# Area of Refuge Solutions

## Can your facility ensure safe communication in emergencies?

Code Blue provides a comprehensive Area of Refuge (AOR) solution tailored to meet the needs of any facility. Our AOR products are designed to offer reliability and peace of mind. With our customizable and scalable options, Code Blue ensures your Area of Refuge system is fully equipped to support safety and communication requirements.

Let us help you stay connected and compliant with a solution that fits your specific needs.
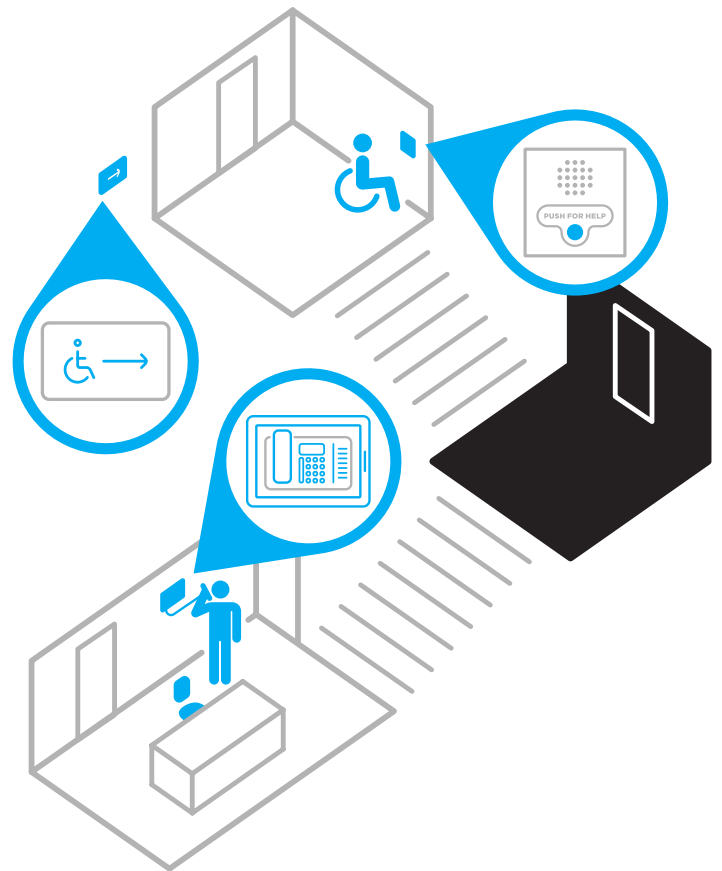
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# AREA OF REFUGE SOLUTIONS

**Code Blue®**

## What is AOR?

An Area of Refuge (AOR), commonly known as Area of Rescue, is a designated space where individuals, especially those with limited mobility, can safely wait for assistance during an emergency, such as a fire or evacuation.

We bring you **dependable, trusted** solutions to keep you secure in any emergency.

## Communication Platform

**Your call routing platform options**

Our flexible solutions provide reliable communication in designated areas designed to alert emergency responders. To meet the unique needs of different environments, our systems are available on cloud, server, and virtual machine platforms. These systems make it easier for first responders to quickly help people who need extra support or cannot evacuate on their own. By enabling faster and clearer communication, our technology improves safety and helps responders do their job more effectively.

