Universal Audio Processor

Description

Designed for small to medium installations, The CORE is a highly versatile drag-and-drop DSP processor. Hardware system configuration is highly flexible in blocks of 2 for 4 in/12 out, 6 in/10 out, etc. configurations. Expandability is also ensured by stacking multiple processors for a very high number of inputs and outputs. Front panel knobs can be programmed to map to any functions within the DSP library and can be scaled to match the requirements of the project. Up to 53 minutes of audio storage is built-in to the box and audio files can be activated via a built-in scheduler, any of 16 resident TTL inputs, or via an end user GUI interface custom built for each application. System design is PC based.

The software system design is PC based. Once connected, The CORE software, 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 Core either via RS-232 or IP commands. Up to 12 CORE units can be networked together for expandability. A variety of accessories, including low cost analog controllers (RAC), digital controllers (URC), and various paging and control microphones (PPM, PPM Touch) are available for use with the system.

Configurations

3 System Configurations available:

• **CORE 8X8** (8 inputs, 8 outputs) • **CORE 4X12** (4 inputs, 12 outputs) • **CORE 12X4** (12 inputs, 4 outputs)

Features

- Up to 16 analog inputs/outputs
- Configuration via PC/Laptop
- Programmable, scalable front panel knobs for DSP functions
- Third-party control via RS-232 or IP commands
- Full DSP drag-and-drop component library
- Up to 53 minute built-in message storage
- 16 built-in TTL inputs and 8 logic outputs
- Stack up to 12 units
- CE and UL listed
- 5 year warranty

Hardware Components

- Main Frame: 4 slots for input/output cards, 16 TTL/Analog Inputs, 8 TTL Outputs, RS485, RS232 Port, Ethernet Port
- Output Card: 4 Channels with individual Overload Indicator, Mute, Meter, Signal Present, Level Control, and adjustable Overload Threshold
- Input Card: 4 Channels with individual Bypass, Mute, Sensitivity Select, Phantom Power, Mute, RTO (route to output), VU Meter, Signal Present, Level Control and adjustable Overload Threshold

Software Components

- Delays: 5 ms to 2000 ms
- Dynamics: AGC (mono and stereo), Automatic Noise Sensing, Compressor, Comp-limiter, 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: 4x4, 8x8, 16x16
- Local Echo Suppression Module
- Meters: 1 CH, 4 CH, 8 CH, 16 CH Peak/RMS
- Logic: AND, NOT, OR, NOR gates with Net Input/Output for network applications
- 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
- Custom Components: Build your own program within the program and password protect it

Specifications subject to change without notice.

Technical Specifications

Frequency Response:	20 Hz to 20 kHz @ +4 dBU (=/-0.6 dB)
Dynamic Range:	> 105 dB
Maximum Gain:	66 dB
Crosstalk:	Line < -78 dB; MIC < -73 dB
Output Impedance:	200 ohms
Input Impedance:	8k ohms
Maximum Output:	+24 dBu
Maximum Input:	+24 dBu
Phantom Power:	+48V DC
Input Gain Range:	0 to 54 dB
Sampling Rate:	48 kHz or 96 kHz (selectable)
A/D D/A Converters:	24 bit
Power Consumption:	< 145 watts
Dimensions:	17-1/8” W x 1-3/4” H x 11-5/8” D
Product Weight:	8 lb.

Architect and Engineer Specifications

The Digital Audio Platform shall be available with up to 16 inputs and outputs. Inputs/outputs shall be specified in blocks of 4, up to a total of 16. MIC/Line Input and line level output options shall be available. Inputs/outputs shall be analog, with internal 24 bit A/D & D/A converters operating at a selectable sample rate of 48 kHz or 96 kHz. All internal processing shall be digital (DSP). Electronically balanced inputs and outputs shall be provided on plug-in barrier strip connectors. Inputs shall be individually programmable for either microphone or line-level audio signal and have assignable 48V Phantom Power. System shall be expandable to up to 12 total DSP units via RJ-45 Digital Links using standard CAT-5 data cabling, up to 32 feet between any two units max. Digital expansion links shall share up to 16 channels of digital audio at 48 kHz or 5 channels of digital audio at 96 kHz sampling rate between multiple units.

