



Upgrading from the Series 3200 to the Series 3300

OVERVIEW

Zetron's Series 3200 telephone system can be upgraded to the VoIP-capable Series 3300 E9-1-1 VoIP call-taking system. This document describes the Series 3300 in relation to the Series 3200 and what to consider when planning an upgrade project.

In order to meet the fast moving trends to VoIP technology, Zetron has developed a phased approach to deploying new IP-based 9-1-1 customer premise equipment. The evolution of the current E9-1-1 network to the next generation will give call-takers a functional advantage previously unmatched. The Series 3300 E9-1-1 VoIP call-taking system augments call-taker's performance by taking the Series 3200 infrastructure and providing access to cutting edge technologies. This improves the overall flexibility and efficiency of Zetron's E9-1-1 call taking product.

The Series 3300's design combines IP-based architecture with Zetron's established, dependable Series 3200 architecture, allowing the system to share both hardware

components and the user interface. This shared architecture enables upgrading to a Series 3300 IP-capable system without discarding your original investment in the Series 3200. The Series 3300's design is based upon the proven success of the Series 3200, and is designed to give access to VoIP technologies currently available in the marketplace, while maintaining its interfaces to legacy technologies that are still in use today. Additionally, the Series 3300 is positioned to be compatible with future E9-1-1 networks (i3), and Next Generation technologies.

PLANNING FOR A 3200 TO 3300 UPGRADE

Once you've decided to upgrade your Series 3200 system, you will need to submit the system ID (Z#) or serial number of your system to Zetron to help determine the proper software revisions for your system. Some of the original circuit cards will be replaced with enhanced cards. Also, you will need to understand what IP interface protocol you are planning to implement into the PSAP.

Zetron Product Specialists will need to understand the preferred call flow when configuring your IP system upgrade. In addition to the IP interface terminations, you will need to plan for the possible rewiring of incoming analog lines and 9-1-1 trunks into the Series 3300. The IP Call System hardware is rack-mounted and uses a minimum of 18 rack units. More space may be required, depending on the final configuration.

Zetron Technical Support can assist you in building a cutover plan that can reduce adverse impacts to the 9-1-1 system.

SOFTWARE

The Series 3300 continues to use the Integrator Software Suite for E9-1-1 call-taking, to include Integrator9-1-1, IntegratorIRR, IntegratorMIS, and IntegratorMap. Configuration utilities such as EPS, PPS, and UMS are also still used with the Series 3300. The Series 3300 will also take advantage of your network access for remote diagnostics and troubleshooting. The system uses flashable non-volatile EPROM's for firmware memory storage and can be upgraded using a laptop connected to the maintenance port and the console com ports. You will need to:

- Update the firmware of the ALI Controller
- Update the firmware of each primary and secondary station card
- Update the firmware of each console phone

Integrator Suite software that resides on the workstation PCs and the 9-1-1 server PC must also be updated. Software applications include:

- Integrator9-1-1
- UMS Server
- 9-1-1 Server
- Integrator Reporting System
- IntegratorIRR

Some or all of these applications could be in use in your system and must be updated to the most current feature group (FG).

HARDWARE

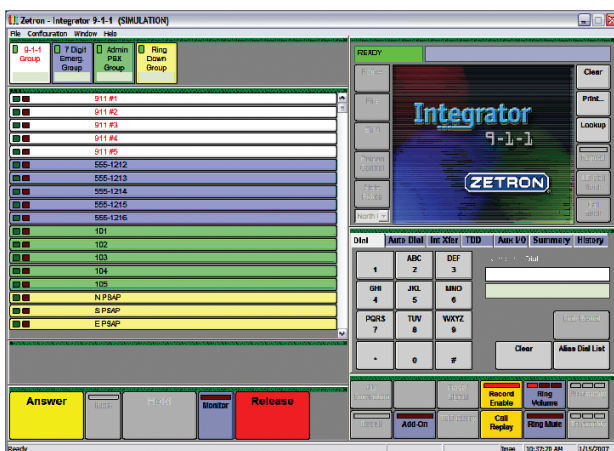
Series 3300 hardware requirements include:

- IP Call System
- Advanced E9-1-1 Trunk Cards
- Advanced Caller ID Cards
- Newer ALI controller with transfer ports required (This will eliminate ALI transfers that are currently being performed.)
- Krone Punch Blocks
- Power Distribution Cable
- N+1 Redundant Power Supply (Optional)

IP Call System

The IP Call System is the most dramatic change to the Series 3200/3300 customer premise equipment. The IP Call System provides the Series 3300 with the ability to process calls that originated from T1 or ISDN (PRI) circuits, Session Initiated Protocol (SIP) (PBX) connections, and traditional analog FXO lines. The IP Call System can also directly connect SIP admin phones for inbound and outbound calls. The IP Call System is flexible in its configuration and can be built up to the requirements of the customer.

