Integrated base stations, WAVES 10 software & server

Description

WAVES Mass Notification System (MNS), part of the ALERiTY integrated platform, was designed to protect, alert and inform people of what to do before, during and after an emergency. WAVES advanced configurable control systems, which include an Integrated Base Station (IBS) and WAVES 10 software provide secure activation of audible, visual and data messages as well as status monitoring of the MNS.

One-click QuickAlert buttons are enabled to launch indoor and outdoor mass notification systems from one easy-to-use Graphical User Interface (GUI). WAVES provides system redundancy with multiple points of command and control (IBS-8400 and IBS-8000C Command Center products) through its web-client GUI architecture. The system can operate as a stand-alone MNS or be integrated with other communication, fire, and security systems for improved situational awareness.

The WAVES 10 software features an interactive Geographic Information System (GIS)-based GUI that allows users to select a single device, multiple devices or a region on a map to launch messages. The map also displays color-coded status of each node in the IP network.

Through a secure, robust and reliable Ethernet communications network, WoIP delivers announcements originating from the IBS through IP Communicators (IPC). The IPC sends and receives audible, visual and data messages via an RTP multicast stream through the Local Area Network (LAN). It supports the highest network security standards with 256-bit AES and features dynamic role-based password protection.

WAVES MNS enables seamless system recovery, rebuilding the system status to last known condition after any system failure. It provides supervision and monitoring at end nodes. Each IPC unit conducts supervisory built-in self-tests (BIT) that are reported periodically or on-demand to the IBS, where they are displayed and logged. Changes in supervised variables trigger alert or alarm conditions at the IBS and can be further programmed to initiate messaging events throughout the system.

In addition to the WAVES Server, a Standby Server is also available. The WAVES Standby Server is an independent secondary server that will enable full command and control capability of the system if the primary server loses power, connectivity or is no longer able to communicate and control the mass notification system. The Standby Server can also be used for an additional command and control system to activate messages while the Primary Server is in control.
Features & benefits

• One click solution to launch indoor and outdoor mass notification systems
• Easy-to-use GUI with unit or script-based activation, including one-click QuickAlerts
• Multiple points of command & control through web-client GUI and Standby Server available for system redundancy
• Remotely access GUI from anywhere
• Standby server available for system redundancy
• Interactive map with geographic unit selection to send alerts and color-coded status of each node in the IP network and its end-of-line-devices (EOLD) such as high power speaker arrays
• Closed loop system—supervision and monitoring of the IPC end nodes assures messages are received as sent
• Supervised system heart beat—system devices continuously send status
• Trouble signals notify operator of equipment degradation or failure
• Interoperability with communication, fire and security systems; Advanced API available with full-featured bidirectional interoperability
• Supports highest network security standards and encryption—256-bit AES
• Multiple user roles and privileges; user configuration of alerts
• Dynamic and customizable role-based password protected environment
• Pre-recorded or live (PTT microphone) messages to any individual or group of audible devices
• Remote monitoring reports indicate off normal conditions prior to dispatching service personnel
• Remotely upload upgrades from main server to IP end nodes

Note: Please review all installation manuals and operation manuals prior to installation.

Approvals

• TÜV certification: UL/CSA/EN 60950-1
• FCC part 15 and ICES-003

Applications

Multiuse applications- Functions as a Central Control Unit/Station for mass notification, emergency communications, personnel notification, and citizen warning for natural or man-made disasters. It can also be used for training, general announcements, crowd control and special events.

Components

IBS-8432®

WAVES 10 software & hard drives, are sold separately. Monitor is also sold separately.

• Rugged Enclosure
• Computer Processor
• IP Communicator (IPC)®
• Ethernet connection
• Keyboard and mouse
• Push-to-talk microphone with All-call switch
• Uninterruptible Power Supply: Eaton 9PX1500RT® (120V); 9PX1500GRT® (208V)

Note: In the WoIP MNS, one Server configuration is required IBS-8432 + WAVES-HD-8101). The system can manage multiple simultaneous log-ins and multiple Command Center configurations (IBS-8432 + WAVES-HD-8101C) for additional points of command and control. Multiple Standby Servers can also be added to the system (IBS-8432 + WAVES-HD-8101SC), which can also be used as a Command Center. These IBS can be located anywhere in the LAN.

[WAVES-HD-8000 product line is required for operation of the IBS. The WAVES-HD-8000 line is sold separately.](#)

For additional information, please refer to specification sheets.