**nebula**

**Cloud**

**TOOLVOXˢ**

**ToolVox® XS**
(Server)

**TOOLVOXᵛ**

**ToolVox® XV**
(Vitual Machine)

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# AREA OF REFUGE SOLUTIONS
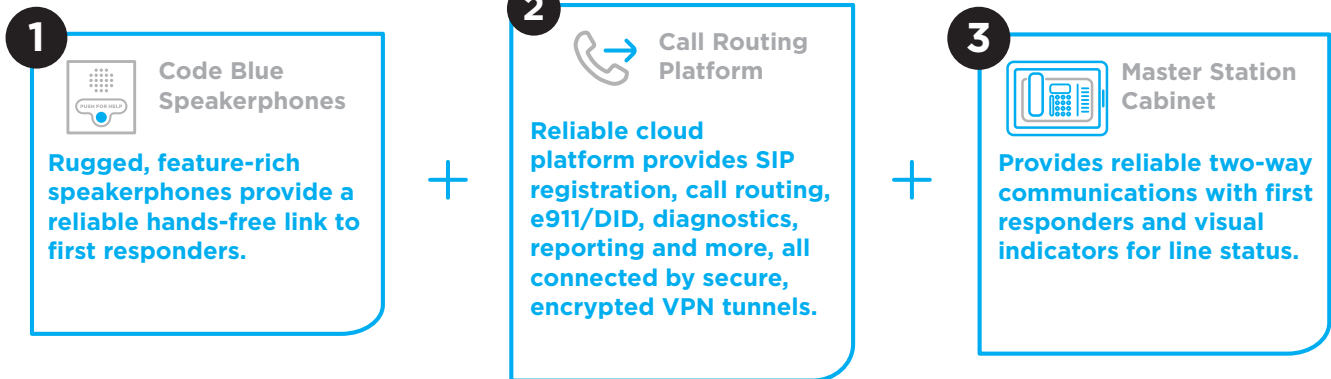
**Code Blue**

Powered by

## Nebula

## Cloud AOR (Area of Refuge)

offers IP- and analog-based* solutions that provide reliable two-way communication in your building stairwell, allowing first responders to assist individuals who cannot evacuate or may require additional assistance.

*requires one or more FXS Gateways.*

## Key Components

**To create a cloud AOR system**

**1** **Code Blue Speakerphones**

**Rugged, feature-rich speakerphones provide a reliable hands-free link to first responders.**

+

**2** **Call Routing Platform**

**Reliable cloud platform provides SIP registration, call routing, e911/DID, diagnostics, reporting and more, all connected by secure, encrypted VPN tunnels.**

+

**3** **Master Station Cabinet**

**Provides reliable two-way communications with first responders and visual indicators for line status.**

## ALSO INCLUDES

**Instruction & Direction Signage**

**Network Equipment for Connectivity**

**System Management**

**Diagnostics & Reporting**

**Scalability**

**Call Redirect if Unanswered**

**Failover & Redundancy**

**Network Security**

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**Product Sheet** | AOR Solutions

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# AREA OF REFUGE SOLUTIONS

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## Features & Options

### Connection Options

- ☑ LAN, SD WAN, Wi-Fi and 4G LTE/5G connectivity
- ☑ Cloud-based SIP registration
- ☑ DID/e911 support
- ☑ Secure connections (encrypted VPN tunnels)
- ☑ Ability to connect multiple locations to a centralized system
- ☑ IP and analog device support

