

S P E C I F I C A T I O N S



MediaMatrix® Miniframe 208nt and Miniframe 108nt

Description

The MediaMatrix Miniframe 208nt and Miniframe 108nt are the most economical of Peavey's digital signal processing products with an integrated CPU. Both are software-based, integrated sound system design, control, and hardware platform that require only microphones and their preamps, power amplifiers, and speakers to provide a complete and working system. The Miniframe 208nt and Miniframe 108nt are based on an open architecture that utilizes a modular computer mainframe including a power supply, a floppy disk drive, a CD-ROM drive, and a system controller board. The Miniframe 208nt comes with two DPU boards, and the Miniframe 108nt comes with one DPU board. Fully loaded, the Miniframe 208nt can provide all needed signal processing for 64 audio input lines and 64 audio output lines, while the Miniframe 108nt accommodates up to 32 audio input lines and 32 output lines.

The Miniframe 208nt and Miniframe 108nt CPU is Intel® Pentium® III based or equivalent, or better and the user's control and design interface GUI is Peavey's MWare™ 3.x running under Microsoft® Windows® 2000 Professional. The MWare 3.x software provides the user/designer the ability to design, wire, operate, control,

and troubleshoot a complete digital audio system in the software domain. The user/designer can create control panels and devices to provide solutions not possible on other DSP audio platforms.

The Miniframe 208nt and Miniframe 108nt accommodate a DPU board that employs Motorola® 56002 80 MHz DSP chips and provides signal processing for up to 32 digital audio inputs and up to 32 digital audio outputs. The Miniframe 208nt accommodates a maximum of two DPU boards, while the Miniframe 108nt accommodates one DPU board. Due to extremely efficient code, an exceptional amount of processing can be accomplished while maintaining double-precision DSP filtering on each DPU board. The MM-DSP-RJ is the standard DPU board that interfaces to the Peavey MM-8802 Break-out-Boxes (BoBs). The Miniframe 208nt-aes interfaces to AES/EBU standard digital signal I/Os from the first DPU board. The Miniframe 208nt-cn interfaces to the Peavey CAB™ Series CobraNet™ bridges, which transport audio and control via an Ethernet network from the first DPU board.

Features

- (Miniframe 208nt): Up to 64 inputs and 64 outputs

- (Miniframe 108nt): Up to 32 inputs and 32 outputs
- Over 600 software audio devices available in library
- Double-precision DSP filtering for accurate filter characteristics
- 19" rack-mount enclosure: 7" (17.78 cm) H x 19" (48.26 cm) W x 24" (76.20 cm) D space required
- 320-Watt universal power supply
- Lockable front control panel
- Mouse and keyboard ports on front and back panels
- Two switches for keyboard lock and front door lock
- 3.5", 10 gigabyte or larger hard disk drive
- 1.44 megabyte, 3.5" floppy disk drive
- 32X CD-ROM drive
- Rugged, American-made steel construction
- Filtered positive airflow chassis cooling
- True color PCI video with 4 megabytes of video RAM and selectable resolutions from 640 x 480 to 1,600 x 1,200, plus refresh rates from 43 Hz to 200 Hz
- Network interface port included
- Passive backplane enables DPU board operation during CPU failure, and has a PIC/MG CPU slot for easy board swapping.

Applications:

- Cruise ships
- Multi-purpose facilities
- Auditoriums
- Schools
- Courts of law
- University campus buildings
- Performing arts centers
- Hotel meeting room complexes
- Houses of worship
- Conference centers
- Teleconferencing systems
- Civic centers
- Small theaters

DIGITAL ELECTRONICS SPECIFICATIONS

System Controller Board:

Socket 370 SBC (single board computer), or equivalent, or better

Processor: Intel® Celeron 600 MHz, or equivalent, or better

Cache: 128 kilobytes or more

Memory: 64 megabytes or more EDO RAM

Drives:

- 3.5" 1.44 megabyte floppy disk drive
- 32X CD-ROM
- 10 gigabyte or larger hard disk drive

Video Port:

True color, PCI video board with four megabytes of video RAM and selectable resolutions from 640 x 480 to 1,600 x 1,200, plus refresh rates from 43 Hz to 200 Hz. The system is shipped set for 800 x 600 at 75 Hz.

