

# IDA8

## Public Address and Voice Evacuation System



FEATURES	SPECIFICATIONS
<ul style="list-style-type: none"> <li>• Full Drag-n-Drop Matrix Multi-Channel DSP</li> <li>• 8 Balanced Mic/Line Audio Inputs</li> <li>• 8 Mic/Line Audio Input Expansion Slot</li> <li>• Optional Telephone Card</li> <li>• 8 Balanced Audio Outputs + 2 Back-Up Amplifier Outputs</li> <li>• 8 100V Amplifier Audio Return Inputs + 1 Back-Up Amplifier Returns</li> <li>• 16 (8x8) Supervised Amplified Speaker Outputs – up to 100V</li> <li>• 9 Logic Inputs and 8 Control Outputs</li> <li>• Security Contacts for Evacuation and Fault Reporting</li> <li>• Connect up to 32 Master/Slave Units in Local Network for 256 x 256 Audio Matrix</li> <li>• 48 digital Audio Channels, 32-Bit, 48KHz Sampling Rate, Redundant Network Devices</li> <li>• Connect up to 32 Local Networks for Global Networking</li> <li>• Networkable via RJ-45 copper or ST Fiber (single or multi-mode) or Hybrid of Both</li> <li>• Up to 4 Hours of Digital Audio Message Storage – Upload WAV files or Live Fash Record</li> <li>• EN 54-16 and ISO 7240-16 Compliant</li> <li>• 5 Year Factory Warranty</li> </ul>	<p><b>FREQUENCY RESPONSE:</b> 20Hz - 20kHz @ +4dBu (±0.6 db)</p> <p><b>DYNAMIC RANGE:</b> &gt; 105 dB</p> <p><b>MAXIMUM GAIN:</b> 66 dB</p> <p><b>CROSSTALK:</b> Line &lt;-78dB, mic &lt;-73dB</p> <p><b>OUTPUT IMPEDANCE:</b> 200 ohms</p> <p><b>INPUT IMPEDANCE:</b> 8k ohms</p> <p><b>MAXIMUM OUTPUT:</b> + 24dBu</p> <p><b>MAXIMUM INPUT:</b> + 24dBu</p> <p><b>PHANTOM POWER:</b> + 48 VDC</p> <p><b>INPUT GAIN RANGE:</b> 0 to 54 dB</p> <p><b>SAMPLING RATE:</b> 48kHz or 96 kHz (selectable)</p> <p><b>A/D D/A CONVERTERS:</b> 24 bit</p> <p><b>POWER CONSUMPTION:</b> &lt;145 Watts</p> <p><b>DIMENSIONS:</b> 17.125"W x 1.75"H x 11.625"D</p> <p><b>MAX WEIGHT:</b> 8 lbs.</p> <p><b>COMPLIANCE:</b> CE LVD and EMC Directive, EU Directive 2002/95/EC, UL approved</p>