### Failover & Redundancy

**Multiple connections available for automatic failover and redundancy**

- ☑ Cellular
- ☑ Ethernet
- ☑ WI-FI 5

### Compliance

- ☑ ADA compliant
- ☑ IBC Code compliant
- ☑ NFPA 72 Chapter 24 compliant
- ☑ Two-way communication
- ☑ Battery backup
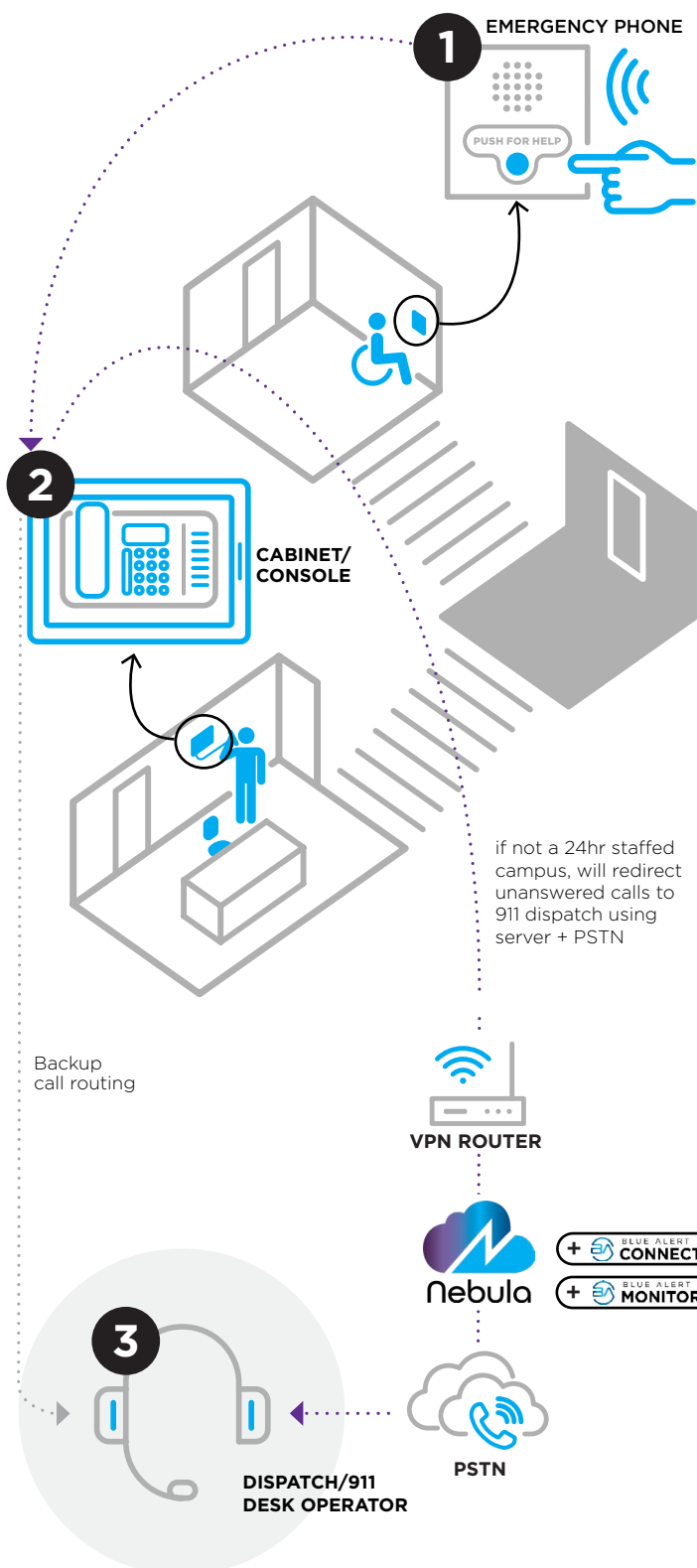- ☑ Call routing and redirect

### Systems Management

- ☑ Managed services and support
- ☑ Pre-configured units
- ☑ Custom engineering and technical support
- ☑ Advanced self-monitoring features can schedule and run tests and instantly deliver a notification if there is an issue
- ☑ Cloud connection monitored for performance

### Benefits

**Low Capital Expenditures**

Our cloud-based solution has extremely low installation costs. A yearly pricing model reduces time spent by your accounting department. We invested in a robust platform, so you do not have to.

**"Futureproof"**

Our system is constantly updated and managed by us. As technology advances, you will receive the most up to date software releases. With a system that you own, you will be responsible for keeping it up to date as well as keeping someone fully trained on administrating those updates.

**Scalability**

Our Managed Cloud platform provides you with the ability to support many devices and offer growth protection.

**Disaster Recovery**

Off-site hardware means that every location will run independently yet perform as a connected network at the same time. A power, hardware, or connection failure at one location will not harm any other location. Calls can be automatically routed to a different location, so customers never experience an interruption of service.

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**Product Sheet** | AOR Solutions

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# AREA OF REFUGE SOLUTIONS

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## Cloud Configuration
### Nebula Cloud Configuration

**1** EMERGENCY PHONE

PUSH FOR HELP

**2** CABINET/CONSOLE

if not a 24hr staffed campus, will redirect unanswered calls to 911 dispatch using server + PSTN

Backup call routing

**VPN ROUTER**

Nebula + BLUE ALERT CONNECT
+ BLUE ALERT MONITOR

**3** DISPATCH/911 DESK OPERATOR

PSTN

Powered by **nebula**

### How it works

1. Activate speakerphone to call for help.

2. A person will answer from the Cabinet/Console and be able to assist. No 24-hour attention is needed in the building.

3. A third-party off-site dispatch center will answer if Cabinet/Console has no one available.

Connect multiple devices to your Nebula Cloud. Cloud-based Blue Alert Connect and Monitor can be utilized with IP- and analog-based AOR solutions.

# AREA OF REFUGE SOLUTIONS

**Code Blue®**

## Not ready for Cloud?

Code Blue offers on-premise options with all the features you need, tailored to fit your requirements and budget.

