



## FEATURES

- 9-1-1 call handling immune from PC or IP network failures
- VoIP intelligent call overflow of voice and data to alternate Series 3300 equipped PSAPs
- Next generation 9-1-1 ready
- Automatic Phase II Wireless ALI Repeat on primary or alternate Series 3300 system
- Full IP Remote call-taker positions from central Series 3300
- Economic addition of administrative IP phones
- Standards-based using Session Initiation Protocol
- Extensive feature set of well established Integrator 9-1-1 Computer Telephony Integration (CTI)
- Dynamic Line Buttons with descriptive labels
- Fault tolerant, high availability architecture
- Convert Series 3200 to IP capable Series 3300 without a forklift replacement

## INTRODUCTION

Zetron's VoIP emergency call-taking system is a standards-based solution that offers the advantages of IP without risking reliability or performance. It is built upon an IP core and uses the widely accepted Session Initiation Protocol (SIP). Yet, the extensive set of features available in Zetron's Integrator 9-1-1 Computer Telephony Integration software are not sacrificed. The Series 3300 accepts standard 9-1-1 trunks, 7-digit emergency lines, caller ID lines, wireless Phase 1 or 2, or, if the PSAP has service from a VoIP provider, VoIP calls. After the call is received, 9-1-1 calls are routed to ring at the call-taker position without any additional

call-processing delay. At the position, the call-taker can answer the call with a mouse, keyboard, touch screen, or 9-1-1 telephone set, which is always present to maintain the call in case of PC failure. With the Series 3300, 9-1-1 calls can be transferred manually or automatically to a PSAP's alternate emergency call-taking system over IP, avoiding the Central Office.

## SYSTEM FEATURES

### Built on Proven Technology

The Series 3300 integrates proven technology to deliver essential solutions for today's IP capable PSAP. By using proven technology, such as Integrator 9-1-1, the Series 3300 is a reliable, feature-rich product that sacrifices nothing while delivering IP's benefits.

### 9-1-1 Call Processing

The architecture of the Series 3300 isolates the 9-1-1 call so it is unaffected by IP security attacks or network congestion. This means that if the Server goes down, the call-taker can still answer 9-1-1 trunk calls. The Series 3300 rings at the call-taker position without the extra call conversion and processing time found with other architectures that convert CAMA to IP on each and every call.

### High Reliability

The distributed architecture and high MTBF design of the system ensures not only high availability, but also minimal impact in the event of a failure. The Series 3300 has built-in redundancy which ensures compliance to NENA reliability standards with two levels of power redundancy available. When properly configured a single failure typically impacts only one console or

trunk, but never more than half the system. Making extensive use of optical and physical isolation maximizes the probability of withstanding lightning strikes so 9-1-1 calls can continue to be processed.

## Diagnostics and Maintenance

In the event of a failure, built-in diagnostics generate alarms to PSAP personnel, and if optionally equipped, to remote repair technicians. Using an IP VPN or secure dial-up connections, the system can be supported remotely. This includes ALI controller updates and full remote diagnostics. The system design allows components replacement while the system is operating. Thus power supplies, cards and consoles can be replaced with minimal disruption to service.

## Future Ready

The Series 3300 is a reliable emergency call-taking solution that has all of the IP capabilities necessary for today. It can grow and expand to meet future requirements as the needs and technology constantly evolve. Since the Series 3300 is designed, developed and maintained by Zetron's 9-1-1 experts, it will easily adapt to meet or exceed technology needs of tomorrow and beyond.

## Conversion Path from Series 3200

With the Series 3300, your current Series 3200 product can be converted to a Series 3300 if and when the need arises. And due to the use of Integrator 9-1-1 suite software, call-takers familiar with using the Series 3200 can begin using the Series 3300 with minimal retraining.

## IP FEATURES

### Network of PSAPs

By using a standard means of connection, the Series 3300 can send 9-1-1 or caller ID calls between PSAPs over IP without going back through the Central Office. This creates the opportunity for PSAPs to build call-taker back-up in support of large incidents or for a 24/7 PSAP to relieve a part-time PSAP after business hours.