Internal system software shall be true drag-and-drop configuration with separate control/monitor GUI via direct data connection or via LAN/WAN using web browser TCP/IP protocol. Available system audio program components shall include (but not be limited to) various forms of: mixers, equalizers, filters, crossovers, dynamics/gain controls, feedback controller, routers, delays, remote controls, meters, noise/tone generators, and diagnostics. Ethernet communications shall be utilized for local or remote software control, configuration, and DSP distribution. After initial programming, systems may be controlled/monitored 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 running Windows® XP Professional/Vista/Windows 7.

DSP shall include two types of presets - “Master” and “Sub-Preset”. There shall be a minimum of 32 Master Presets, which will allow user to switch the unit between totally different preprogrammed designs. There shall also be a minimum of 16 Sub-Presets that allow user to switch to preprogrammed parameter settings within each Master Preset.

The DSP shall incorporate an audio message player that can store up to 53 minutes of 8-bit audio or 18 minutes of 16-bit audio. Audio messages can be played either manually via direct PC selection, external analog or TTL logic input, microphone paging station programmable flex button, or automatically via internal event scheduler. Messages can be manually or automatically routed to any single or multiple zones/outputs. There shall be up to 128 schedules with up to 100 programmable scheduled events per schedule.

The DSP unit shall incorporate 16 logic inputs to trigger events or presets and other logic functions and 8 logic outputs with a common rail contact for controlling external functions. The unit shall also be equipped with 8 front panel control knobs, which shall be totally programmable for any variable function in the design program. This function knob shall also be 100% scalable to limit amount of volume/control. Front panel shall also have multi-color LED for displaying input/output signal presence, routing, and clipping indication for each input and output.

DSP shall contain both TTL Logic and RS-485 serial control ports for communicating with a myriad of intelligent remote controls and microphone paging stations. Remote Intelligent controls shall be either selector switch with volume knob in a 5-position or 8-position style (RAC 5 or RAC 8), or an LCD window style with control wheel and selector buttons - (URC for monochrome RS-485) or (URC-200 for multi-color IP-based controller). There shall also be the capability for remote intelligent gooseneck paging stations which incorporate either programmable flex buttons with expansion button units, or touchscreen controllers. Multiple remote serial control devices can also be daisy-chained by installing optional PPM-WJB junction box.

The DSP unit shall be 1RU high, 17-1/8” x 1-3/4” x 11-5/8” (W x H x D). Product weight shall be 8 lb. DSP unit shall be factory warrantied for 5 years.

Accessories

Remote Controls
Models RAC5, RAC8

- 5 Sources selector (RAC5)
- 8 Sources selector (RAC8)
- Wall-mounted level

Noise Sensing Microphone
Model NSM

- Omnidirectional pickup pattern
- Preamplification of surrounding background noise
- Auto Noise Gain control feature, 0 dB modulation

IP-Based Remote with LCD Display
Model URC200

- Programmable remote controller (TCP/IP)
- Integrates with room controllers like light, curtains, sound and video control
- Easy to read full color display
- Low-power consumption allows for long lines and multiple devices into one system

Programmable Remote Controller
Model URC

- RS485 protocol with display

Junction Box
Model JB

- RS485 protocol
- For splitting/extending PPM/URC

8-Button Paging Microphone
Model PPM8

- 8 programmable zones/buttons, expandable up to 256 zones (requires PPMKeypad)
- All-call button
- Buttons have push-to-talk or latch functionality
- Sleek, unidirectional, condenser gooseneck microphone
- Hold, Busy, and Zone LED signals
- Standard RJ45 connectors
- RS485 protocol over single CAT5 cable connection