**1** EMERGENCY PHONE

PUSH FOR HELP

**2** CABINET/ CONSOLE

if not a 24hr staffed campus, will redirect unanswered calls to 911 dispatch using server + PSTN

Backup call routing

**TOOLVOX**ˢ  + **BLUE ALERT CONNECT**
**TOOLVOX**ᵛ  + **BLUE ALERT MONITOR**

Analog phone lines

**SIP FXO Gateway**

☑ POTS (Plain Old Telephone Service)
☑ PBX (Private Branch Exchange)
☑ Other sources

**3** DISPATCH/911 DESK OPERATOR

**PSTN**

### ToolVox® XS
**Server**

is the perfect hardware appliance to deploy for almost any Help Point® ecosystem. This 1U rack-mountable server, provides the ability to effectively manage unique & real-time monitoring and reporting capabilities.

### ToolVox® XV
**Virtual Machine**

allows the use of existing network hardware to be utilized as the central hub for your Blue Alert® software needs & eliminates the need to install an additional server appliance on site.

### Benefits

☑ Schedule reports and run tests of connected devices.

☑ Remote monitoring of Code Blue phones and third party devices.

☑ Generate dial tone for IP and analog emergency phones.

☑ Connect to PBX, public telephone (PSTN) and internet (ISP) networks and third party platforms.

# AREA OF REFUGE SOLUTIONS

Code Blue®

## AOR IP SOLUTION

LS1000, IP2500, IP1500 VoIP speakerphones can be connected to Power over Ethernet switches and registered to the Toolvox Server.

TOOLVOX$

TOOLVOXⱽ

Mounted Central Station

PoE Switch

Battery Backup
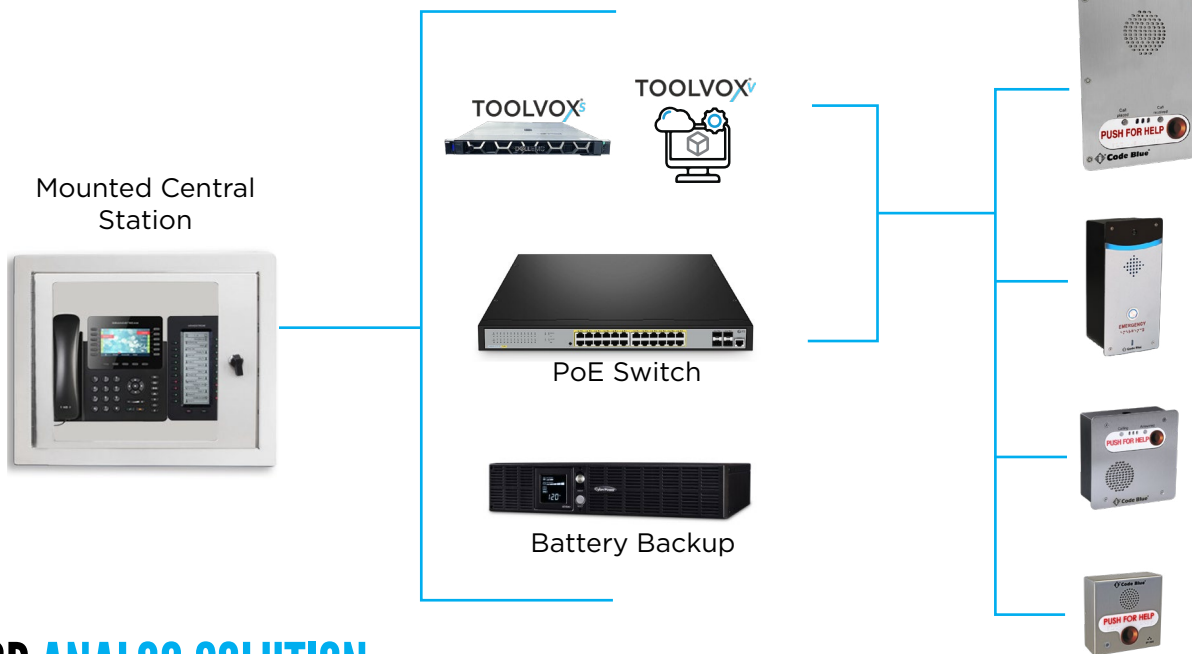
## AOR ANALOG SOLUTION

IA4100 analog speakerphones can be connected to a patch panel and powered by a distrbuted power supply. An IAD provides dial tone and conncts to the Toolvox Server and central station.