### Intelligent Call Overflow

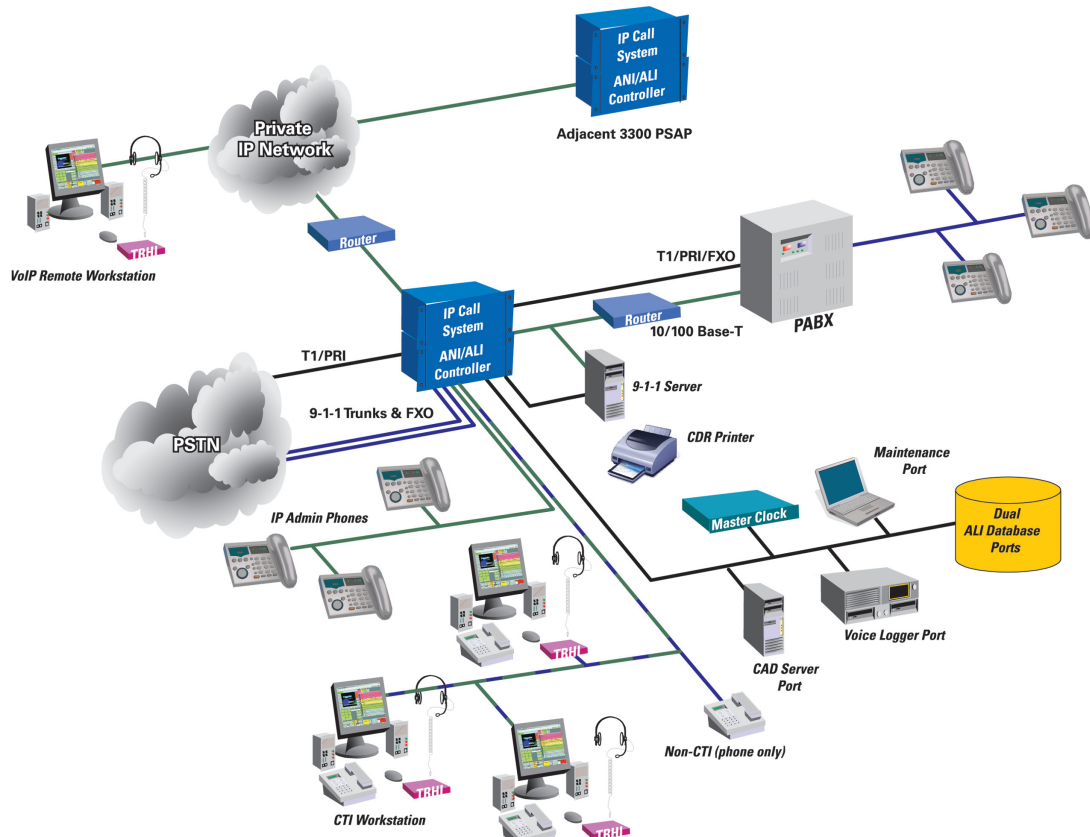
In addition to manual transfers and night service, the Series 3300 has intelligent call overflow over IP. Series 3300-equipped PSAPs with intelligent call overflow between them exchange data messages that indicate their status and readiness to accept an IP transfer. It senses when all call-takers are busy then searches that call-takers are available in the designated back-up PSAPs before transferring the call.

### Call Data Delivered with the Call

When manual transfers, night service, or intelligent call overflow occur, it is important that the receiving PSAP call-taker know where the call came from, accurate ANI/ALI, and the call priority. The Series 3300 provides this information. Since the back-up PSAP may not have the same ALI provider, all ALI look-ups go back through the PSAP initially receiving the call.

### Dynamic Button Line Groups

The Series 3300's IP Call Server also includes options for grouping and pooling calls, so multiple incoming lines can be represented on a single button on the Integrator 9-1-1 screen. This reduces the number of resources your call-takers must manage.