**DESCRIPTION**

Designed for the critical Mass Notification and large Voice Evacuation Systems, the IDA8 (C/S) is a third generation audio system controller that meets the complex needs of these critical systems. The IDA8 is a true drag-n-drop 8 x 8 matrixing DSP processor that also complies with NFPA-2010, Chapter 24 supervised audio requirements. The IDA8 uses impedance scanning to monitor the paging stations, wiring, connector blocks, internal program and hardware components, and amplified speaker outputs. The user can select the fault scanning tolerance and any deviation will be announced visually, audibly and logged into the data file for local and/or remote referencing. The IDA8 also contains 8 channels of amplifier monitoring via HF tone monitoring as well as amplifier output voltage monitoring. There are two channels or backup amplifier channels that will automatically be switched upon any amplifier fault detected. The IDA8 also has a fully supervised paging microphone with zone selection and message selection programmable software keys and LCD screen display on the front panel. There is also an emergency all-call button for emergency all-call announcement capabilities across the entire IDA8 network. Up to 31 IDA8S slave units can be networked to each IDA8C controller unit per local network for a 256 input by 256 output local network capacity. Up to 32 local networks can be networked together for a much larger "Global" network, which gives the IDA8 total system capacity of over 65,000 inputs and outputs. The IDA8 has 48 true audio digital channels over the Aetis-Net and networking can be via copper or Fiber – Single or Multi-Mode – or hybrid of both as needed. The IDA8 has up to 4 hours of digital audio messaging storage at 48KHz sampling rate and can play up to 4 audio messages in each IDA8 unit or up to 48 messages in the IDA8 network simultaneously. Each IDA8 controller can handle up to 4 programmable and fully supervised microphone paging stations with either programmable flex buttons or color touchscreen. Up to 2 per IDA8S slave unit. The IDA8 incorporates an internal real time clock for scheduling events such as message playback, output control, preset control, etc. Software system design is PC based via ATEIS Studio software residing on a PC. Once connected to the IDA8, ATEIS Studio allows for design downloading, reversal of in-box designs, and live monitoring, calibration, and routing via the PC. Third Party control systems such as Crestron, AMX, Vity and others can also control the IDA8 either via RS232 or IP commands. Up to 32 IDA8 units can be networked with up to 4 miles between each unit (fiber connection). A variety of accessories, including low cost analogue controllers (RAC), digital controllers (URC), and various paging and control microphones (PPM, PPM Touch) are available for use with the system.

- SOFTWARE COMPONENTS:**
- Delays – 5 ms to 2000 ms
  - Dynamics – AGC (mono and stereo), Automatic Noise Sensing, Compressor, Compressor, Expander (mono and stereo), Ducker (mono and stereo), Mono and Stereo Gate, Voice Gate, Gate with Sidechain
  - Equalizers – Mono and Stereo GEQ (1 Octave, 2/3 Octave, 1/3 Octave), Mono and Stereo PEQ (2, 4, 6, 8, 10, 16 bands)
  - Feedback Cancellation – Dynamic Feedback cancellation 1/5, 1/10, 1/20, and 1/100 Octave with 4, 8, 12, or 16 bands
  - Inverter
  - Level Controls – 1x1, 4x4, 8x8, 16x16
  - Local Echo Suppression Module
  - Logic – AND, NOT, OR, NOR gates with Net Input/Output for network applications
  - Meters – 1 CH, 4 CH, 8 CH, 16 CH Peak/RMS meters
  - Message Repeater – Up to 53 minutes of audio can be stored inside the box and output 2 separate messages simultaneously to independent zones. Messages can be activated using TTL inputs or via the built-in Scheduler
  - Mixers – Automixers, Automixers with Mix Minus, Matrix Mixers, Standard Mixers, and Room Combiner
  - Noise Generator – White, Pink, Tone
  - Page Control Module – For zone paging applications
  - Selectors – 4x1, 5x1, 6x1, 7x1, 8x1, 16x1, 32x1 for use with Third Party control or ATEIS RAC, URC remote controllers
  - Telephone Card
  - Phone Book
  - Custom Components – Build your own program within the program and password protect it

- HARDWARE COMPONENTS:**
- Controller Main Frame – 2 slots for audio input cards, 9 TTL/Analogue Inputs, 8 TTL Outputs, RS-485, RS232 Port, Ethernet Port, 1 Dual Port Network Card slot
  - Paging Station Ports – 4 RJ45 Connectors for Microphone Paging Stations
  - Audio Connections – 8 Line-Level Audio Outputs, 8 Amplified Audio Returns, 8 Amplified Speaker Zone outputs – Line A/B Optional – 2 back-up Amplifier Returns
  - Telephone Card – Caller Signal Mute and level adjust, Ring Signal Mute and level adjust, Auto Answer on/off – number of rings select, Noise Suppression, Line Echo Cancellation, DTMF Decoder, Dialer, Phone Book, Level Out Adjust
  - Network Card – Cat 5 Copper port or Fiber (Single or Multi-Mode) Port
  - Color LCD Screen with programmable soft keys for functions, zone select, message select
  - **Paging Microphone** with PTT switch - Emergency All-Page Override Button