TOOLVOX$

TOOLVOXⱽ

Mounted Central Station

IAD

Battery Backup

Power Distribution
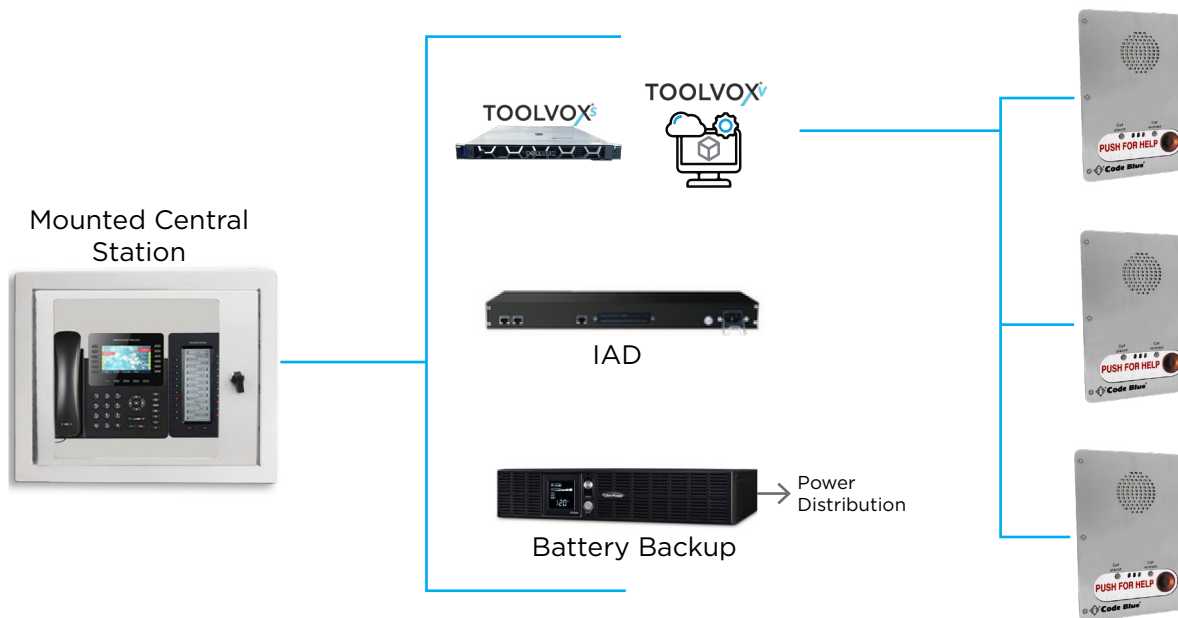
*By incorporating additional third party products, including battery backup with at least four hours of operation during a power outage and a mounted central station that can either directly answer requests for help or automatically be routed to an outside service like 911 if it is not being monitored, locations can take advantage of Code Blue's pioneering emergency communication solutions while successfully fulfilling their Area of Refuge needs.*

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# Area of Refuge Products

Code Blue offers a full suite of products designed to create a complete Area of Refuge (AOR) ecosystem. In addition to our speakerphones, these include central station cabinets, desk phones, network switches, ToolVox ™ servers, signage, & UPS battery backups. This collection of products allows you to integrate the benefits, durability, features, & flexibility of Code Blue products into your Area of Refuge system.

## Essentials
**Required to install an AOR System**

| Wall-Mounted Master Station | Signage | Code Blue Speakerphones |
|---|---|---|
| Connection Platform | PoE Switch | UPS Backup Battery |
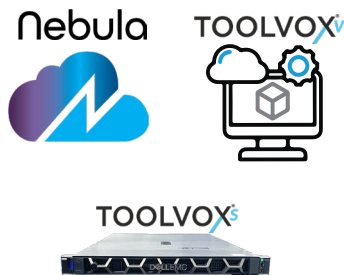
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# AREA OF REFUGE PRODUCTS

Code Blue®

## Network Equipment

At the heart of any Area of Rescue system is the need to keep communications connected and reliable in times of crisis. The networking equipment that is installed for your AOR system is a vital backbone to ensuring your system operates correctly when it is needed most. Battery backups, network switches, rack equipment, and servers are often overlooked parts of an AOR ecosystem but are just as important as communication & visual aid devices.