Network Interface Port:

10/100BaseT fast Ethernet board with RJ-45 connector

Digital Audio Processing Boards:

Digital Audio I/O: 32 channels in / 32 channels out per DPU board

Processors: Four Motorola 56002 80 MHz DSP chips per board

Digital Audio Bussing: 256 inter-board channels (between DPU boards), 256 inter-cell channels (between DSP chips)

Backplane:

Eight-slot passive backplane with (3) PCI slots and (5) ISA slots, (PIC/MG CPU slot for easy board swapping)

SOFTWARE SPECIFICATIONS

Operating System:

- Microsoft® Windows® 2000 Professional

for system controller board

- MWare™ 3.x for sound system design, control, and diagnostics (operates under Microsoft 2000)

Virtual Audio Devices (In Software Environment Libraries):

- **AES** digital audio input and output ports and level controls
- **Automatic mixers** from 2 to 32 input channels with direct outputs and linking capability
- **Bitmaps** to incorporate a graphic into the system control interface
- **BoBs** (Break-out-Boxes) analog input and output ports and level controls, with control ports for virtually any system control parameter
- **Blocks:** a graphic object that contains a child window with a sub-system or sub-function, etc.
- **Bump panels:** a graphic object for a control area, label, message, etc.
- **Comments:** a text entry area to type in any type of note or comment for explanation or clarification
- **Control modifiers** to limit the range of controls
- **Crossover networks:** 2-, 3-, and 4-way using Bessel, Butterworth, and Linkwitz-Riley filter functions in appropriate slope-rates from 6 dB to 48 dB per octave in 6 dB increments
- **Delay lines:** 5, 50, and 200 ms, plus 3D position calculating delays, from 1 to 16 outputs
- **Diagnostics** for the system (compiled-in)
- **Diagnostics** for the system (non-compiled)
- **Dip panels:** a graphic object for a control area, label, message, etc.
- **Dynamics:** **AGCs, compressors, duckers, expanders, GAP Ambient Level Sensors™, noise gates, and limiters**
- **Equalization filters:** **all-pass filters, band-pass filters, CD horn lift, graphic EQs, high-pass filters, low-pass filters, parametric filter sets, shelving filters, and tone controls**
- **Error indicators** for digital errors
- **Feedback Ferret™** acoustic feedback elimination technology
- **Hardware failure indicators**
- **Labels:** graphic areas to type in any type of label, banner, etc.
- **Level controls:** **attenuators** with and without trim control (limits); **cross-faders; distribution amplifiers** with 2 to 16 outputs; **multi-channel attenuator groups** from 2 to 16 channels; **On-Off switches; panning attenuators** from 2 to 5 channels; **ramps** with adjustable ramp level change, ramp time, and ramp rate

Logic controls:

- **Boolean** with 2, 4, 8 or 16 inputs
- **RPN: base integer RPN, base logic RPN, base % RPN, control inverter, dual flip-flop, event counter, or flip-flop** functions
- **Meters:** **LED** with tiny and large signal-presence or overload indication, **Peak** and **RMS** meters in 4 appearances with parameter controls
- **Mixers** from 2 to 64 inputs and from 1 to 16 outputs
- **Presets:** up to 255 system-wide with more possible
- **Program launchers** to launch other programs from within MWare 3.x
- **RoomLink™** room combiners, using either automixers, mixers, or mixers with delay, for 3 to 15 rooms
- **Routers:** from 1 to 32 inputs and from 1 to 32 outputs, with or without
- **Processor** preconfigurations for 4 Peavey speaker systems
- **Sub-presets:** up to 255 for individual child windows with more possible and schedulable with a built-in event timer
- **System mute:** to mute all outputs simultaneously
- **Test functions:** **DC-voltage generator, frequency-response probe, I/O probe, pink-noise generator, signal probe, sine-wave generator, and a white-noise generator**
- **Title blocks:** a graphic area to type in any type of title, etc.
- **Via** function to allow a signal to loop back up the signal chain without creating feedback oscillation
- **Wave file players** for 32, 44.1, and 48 kHz system sample rates at 100%, 50%, and 25% of that sample rate.