### ■ ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The Voice Evacuation/Mass Notification System Controller shall consist of an 8 input by 8 output networked control unit with full Drag-n-Drop matrixing digital signal processor. The IDA8 control unit can be networked with 31 slave units for a local network Input/output capacity of 256 by 256. 32 local network controllers can be networked together in a global Network for a maximum zone capacity of over 65,000 output zones. The system controller shall have 9 control inputs that can be software configurable for either TTL or analog. The system controller shall also have 8 control outputs configurable for N.O. or N.C. operation.

Voice evacuation system controller shall incorporate 4 hours of audio digital messaging and be able to play 4 messages simultaneously on a single controller unit and up to 48 simultaneous messages on a single networked system. Digital audio messages can be stored internally via PC upload of WAV files, or live flash recorded. Vox-Net media streaming server shall allow virtually unlimited message storage and playback capabilities. System controller shall also have internal real-time clock with event scheduling software to allow for timed operations such as message playback/repeating, control output activation, preset activation, etc. System shall have 32 Master design presets with each Master preset containing up to 16 parameter change sub—presets.

The system controller shall include integral **paging PTT microphone** with color LCD screen and programmable soft-key buttons for zone, message, function selection and alarm acknowledge/silence. There shall also be an integral emergency override page button for automatic live voice priority paging to all outputs on local network.

The system controller and slave units shall allow for supervised microphone paging stations with either programmable flex-buttons for zone/function select or color configurable touchscreen with gooseneck paging microphone. Microphone paging stations shall wire with standard CAT-5 4-pair cabling with RJ-45 connectors. The paging stations and wiring shall be fully supervised. Each controller unit shall accept up to 4 microphone paging stations and each slave unit shall accept up to 2 microphone paging stations. Additional unsupervised paging stations can be added via TCP/IP network connection.

The system controller shall supervise each amplifier via selectable 18KHz or 20KHz tone monitoring on 8 audio outputs and subsequent 8 amplified audio returns with up to 1000-watts at 70V maximum current/voltage handling. The controller unit shall also monitor amplifier output voltage. There shall be 2 backup amplifier ports that are hot swappable by controller automatically if any fault is detected on the amplifier circuits. The 8 amplified speaker output zones shall be supervised via impedance scanning and referencing for faults exceeding the user selectable tolerance percentage settings – down to 5% deviation. System controller and slave units shall constantly monitor all hardware and software components, as well as external wiring and connectors for any fault once reference is taken after system set-up. All faults shall be reported to main system controller for visual and audible alarm, as well as via the monitor speaker output to security station. All faults shall be logged into system buffer memory for local and/or remote PC access via direct connection or network connection on TCP/IP LAN/WAN. System shall be able to be locally or remotely monitored and controlled via PC Ethernet connection on controller unit. Controller Unit and Slave units shall also have 24VDC battery back-up input for primary back-up power connection with fault monitoring contacts upon primary power failure.

Available system program processing components shall include (but not be limited to) various forms of: mixers, equalizers, filters, crossovers, dynamics/gain controls, routers, delays, remote controls, meters, generators, and diagnostics. Ethernet communications shall be utilized for software control, configuration, and DSP distribution. Each multi-unit application shall feature a fully redundant network configuration with less than 0.02ms latency between units. All network configurations shall be via CAT5 cable or fiber-optic. After initial programming, systems may be controlled using either TCP/IP or RS-232 serial communication by third party control systems (such as AMX® and Crestron®), by PC computer, and/or by dedicated remote control devices. Software shall operate on a PC computer, with network card installed, running Windows® XP Professional/Vista/Windows 7. The Digital Audio Platform shall be CE marked, UL/C-UL listed. Warranty shall be 5 years.