The Series 3300 takes analog lines and T1/PRI circuits and converts them into Ethernet. The system virtually switches calls over IP using SIP (up to 96 simultaneous call paths) and sends the call through gateways to its defined destination. This improved ability gives the system dynamic line management and eliminates the need for a one card per line relationship. This technology increases the systems line capacity and decreases the hardware footprint.



In cases of high call volume, the IP Call System can overflow calls over IP to another Series 3300 system at an adjacent PSAP. This feature is especially useful for PSAPs with partner sites or backup locations.

The IP Call System is assembled and initially programmed at the factory. It is important to provide Zetron with as much accurate configuration information as possible. Zetron will administer a pre-configuration tool to assist in the gathering of this information. Typically, unforeseen variables are discovered post shipment or during the installation process. In order to provide installation support, Zetron requires an initial VPN access port to facilitate changes by engineering personnel and ensure a successful installation.

9-1-1 Trunk Cards and Caller ID Cards

The Series 3200 9-1-1 trunk card and Caller ID line card have been redesigned with faster processors and enhanced memory to support the advanced features of the Series 3300. When upgrading your system, older 9-1-1 and CLID cards must be replaced.

ALI Controller

The Series 3300 requires the EX ALI controller with transfer ports for communications with the IP server. If your ALI controller is not the EX version or does not have transfer ports it will need to be replaced.

Krone Blocks

Krone blocks are used to cross connect incoming lines to the appropriate line cards and gateways in the IP Call System. The Krone block is also used for E9-1-1 trunk termination into the Series 3300. This new arrangement cuts the number of connected 66 blocks used. On new systems the Krone blocks are pre-wired at the factory, but on upgrades these blocks will need to be wired in the field. For more detail on Krone blocks refer to Zetron document part number 025-9419 (Series 3200 and Series 3300 E 9-1-1 Call Taking Systems Installation and Configuration).

Power Distribution Cable

A new, easy-to-install, Power Distribution Cable has been developed. It provides a cleaner plug & play power connection between the station card and line card shelves within the system. This cable is optional for previously installed systems, but comes standard with all new systems.

Power Supply

The N+1 power supply provides a fully redundant modular power source for the Series 3200 and 3300 systems. This power supply is optional and requires DC interrupters to provide wink cadences for the system.

SUMMARY

The Series 3200 telephone system meets the requirement for VoIP technology when upgraded to a Series 3300 system.

Some recommended steps for upgrading your Series 3200 to Series 3300 are as follows:

1. Answer the questions in the Zetron Series 3300 Sales Configuration Guide (Zetron part number 001-0268).
2. Upgrade all firmware and software of existing Series 3200 per the instructions listed in Zetron document part numbers 025-9419 and 011-0526 (Series 3200 E9-1-1 Telephone System Software Update Information).
3. Ensure that the EX ALI Controller is installed in your Series 3200. If not plan to replace it.
4. Replace any existing Caller ID (CLID) line cards and E9-1-1 trunk cards with Advanced CLID, and Advanced E9-1-1 trunk and line cards. The new enhanced line/trunk cards give the S3300 access to improved features and functionality.
5. Reprogram the system using EPS and PPS for S3300 per instructions listed in Zetron document 025-9419.
6. Install the IP Call System into existing rack space. The IP Call System's standard configuration requires 18 rack units of rackspace, and supports up to 24 simultaneous calls. Additional rack space is required for larger system configurations.
7. Setup/Configure the IP side of the Series 3300 by following the instructions in Zetron document part number 025-9419 (Series 3200 and Series 3300 E 9-1-1 Call Taking Systems Installation and Configuration). Network addresses for all devices will need to be properly configured and documented. If connecting to an IP PBX, dialing plans will need to be programmed by the factory. VPN access to the factory is required during the initial installation for system optimization.

ZETRON USA

PO Box 97004
Redmond, WA
98073-9704
USA

TEL 425 820 6363

FAX 425 820 7031

zetron@zetron.com

WWW.ZETRON.COM

ZETRON UK

27-29 Campbell Court
Bramley TADLEY
Basingstoke RG26 5EG
UK

TEL +44 (0)1256 880663

FAX +44 (0)1256 880491

uk@zetron.com

ZETRON AUSTRALASIA

PO Box 3045
Stafford Mail Centre
Stafford QLD 4053
Australia

TEL +61 7 3856 4888

FAX +61 7 3356 6877

au@zetron.com



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