- Notes:** (1) New devices may be created and stored by the user in these libraries
(2) Any control parameters of any of the above devices may be controlled via the control ports on the BoB or CAB I/O's, and via third-party control software with a properly configured interface port.

GENERAL SPECIFICATIONS

Controls:

- Front door lock
- Keyboard lock
- System power switch
- Power LED
- Power switch, Power and HDD LEDs
- Chassis slide rails

Connectors:

Front panel: (1) AT keyboard connector

and (1) PS2 mouse connector

Rear panel: (1) Euro-style AC cord connector, (1) DB-25 parallel connector, (1) At keyboard connector, (1) PS2 mouse connector, (1) DB-15 video connector, (1) RJ-45 10/100BaseT network port and (2) COM port DB-9 connectors (COM 1 and COM 2)

Dimensions:

6.97" H x 19" W x 19.30" D
(17.70 cm H x 46.26 cm W x 49.02 cm D)

Note: a 24"-deep rack is required.

Net Weight w/o DPU boards:

40 lbs. (18.18 kg)

AC Power:

320-Watt universal power supply Power Factor Correction, UL, CSA, and CE listed

Voltage: 100 to 120/200 to 240 VAC +/- 10%, auto-selecting depending on source voltage

Frequency: 50 to 60 Hz +/-5%

Maximum Power Consumption and Heat Generation:

805 Watts, 2737 BTU/Hr. at 115 VAC fully loaded

920 Watts, 3128 BTU/Hr. at 230 VAC fully loaded

Maximum In-rush Current:

60A at 115 VAC, 35A at 230 VAC, 25° C cold start

Finish:

Grey powder-coat painted steel

Accessories:

- Detachable AC cord
- Keys for front door, keyboard, and mouse
- Microsoft® Windows® 2000 Professional CD
- MediaMatrix® MWare™ 3.x CD
- Intel® Celeron 600MHz, or equivalent, or better
- Drivers for the 10/100BaseT fast Ethernet and PCI video ports

Product Agency Compliance Listings:

UL, CUL, CE, and FCC part 15, A

ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The MediaMatrix Miniframe 208nt/108nt signal processor shall be a software-based, integrated sound system design, control, and hardware platform that requires only microphones, microphone pre-amps, power amplifiers, and speakers

to provide a complete and working system. It shall be based on an open architecture that utilizes a modular computer mainframe including a power supply, a floppy disk drive, a CD-ROM drive, a system controller board, and up to (Miniframe 208nt) two digital signal processing boards/(Miniframe 108nt): one digital signal processing board. The Miniframe 208nt/108nt system shall provide all needed signal processing for up to 64/32 audio input lines and 64/32 audio output lines. Systems of lesser capacity shall not be acceptable.

The Miniframe 208nt/108nt system's CPU shall be Intel Celeron 600 MHz-based, or equivalent, or better and the user's control and design interface GUI shall be Peavey's MWare 3.x running under Microsoft Windows 2000 Professional. The Miniframe 208nt/108nt system's software must provide the ability to design, wire, operate, control, and troubleshoot a complete digital audio system in the software domain. It shall allow the creation of custom control panels and devices to provide unique solutions not possible on other DSP audio platforms. Additionally, it shall allow third-party control of virtually any adjustable parameter in the system design. Systems not providing the above capabilities and not operating under Microsoft Windows 2000's robust and stable operating system shall not be acceptable.

The Miniframe 208nt/108nt shall accommodate a digital audio board that operates at 32 kHz, 44.1 kHz, and 48 kHz A/D and D/A sample rates. This DPU board shall provide signal processing for 32 digital audio inputs and 32 digital audio outputs. Systems not accommodating digital audio at multiple sample rates shall not be acceptable.