## Interactive Voice Response (IVR)

For incoming administrative calls, it is useful to have a voice prompt to help guide the caller to the proper extension. Voice prompts are available and can be locally recorded so a single line can be directed to any of several phones.

## VoIP Remote Positions

Sometimes it is desirable for small back-up sites with one or two call-takers to be economically provisioned without the need to install the CPE back-room equipment at each location. The Series 3300's VoIP Remote Position option enables this over the IP network. All that's required at the remote position is a small interface unit and Integrator 9-1-1 CTI. This could result in circuit cost savings.

## Integrator ALI Call-Taking Extension

Zetron's Integrator ALI call-taking extension (ACE IP) is a software-based telephone that can be run on any typical office computer or laptop that shares a network connection with the Series 3300 E9-1-1 Call taking System. The Integrator ACE IP is capable of handling 9-1-1 calls in a busy-overflow environment or calls that are manually transferred directly to it. For incoming calls, ACE IP provides the user with a text display of the ALI information that was provided to the 3300 system. The Integrator ACE IP soft phone provides a cost-effective backup position for periods of unusually high traffic, making it ideal for Emergency Operation Centers (EOCs) located in the same building.

## SIP Administrative Phones

The Series 3300 offers the opportunity for PSAPs to install SIP telephones for administrative personnel easily and economically. The system can support any standard SIP based phone set. The Series 3300 can also tie into other PBX systems that serve other agencies to create an integrated system.

## OTHER FEATURES

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### System Capacity

The system can expand up to 90 call-taker positions. The number of incoming lines or trunks is dependent upon whether the Dynamic Button Line Groups are configured. If that feature is not used, the combination of lines and trunks can go up to 90 with an additional 10 lines for ringdown circuits. If the Dynamic Button Line Group feature is used the total number of lines can grow beyond this limit.

### FCC Phase 1 & 2

The system can handle Phase 1 and 2 wireless calls. With its Enhanced MF capability it is able to accept all call delivery methods including CAS, NCAS and HCAS.

## Automatic Wireless ALI Repeat

The system can be configured to automatically make a second ALI retrieval to obtain the Phase 2 ALI information without call-taker intervention. Call-taker controls also permit continuous updates for moving incidents.

## Pre-Answer ALI

With Pre-Answer ANI/ALI, the ANI and ALI of all incoming calls are represented on each individual line appearance. This allows the user to see call information before they answer. On-screen information also shows which console is connected to a line. The ANI/ALI can be displayed on those calls answered by others. When using Zetron's optional Integrator Map, this feature allows the call-taker to view and handle calls from the map screen before they are answered.

## Busy Announcement

With the optional Busy Announcement feature, whenever all call-takers are busy, 9-1-1 callers can receive a pre-recorded voice announcement in place of ringing.

## Integrated TTY

The TDD/TTY feature is fully ADA compliant and includes HCO/VCO, Baudot and ASCII compatibility, as well as compliance with Wireless TTY standards. Buttons on the console permit quick sending of preprogrammed messages, or by plugging in the optional keyboard, free-form text may be sent.

## Integrated Instant Recall Recorder

An integrated Instant Recall Recorder (IRR) option is available for consoles to provide limited conversation recording playback via the console's handset or headset.

## Integrated Phone Book

Within the CTI, a phone book is provided that displays names and numbers that can be grouped in lists. Any entry may be assigned as a single-button auto dial. The list may be searched alphabetically using up/down buttons or by using the optional keyboard to perform name matches.

## CAD & GIS Interface

A standard feature of the Series 3300 is a NENA compliant Computer Aided Dispatch (CAD) port which delivers ALI data upon call answer. This port can be used by both CAD and GIS (Mapped ALI) systems to automatically populate address fields and to display map locations.

## Priority Answer

Each type of line in the system can be assigned high, medium or low answer priority. By pressing the Answer button, the highest priority, longest ringing line is always answered first.

## Distinctive Ring

Up to 12 different ringing sounds can be assigned to each group of lines so that call-takers can tell what type of line they will be answering without looking at the phones.

