DP-SP3 CE

DIGITAL SPEAKER PROCESSOR



The DP-SP3 is a 1U rack mountable Digital speaker processor having 2 inputs and 6 outputs. It features digital signal processing functions such as Equalizer, Crossover, Matrix, Compressor, and Delay. Other functions include input PAD, analog output attenuator, output MUTE, EQ characteristic library for TOA speakers, and contact input terminals. When connected to a LAN, settings and operations of the DP-SP3 can be performed on a PC with the supplied DP-SP3 PC Software installed. It can be mounted in an EIA component rack (1U size).

Key features

- Digital Speaker Processor for clear, high-quality and realistic sound, with a full sense of presence
- Essential audio processing tools: Compressor, Parametric Equalizer, Output Delay and Mute
- 10 filters on each input and 12 filters on each output
- Any combinations of parametric equalizer and high/low pass, and high/low shelving filters, as well as all-pass, notch filters and CD horn equalizer are possible
- 2 inputs & 6 outputs, processor can work with a 3-way multi-amp system

Specifications

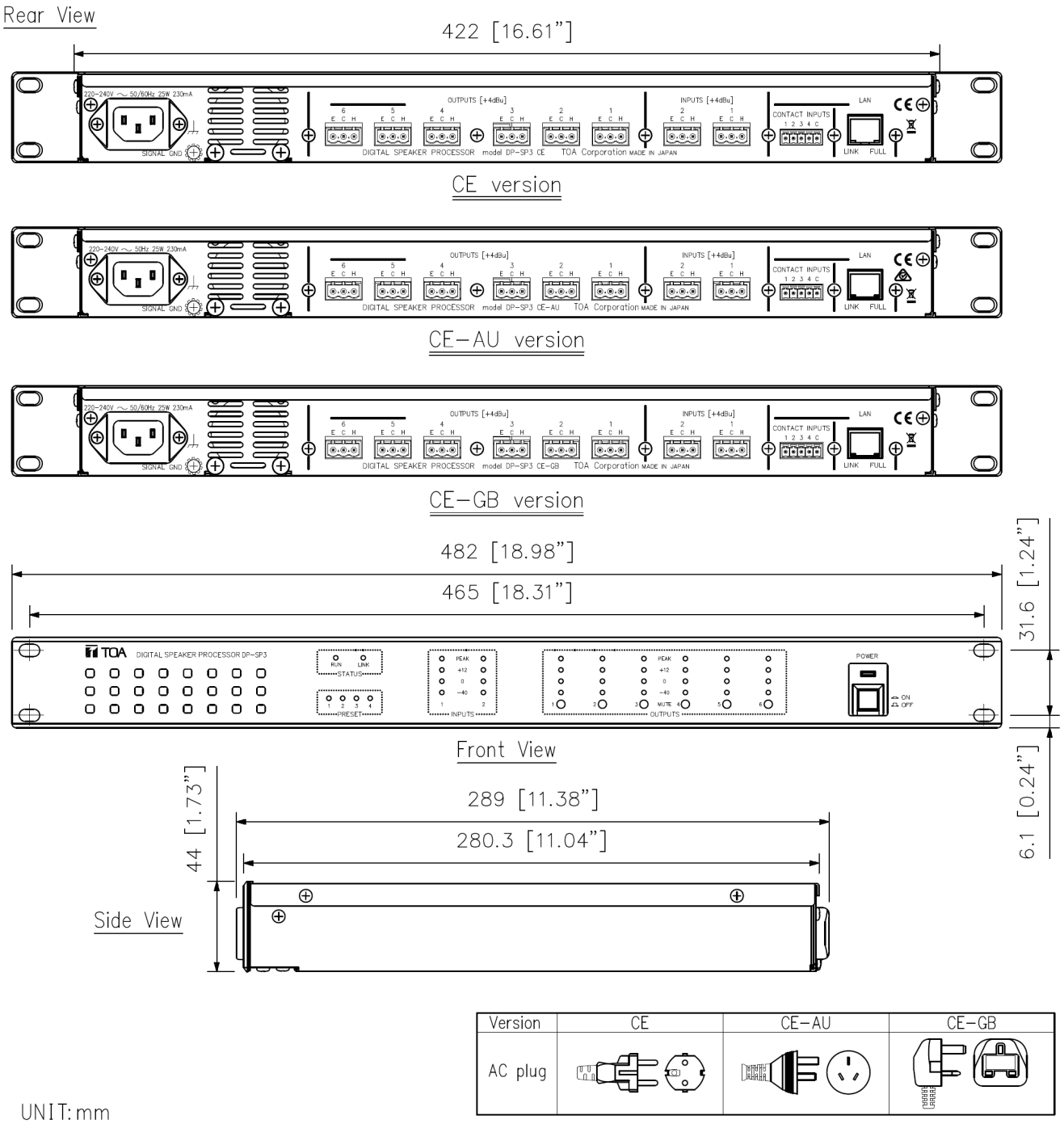
Power Source	220 - 240 V AC, 50/60 Hz
Power Consumption	25 W
Frequency Response	20 Hz - 20 kHz, ±1 dB
Sampling Frequency	96 kHz
Dynamic Range	110 dB or more
Distortion	0.03 % or less, 1 kHz, +4 dB* input/output, 20 Hz – 20 kHz BPF
Crosstalk	–80 dB or less, 1 kHz
Input	2 channels, +4 dB* (max. +24 dB*), 10 kΩ, electronically-balanced, removable terminal block (3P)
Output	6 channels, +4 dB* (max. +24 dB*), applicable load 600 Ω or more, electronically-balanced, removable terminal block (3P)
A/D Converter	24 bits
D/A Converter	24 bits
Preset Memory	16
Digital Signal Processing	
Equalizer/Filter	Parametric equalizer: 20 Hz – 20 kHz, ±15 dB, Q: 0.267 – 69.249 Filter: High-pass filter: 20 Hz – 20 kHz, 6 dB/oct, 12 dB/oct Low-pass filter: 20 Hz – 20 kHz, 6 dB/oct, 12 dB/oct Notch filter: 20 Hz – 20 kHz, Q: 8.651 – 69.249 All-pass filter: 20 Hz – 20 kHz, Q: 0.267 – 69.249< High-shelving filter: 5 – 20 kHz, ±15 dB Low-shelving filter: 20 – 500 Hz, ±15 dB Horn equalizer: 20 kHz, 0 – 18 dB in 0.5 dB steps
Crossover	2 ways, 3 ways, 4 ways Crossover filter: 20 Hz – 20 kHz, 6 dB/oct, 12 dB/oct, 18 dB/oct, 24 dB/oct,–15 to +12 dB, polarity switchable Delay: 0 – 170.656 ms in 0.01 ms steps
Compressor	Threshold: –20 to +20 dB* in 1 dB steps Ratio: 1:1, 1.1:1, 1.2:1, 1.3:1, 1.5:1, 1.7:1, 2:1, 2.3:1, 2.6:1,3:1, 4:1, 7:1, 8:1, 10:1, 12:1, 20:1, ∞:1 Attack time: 0.2 ms – 5 s Release time: 10 ms – 5 s
Delay	Delay time: 0 – 682.656 ms in 0.01 ms steps
Matrix	2 x 6
Crosspoint gain	– ∞ to 0 dB in 1 dB steps
Control	
Contact Input	4 channels, open voltage: 5 V DC, short-circuit current: 5 mA, removable terminal block (5 P) Control function: preset memory selection, volume control, and mute
Network	Network I/F: 1 channel of 10BASE-T/100BASE (auto-negotiation), RJ45 connector, connection via switching hub Network protocol: TCP/IPConnection cable: Shielded Cat. 5 or higher twisted pair cable for LAN (Cat. 5-STP or better) Maximum cable length: 100 m (109.36 yd) (between DP-SP3 and switching hub)
Function	Input PAD (–16 dB) control, analog output attenuator (– ∞ to 0 dB in 1 dB steps) control, EQ characteristic library for TOA speakers, input/output level indicator (4-point LED indicator), output MUTE switch x 6