The Miniframe 208nt/108nt system shall have a CPU that is an Intel Celeron 600 MHz with 32 kB of cache and 64 MB of RAM or equivalent, or better. It shall have a 1.44 MB FDD, a 32X CD-ROM drive, and a 10/100BaseT fast Ethernet interface board. Video shall be true color PCI video with 4 MB of video RAM and selectable resolutions from 640 x 480 to 1,600 x 1,200, plus refresh rates from 43 Hz to 200 Hz. The Miniframe 208nt/108nt shall have a 10 GB or larger HDD. It shall also have a passive backplane that enables the digital audio to function during CPU failure and a PIC/MG CPU slot for easy board swapping. The backplane shall have (3) PCI slots and (5) ISA slots to enable maximum flexibility in system configuration. Systems of lesser

CPU and video capabilities, or lacking the above drives or passive backplane and its flexible capacity, shall not be acceptable.

The Miniframe 208nt/108nt shall accommodate up to (2)/(1) audio DPU boards. Each board shall provide digital audio signal processing for 16 input channels and 16 output channels. A 256-channel digital audio bus shall allow processing resources to be shared between DPU boards and DSP chips. Systems using hardware restricted digital audio paths shall not be acceptable.

The Miniframe 208nt/108nt system shall operate under the Microsoft Windows 2000 Professional operating system for stable operation and increased network access security. The sound system design, control and diagnostics software shall be Peavey MWare 3.x, which allows the creation of custom control panels and devices to provide unique solutions not possible on other DSP audio platforms.

The virtual audio devices available for sound system creation shall include the following:

- **Automatic mixers** from 2 to 32 input channels with direct outputs and linking
- **AES digital audio** input and output ports and level controls capability
- **Bitmaps** to incorporate a graphic into the system control interface
- **BoBs** (Break-out-Boxes) analog input and output ports and level controls, with control ports for virtually any system control parameter
- **Blocks:** a graphic object that contains a child window with a sub-system or sub-function, etc.
- **Bump panels:** a graphic object for a control area, label, message, etc.
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- **Crossover networks:** 2-, 3-, and 4-way using Bessel, Butterworth, and Linkwitz-Riley filter functions in appropriate slope-rates from 6 dB to 48 dB per octave in 6 dB increments
- **Delay lines:** 5, 50, and 200 ms, plus 3D position calculating delays, from 1 to 16 outputs
- **Diagnostics** for the system (compiled-in)
- **Diagnostics** for the system (non-compiled)
- **Dip panels:** a graphic object for a control area, label, message, etc.
- **Dynamics:** AGCs, compressors, duckers, expanders, GAP Ambient

- **Level Sensor™, noise gates, and limiters**
- **Equalization filters: all-pass filters, band-pass filters, CD horn lift, graphic EQs, high-pass filters, low-pass filters, parametric filter sets, shelving filters, and tone controls**
- **Error indicators** for digital errors
- **Feedback Ferret™** acoustic feedback elimination technology
- **Hardware failure indicators**
- **Labels:** graphic areas to type in any type of label, banner, etc.
- **Level controls: attenuators** with and without trim control (limits); **cross-faders; distribution amplifiers** with 2 to 16 outputs; **multi-channel attenuator groups** from 2 to 16 channels; On-Off switches; panning attenuators from 2 to 5 channels; **ramps** with adjustable ramp level change, ramp time, and ramp rate
- **Logic controls:** **Boolean** with 2, 4, 8 or 16 inputs **RPN: base integer RPN, base logic RPN, base % RPN, control inverter, dual flip-flop, event counter, or flip-flop** functions
- **Meters: LED** with tiny and large signal-presence or overload indication
- **Peak** and **RMS** meters in 4 appearances with parameter controls
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- **Presets:** up to 255 system-wide with more possible
- **Program launchers** to launch other programs from within MWare™ 3.x
- **RoomLink™** room combiners, using either automixers, mixers, or mixers with delay, for 3 to 15 rooms
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- **Processor** preconfigurations for 4 Peavey speaker systems
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- child windows with more possible and schedulable with a built-in event timer
- **System mute** to mute all outputs simultaneously
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- **Wave file players** for 32, 44.1, and 48 kHz system sample rates at 100%, 50%, and 25% of that sample rate.

