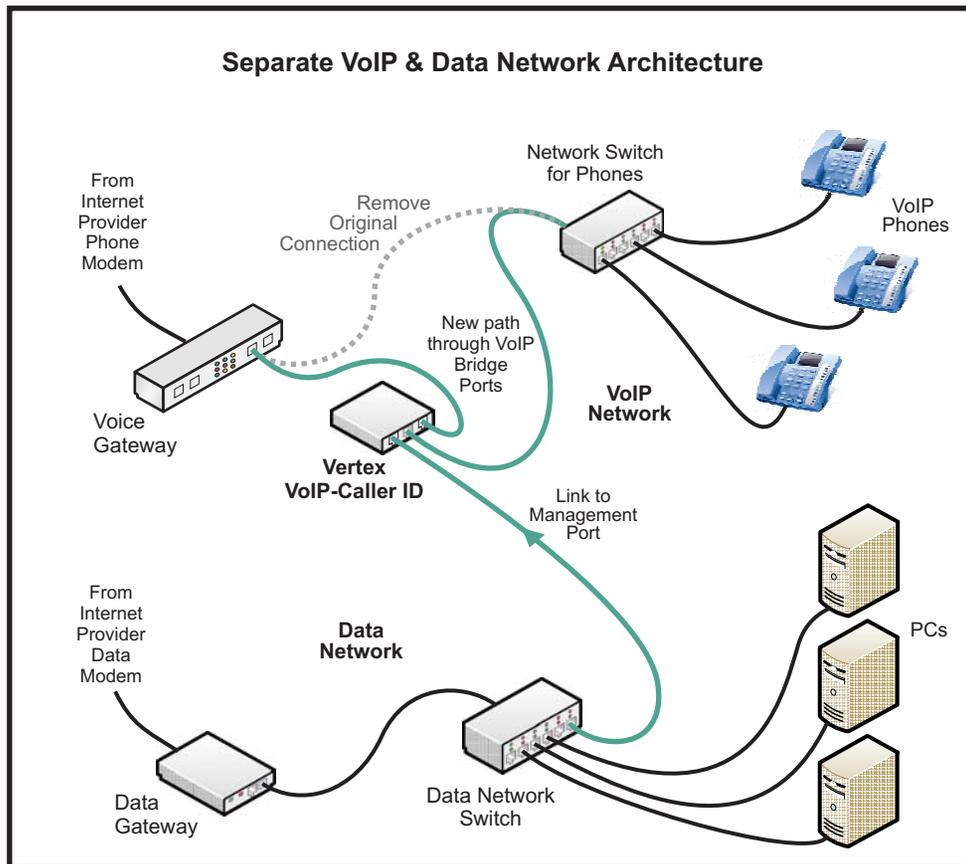


Fig. 4 - Managed VoIP

Managed VoIP involves additional equipment on site that handles most of the VoIP switching, routing, and call processing. If you have a Managed VoIP system, your IT person and/or telephone switch provider will know the details.

Managed VoIP service employs a SIP server device on site to process calls. Some SIP servers also provide the Gateway for all external VoIP traffic. The SIP server/Gateway can be an Asterisk PC or Telephone switch card fed with a SIP Trunk or ISDN PRI circuit. **An Asterisk switch is technically a Managed VoIP system. But, if the VoIP gateway is the same as the Data Gateway, refer to the Hosted VoIP diagrams.**

Re-route the connection carrying all VoIP traffic through the two Vertex “VoIP Bridge Ports”. Connect the Management Port to the Network Switch.