Drawings

Figure 1. IBS-8432
Table 1. Order Information

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBS-8432</td>
<td>Integrated Base Station/Primary Server (see components for IBS-8432) - 120V. Does not include software/hard drive (WAVES-HD-8000 range). LCD monitor sold separately. IBS-8432 can act as a Server with WAVES-HD-8021 software or as a Command Center with WAVES-HD-8021C software.</td>
</tr>
<tr>
<td>IBS-8432-220</td>
<td>Integrated Base Station/Primary Server (see components for IBS-8432) - 220V. Does not include software/hard drive (WAVES-HD-8000 range). LCD monitor sold separately. IBS-8432 can act as a Server with WAVES-HD-8000 software or as a Command Center with WAVES-HD-8000C software.</td>
</tr>
<tr>
<td>IBS-MIC</td>
<td>IBS Microphone (Line Replacement Unit) with cable</td>
</tr>
<tr>
<td>IBS-MIC-RMT</td>
<td>IBS Microphone with 100 ft. remote cable</td>
</tr>
<tr>
<td>IBS-RM-KIT</td>
<td>Hardware to rack mount IBS chassis</td>
</tr>
<tr>
<td>X12-04640</td>
<td>22” LED backlit LCD monitor. Monitor stand included.</td>
</tr>
<tr>
<td>X12-04662</td>
<td>43” LED backlit LCD monitor. Monitor stand and bracket mounting options sold separately.</td>
</tr>
<tr>
<td>X12-04645</td>
<td>Monitor stand for 43” LCD display.</td>
</tr>
<tr>
<td>X12-04646</td>
<td>Monitor wall-mount kit for 43” LCD display.</td>
</tr>
<tr>
<td>DTMF-8000</td>
<td>Telephone Control Module provides remote access to a WAVES IBS via telephone/cell phone</td>
</tr>
</tbody>
</table>

① Spare/back-up and upgrade models are available: WAVES-HD-8100-LRU (upgrade for IBS-8431 and IBS-0331-HD), WAVES-HD-8100C-LRU and WAVES-HD-8100SC-LR (for IBS-8431), WAVES-HD-8101-LRU (for IBS-8432 and IBS-0332-HD), WAVES-HD-8101C-LRU (for IBS-8432), WAVES-HD-8101SC-LR (for IBS-8432) and DTMF-8000-LRU.

Table 2. Product features

General Specifications & Performance
- Long-life revision-controlled motherboard
- 8 GB high-speed memory
- 500 GB removable hard drive with caddy
- CD/DVD-RW optical drive
- Ports: DVI and HDMI video ports; 2 available network ports (LAN & AUX) and 7 USB ports (1 front & 6 rear)
- SVGA Graphics (up to 1920 x 1440)
- Windows® 10
- User-selectable logging levels. Logs on hard drive are printable and exportable to spreadsheets.

Security
- Encryption: 256-bit AES
- Database: SQL, password protected

Environment
- Operating Temperature: 32°F to 120°F (0°C to 49°C); UPS: 32°F to 104°F (0°C to 40°C)
- Storage Temperature: -20°F to 140°F (-20°C to 60°C); UPS: 5°F to 113°F (-15°C to 45°C)
- Humidity, Non-Condensing: 0 to 93% RH @ 90°F (32°C)

Power
- Component AC Input: 110-240 VAC 50/60 Hz Auto-switching. 110 V US power cable included. For international use, the country specific cable will need to be purchased.
- Power Consumption: 125 W
- System Input Voltage: 120V (UPS-914); 220V (UPS-915)
- Typical UPS Back-up time: 90 minutes

Physical (Enclosure)
- Dimensions: 7” H (20.3 cm) x 17” W (43 cm) x 22” D (62.5 cm)
- Weight: 40 lbs (18 kg)
- Finish: Black powder coat

Certification
- IBS-8432: TÜV certification: UL/CSA/EN 60950-1; FCC part 15 and ICES-003
Architects and engineers specifications

The Central Control Unit/Station shall be an WAVES over IP Integrated Base Station - IBS-8400 product line or equivalent for a Mass Notification System. The software and hard drive for the IBS shall be WAVES-HD-8000 product line or an equivalent web-client Graphical User Interface (GUI). The IBS shall deliver announcements via an Ethernet communications network, the IP Communicator (IPC) or equivalent. The IPC shall send and receive audio and data via an RTP multicast stream through the Local Area Network. It shall support the highest network security standards with encryption- 256-bit AES and shall feature dynamic role-based password protection. It shall have the capability to be integrated with communication, fire and security systems.

The IBS shall include an intuitive, easy-to-use interface with unit and script based activation with a one click solution to launch indoor and outdoor mass notification systems.

The interactive map of the IBS shall offer geographic unit selection for message activation. It shall also include color-coded status of each node to its EOLD (speaker arrays, strobes, display signs).

The system shall offer multiple points of command and control through a web-client GUI. It shall provide seamless system recovery, rebuilding the system status to last known condition after any system failure.

The MNS shall provide supervision and monitoring at end nodes. Each IPC unit shall conduct supervisory built-in self-tests (BIT) that are reported periodically or on-demand to the IBS, where they shall be displayed and logged.

The IBS shall be field-programmable and configurable by a system administrator. The IBS shall be able to execute pre-scripted, automated responses to user input, commands from C2 systems or WAVES network events. Such events shall include playing of pre-recorded audible messages, activation of text messages and strobes as well as sending messages to other connected systems.

Note: Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Eaton business standard terms and conditions.

WE ENCOURAGE AND SUPPORT NICET CERTIFICATION
18 MONTH WARRANTY