Notes: (1) New devices may be created and stored by the user in these libraries
 (2) Any control parameters of any of the above devices may be controlled via the control ports on the BoB or CAB I/Os, and via third-party control software with a properly configured interface port.

Other software packages not offering the stability, security or flexibility of these operating system and design/control/ diagnostics packages shall not be acceptable. The Miniframe 208nt/108nt system shall have the following front-panel controls and connectors: Front door and keyboard locks, system power switch; power and HDD LEDs; AT keyboard and PS2 mouse connectors. On the rear panel, it shall have a Euro-style AC cord connector, a DB-25 parallel connector, an AT keyboard connector, a PS2 mouse connector a DB-15 video connector, one RJ-45 10/100BaseT port, and two COM port DB-9 connectors for COM 1 and COM 2.

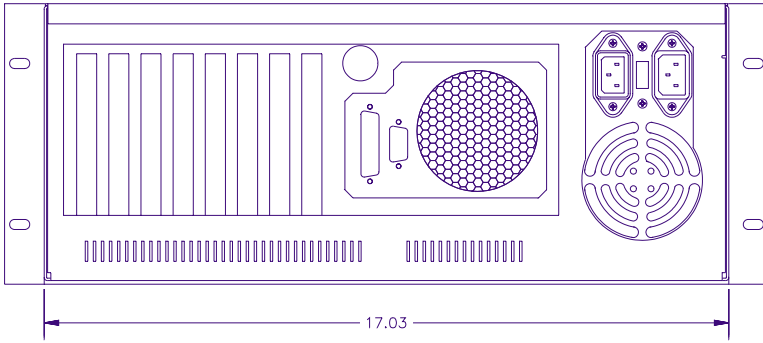
The Miniframe 208nt/108nt shall have a 320-Watt universal power supply, UL, CSA, and CE listed. It shall operate on AC power at either 50 or 60 Hz +/-5%, from 100 to 120 VAC or 200 to 240 VAC +/-10% with Power Factor Correction depending on the source voltage. The power supply shall consume no more than 805 Watts and produce no more than 2737 BTU/Hr. at 115 VAC fully loaded, or consume no more than 920 Watts and produce no more than 3128 BTU/Hr. at 230 VAC fully loaded. It shall draw a maximum in-rush current of no more than 60A at 115 VAC and no more than 35 A at 230 VAC.

The Miniframe 208nt/108nt shall be 6.97" (17.70 cm) high by 19" (46.26 cm) wide by 19.03" (49.02cm) deep and require a 24"-deep rack. It shall weigh 40 lbs. (18.18 kg) w/o DPU boards. It shall be finished in grey powder-coat painted steel. It shall be supplied with the following accessories: a detachable AC cord, rack slides, keys for the front door and keyboard lock, Microsoft Windows 2000 Professional CD, MediaMatrix® MWare™ 3.x CD, Pentium MMX SBC, or equivalent, or better and drivers for the 10/100BaseT fast Ethernet board and PCI video board.