Operating Temperature	0 to 40 ºC (32 to 104 ºF)
Operating Humidity	90 %RH (no condensation)
Finish	Panel: Aluminum, hairline, black, Case: Surface–treated steel plate
Dimensions	482 (w) x 44 (h) x 288.7 (d) mm (18.98” x 1.73” x 11.37”)
Weight	3.1 kg (6.83 lb)
Included Accessories	Power supply cord (2 m (6.56 ft) x 1, Removable terminal plug (3P) x 8, Removable terminal plug (5P) x 1, Rack mounting screw x 4

PC requirements

PC Requirements	
Hardware	CPU: 1 GHz or faster 32-bit (x86) or 64-bit (x64) processor Memory: 1GB or more RAM (for 32-bit CPU) or 2 GB or more RAM (for 64-bit CPU) Display: 1024 x 768 resolution or higher Free Hard Disck Space: 16 MB or more however 600 MB or more is required for the 32-bit edition or 1.5 GB or more for the 64-bit edition when ".NET Framework" is not yet installed Network Adapter: 10BASE-T or faster connection
OS	Windows 10 Pro (32/64 bit edition) Windows 11 Pro (64-bit edition)
Required Component	.NET Framework 4 Client Profile

Dimensions



Version	CE	CE–AU	CE–GB
AC plug			

UNIT: mm

A&E specifications

The digital audio device shall be available in hardware configurations of 2 inputs by 6 outputs with capabilities of driving 3 separate audio amplifiers individually. All the inputs and outputs are balanced analog signals accessible via removable terminal strip connectors with 24-bit analog to digital and digital to analog converters operating at a sample rate of 96 kHz. The device shall have a frequency Response of 20 Hz - 20 kHz, -/+1 dB.Digital signal processing (DSP) functions shall be offering; parametric equalizer, high pass and low pass filters, horn equalization, crossover with 2, 3 and 4way options, compression and delay of 0 – 682.656ms, and 2 x 6 matrix.The digital processor shall have 16 preset memories that can be recalled by remote function. The remote control function shall be accessed via 4 contact input terminals for memory recall, output volume control and output muting. Switching of preset DSP parameters patterns and matrix selection shall be available by Web browser via Ethernet.Attenuating output volume by means of external analog device shall be possible. The digital processor shall include control software for PC operation and settings, access to 16 preset memories, built in library of manufacturers loudspeakers.Network shall be available using RJ45 connection via switching hub. Network I/F: 1 channel of 10BASE-T/100BASE-TX Auto-Negotiation utilizing network protocol TCP/IP. Connection cable shall be shielded Cat. 5 or higher twisted pair cable for LAN. Maximum cable length: 100 m (109.36 yd.) between digital signal processor and switching hub.It shall use only one EIA component rack space and its dimensions shall be 482 (W) × 44 (H) × 289 (D) mm (18.98" × 1.73" × 11.38") Weight shall be 3.1 kg (6.83 lbs) and finished in black aluminium front panel with surface-treated steel plate case.