## ToolVox XS™ Server Appliance

Serving as the brain of your AOR system, the Toolvox XS™ Server ensures reliable connectivity and supports self-monitoring and diagnostic features to keep your system running smoothly at all times. *Also available in virtual machine.*



### Hardware Details

- **Chassis Size**
    - **Height:** 1.7" (1U Form Factor)
    - **Width:** 17.08"
    - **Depth:** 22.58"
    - **Weight:** 26.89 lbs. (12.2kg)
- Linux OS
- Swappable RAID drives

## UPS Battery Backup

Part of ensuring proper operation of your AOR system includes planning for instances where power may not be available. An Uninterruptible Power Supply (UPS or Batter Backup) needs to be parts of that plan. Not only does this help when the power is off, but it also provides data line & surge protection for equipment connected to it.



### Hardware Details

- **Batteries:** 4x 12v 7Ah (user replaceable)
- **Outputs:** 8x 120VAC Outlets
- **VA:** 1500 VA
- **Watts:** 1125 W
- **Dimensions:** 17" x 3.5" x 18.8"
- **Form Factor:** Rack Mount or Free Standing Tower
- **Rack Height:** 2U

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## PoE Switches

A reliable **Power Over Ethernet (PoE) Network Switch** helps ensure that your connected equipment stays connected and powered up. While a 24-port option is our most commonly sold option for AOR applications, other configurations such as 16-port & 8-port are also available.

### Hardware Details

- **Dimensions:** 1.73" x 17.32" x 8.19"
- **Ports**
    - 24x 10/100/1000BASE-R RJ45
    - 4X 1G SFP
- **PoE Standard:** IEEE 802-3af/at
- **PoE Budget: 370W**
- **Operating Temp:** 0 to 45ºC (32 to 113°F)
- **Desktop or Rack-mountable**

## Network Equipment Rack

A **Network Equipment Rack** is essential for keeping vital equipment organized and protected. Our 12U wall-mountable rack is designed to accommodate your AOR network equipment while maximizing space efficiency in your network room. Featuring vented locking doors and panels, it ensures proper cooling and security for your equipment

### Rack Details

- **Dimensions:** 26.46" x 24.77" x 36.22
- **Weight:** 101.4 lbs
- **Rack Height:** 12U
- **Max Device Depth:** 32.50"
- **Weight Capacity (Stationary):** 500 lbs
- **# of Vertical Mounting Rails:** 4
- **Locking Cabinet (keys included)**
- **Vented at the sides, top, & bottom**
- **Includes M6 screws (20), M6 cage nuts (20), washers (20), & 12-24 screws (20).**
- **Wall mounting holes spaced 16" apart for standard stud placement.**

Code Blue®

## FXO VoIP Gateway

Not all communication devices within an AOR system are IP devices, so the use of an FXO VoIP Gateway may be needed to connect POTS/analog line devices. Utilizing one of these devices means you can easily take advantage of Code Blue's AOR system components whether you need to connect analog or VoIP devices.

### Details

- **Designed to support a wide range of call features, delivering a complete and reliable VoIP solution suitable for nearly any scenario.**
- **Power**
  - 12VDC/1.5A
- **Telephony Interface:** 2x RJ11 FXO Ports
- **Network Interface:** 1 WAN & 1 PC RJ45 Ethernet Ports (10/100/1000Mbps)

## FXS Gateway

Additionally, you'll need an FXS gateway to supply dial tone, ringing, and voltage to power traditional analog phones. SIP to FXS gateways convert analog phone lines into VoIP connections, allowing you to use traditional phones with your VoIP system. Stay seamlessly connected by choosing the appropriate gateway size, available in configurations of 2, 4, 8, or 24 ports to meet your needs.

| | Power | Telephony Interface | Network Interface |
|---|---|---|---|
| 2-port | Input: 100-240 VAC, 50-60Hz<br><br>Output: 5.0VDC | Two (2) RJ11 FXS ports | One (1) 10/100 mbps auto-sensing ethernet, RJ45 |
| 4-port | Input: 100-240 VAC, 50-60Hz<br><br>Output: 12VDC/1.0A | Four (4) RJ11 FXS ports | Two (2) 10/100/1000 mbps, RJ45 ports |
| 8-port | Input: 100-240 VAC, 50-60Hz<br><br>Output: 12VDC/1.5A | Eight (8) RJ11 FXS ports | Two (2) 10/100/1000 mbps, RJ45 ports |
| 24-port | Input: 100~240VAC, 50~60Hz<br><br>Output: 12VDC, 5A/24VDC, 6.25A | 16-24-32 x RJ11 & 1/1/2 50-pin Telco Connections or 2 50-pin Telco connectors | 1 x 10/100/1000 mbps auto-sensing RJ45 port |

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## IP Desk Phone

Typically housed within a central station cabinet to enable communication with connected call stations in the AOR system. Code Blue's **IP Desk Phone** is a durable and versatile solution designed to meet the needs of any application. It is also fully compatible with the **extension module**, offering enhanced functionality and seamless integration with your system.