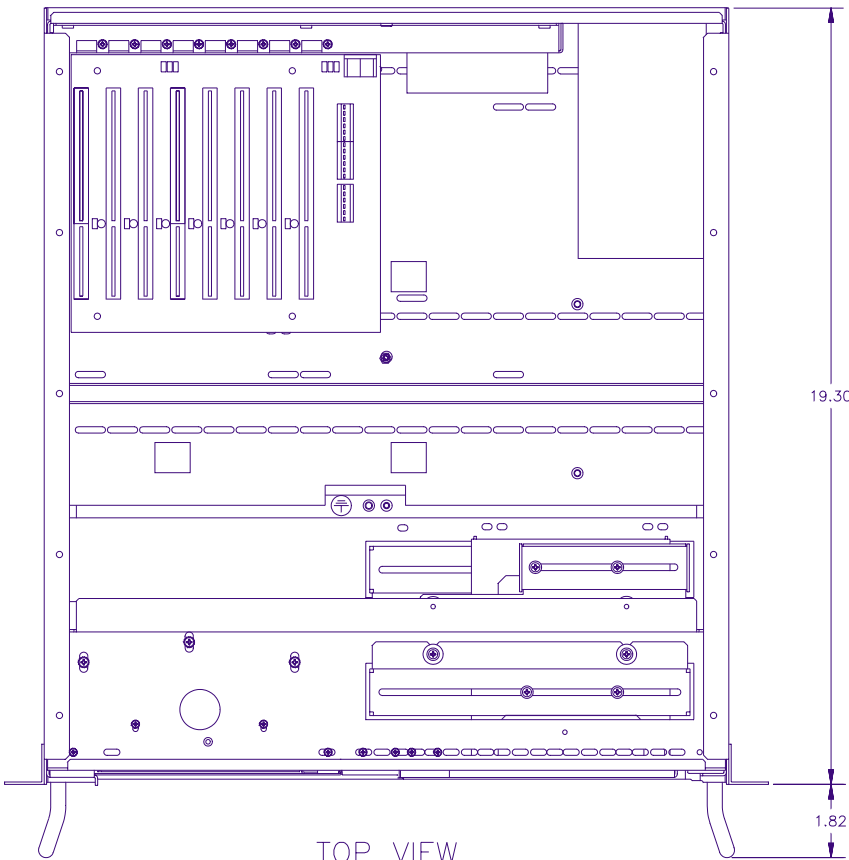
The Miniframe 208nt/108nt shall be in compliance with the standards of and listed by UL, CUL, CE, and FCC part 15, A. The Miniframe system shall be the Peavey MediaMatrix Miniframe 208nt/108nt.

Note: Microsoft® Windows® 2000 is a registered trademark of Microsoft Corporation, and Motorola® is a registered trademark of Motorola, Inc. Celeron™ is a trademark of Intel. CobraNet™ is a trademark of Peak Audio, Inc.

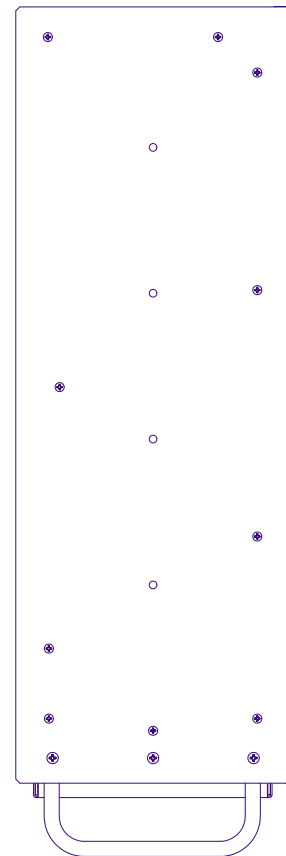
Miniframe 208nt and Miniframe 108nt Mechanical Drawing



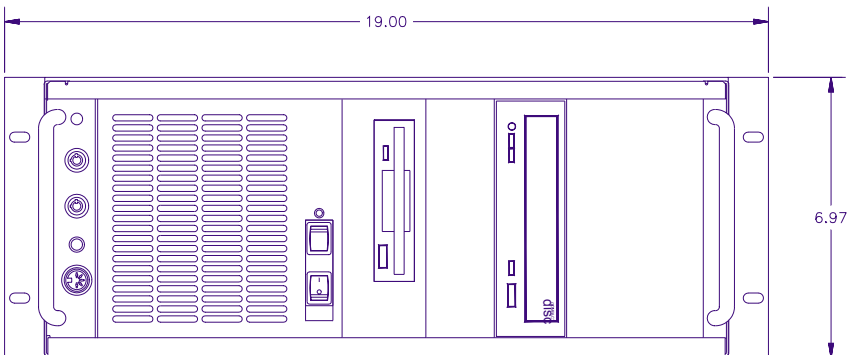
REAR VIEW



TOP VIEW



SIDE VIEW



FRONT VIEW



Features and specifications subject to change without notice.

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