## Call-Taker Logon

Using Zetron Account Manager (ZAM) administrators are able to assign profiles and permissions to call-takers. Thus, when a call-taker logs on, their preferences and permissions follow them. This includes call group membership, personal dial list, supervisory features, and screen color/layout.

## SPECIFICATIONS

### IP DISTRIBUTION INTERFACES

RJ-45 female, 100BaseTX Ethernet, w/ optional power over Ethernet (802.3af), SIP v2, G711, IAX2

### ADMINISTRATIVE AND EMERGENCY LINE INTERFACE

- Analog  
RJ-21, FXO 2-wire loopstart, ring and tone detection, disconnect supervision, Caller ID detection
- Digital T1  
RJ-48c, CAS Robbed bit loop and ground start, E&M, immediate, wink, double wink
- Digital PRI  
RJ-48c, ISDN DSS-1, NI-2, Q.SIG
- E9-1-1 Trunk  
RJ-21, 2-wire, reverse battery, 900 ohm, accepting MF (R1) signaling, Direct CO, Tandem CO, Enhanced MF

### ALI INTERFACE

DB-25 male wired at DTE up to 19200 baud  
RS232 (external modem)

### CAD INTERFACE

DB-25 female wired as DCE, RS-232, 1200 to 9600 baud

### MASTER CLOCK INTERFACE

DB-9 male wired as DTE, RS-232, 1200 to 9600 baud

### CDR PRINTER INTERFACE

DB-9 female wired as DCE, RS-232 9600 baud, abbreviated ASCII text

### TDD/TTY COMMUNICATIONS

5-bit Baudot at 45.45 baud, 7-bit ASCII at 300 baud

### ENVIRONMENTAL

Operating Temp 0 to 50C (32 to 122F) (5 to 37C for power supply)

- Operating Humidity up to 80%, non-condensing

## SIZE

24 Call, IP Call System w/ 2 Gateways:  
14 U (24.5") H, 19" W, 16" D, 65 lbs

Additional IP Call System enclosures fully loaded:

3 U (5.25") H, 19" W, 16" D, 18 lbs

5 U (8.75") H, 19" W, 16" D, 36 lbs

8 U (15.75") H, 19" W, 16" D, 65 lbs

Station Card Shelf:

10 U (17.5") H, 19" W, 12" D, 35 lbs (max)

Line Card Shelf:

3 U (5.25") H, 19" W, 10" D, 15 lbs (max)

AC Power Supply:

5 U (7.5") H, 19" W, 6" D, 14 lbs

AC N+1 Power Supply:

3 U (5.25") H (add 1 U above and below for air flow), 19" W, 16.5" D

## POWER

24 Call, IP Call System w/ 2 Gateways:  
100-240 VAC (50/60Hz), 275W dissipation

Line & Station Shelves:

110W dissipation per shelf (max.)

AC:

100-134 VAC, 57 to 63 Hz, (distributed or N+1 PSU configuration available)

DC:

-43.5 to 56.5 VDC

Stations:

36 W each (computers, monitors, and accessories not included)

## COMPLIANCE

- FCC CFR 47 Parts 15 and 68, Docket 6787
- EIA/TIA RS-310, 574, TIA/EIA-825
- BellCore TA-NPL-00912, TR-NWT-000030 & 001188, TR-TSY-000064 & 000350
- NENA 04-001, 04-002, 03-002, 02-010, 08-001, 58-001, 08-501
- ANSI/TIA/EIA 574, 825

## NETWORK REQUIREMENTS

Voice Traffic 150 Kbps between Series 3300  
Bandwidth per duplex conversation 250 Kpbs to VoIP Remote Station

Voice Traffic Payload to Bandwidth Ratio < 40% of total available bandwidth

Packet Loss < 1.0% (< 0.1% mission critical)

Packet Delay < 80ms (< 40 ms mission critical)

Packet Jitter < 40 ms (< 20 ms mission critical)

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