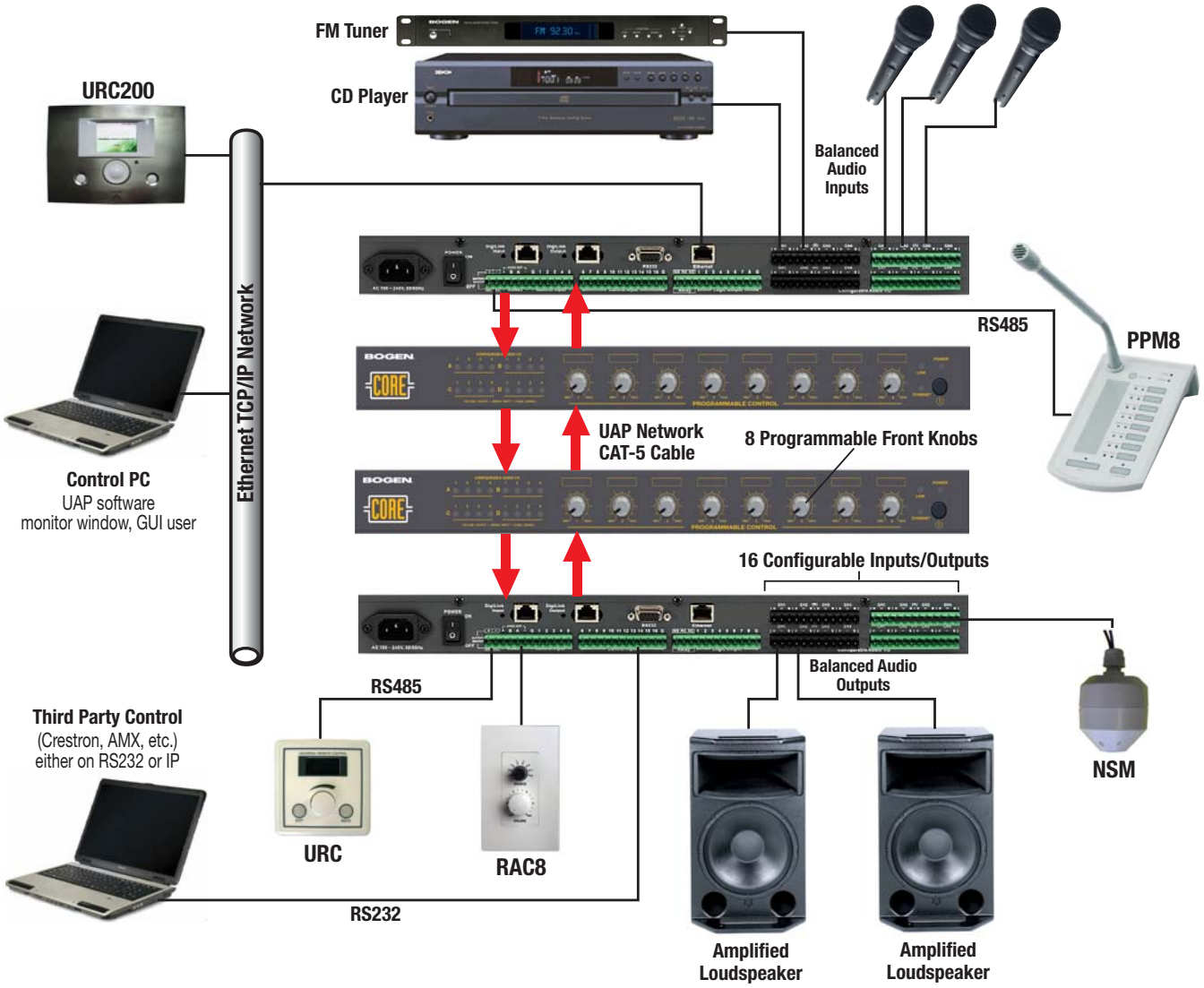
Additional Keypad for PPM8
Model PPMKeypad

- Provides additional zones for PPM8

IP Touchscreen Paging Station
Model PPMIT5

- Paging console with Ethernet link for remote paging over TCP/IP
- 168 buttons/zones, over 12 pages allow group and zone selections
- Zones assigned to different buttons, zone names, zone groups, message triggering, levels adjustments, pre-call chime, fader control, button control, or event control
- Allows call paging, message broadcasting, and DSP matrix parameter control
- Backlit touch screen
- 3 Assignable hardware keys
- Various operating levels with password protection
- Programmable paging parameters
- Can control third-party devices over IP

Typical example with UAP DSP Audio CORE Matrix System



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