### Desk Phone Details

- **Lines:** 16
- **Display:** 5" 1280-720 capacitive touch screen IPS LCD
- **Network Interface:** Dual switched 10/100/1000 Mbps ports with integrated PoE/PoE+
- **Ports:** HDMI in/out, USB, Micro SD, headset jack, EHS
- **Extension Module Compatible**
- **Runs on Android 7.0 OS**
- **Dual-min HD speakerphone with noise reduction, advanced echo cancellation & excellent doubletalk performance.**

### Extension Module Details

- **Ideal for handling high call volumes, offering advanced features like call park/pick-up, speed dial, intercom, video conferencing transfer/forward and more.**
- **Lines:** 20 per page (offers up to 40 contacts per module with support for up to 160 contacts by using 4 modules.)
- **Display:** 4.3 inch (272x480) TFT color LCD
- **Feature Support:** Local GUI: Multiple line/call appearances

## AOR Signage

Code Blue's **Area of Refuge Signs** help guide individuals within a building to reliable two-way communication, allowing first responders to assist individuals who cannot evacuate or may require additional assistance.

9" H x 6" W
(22.9 x 15.2 cm)

5" H x 15" W
(12.7 x 38.1 cm)

*Arrow direction available facing left or right

### Standard Features

- **ADA Compliant**
- **NFPA 101 Compliant**
- **IBC Compliant**
- **Embedded Raised Lettering**
- **Self-Adhesive Mounting Vandal-resistant**

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## Master Station Cabinet

The Master Station Cabinet provides the essential location to coordinate & control in-building rescue communications in the event of an emergency. This powder-coated steel cabinet provides adequate room for important equipment and keeps components out the elements.
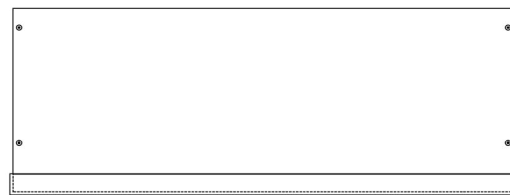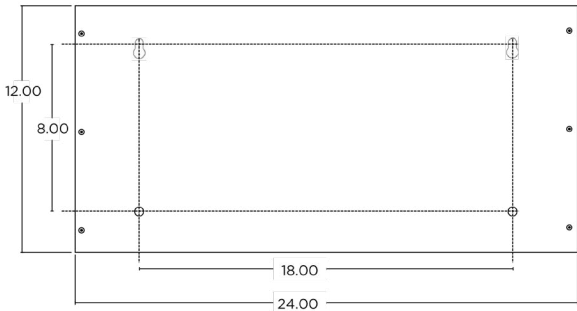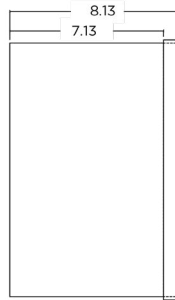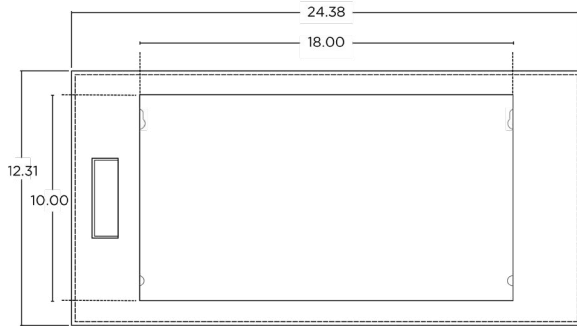


## Code Blue Help Points® & Speakerphones

Along with the components detailed in this document, Code Blue provides a wide range of Help Points® and speakerphones that can integrate seamlessly into your AOR ecosystem. For more information, visit our website at www.codeblue.com.



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