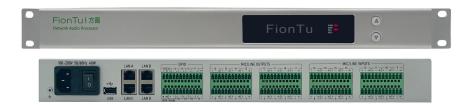


Network Audio Processor MBP100



Feature:

- 1.This product is a network audio processor, designed with Cortex-A9 dual-core + FPGA + DSP architecture, using Linux operating system, built-in ADI's latest SHARC, 64-bit floating-point operations, and high-performance FFT/IIR/FIR hardware acceleration functions for audio processing; the new generation FT-Designer integrated management platform, FionTu's various audio products, are freely configured in a modular manner, support online and remote management, and can be used through the FT-Deginer platform to monitor and control the system in real time; the audio processing part adopts a modular design scheme, which can be designed freely and flexibly, and uses a software drag-and-drop interface to facilitate the operation of the tuner; in terms of network transmission, FionTu's self-designed F-LAN audio network transmission protocol is used to realize the transmission, monitoring, and management of network audio, and supports communication with Dante-AES67 and QLAN-AES67 Interconnection of audio
- 2.Applicable occasions: sound reinforcement systems for large and small conference rooms or multi-function halls and performance venues, background music systems for churches and theaters, public broadcasting systems for large venues such as airports, conference centers or hospitals
- 3. Built-in self-developed F-LAN protocol, supports AES67 standard, and can be interconnected with Dante-AES67 and QLAN-AES67
- 4. Supports 48*48 network audio channels
- 5. Supports 16*16 analog audio input\output channels
- 6. Input 16 analog audio channels, all can be configured as microphone\line level analog channels, support independent 48V phantom power supply
- 7. Output 16 analog line levels
- 8. Supports 3.12-inch OLED display on the front panel, input and output level display and other device information display
- 9. Supports front panel mechanical physical button adjustment
- 10. Supports 48KHz/24bit sampling rate, 104dB dynamic range
- 11. Support SPDIF digital audio interface audio input\output
- 12. Support 4 Gigabit Ethernet ports for network audio cascading, network backup connection, FT-Deginer control connection
- 13. Support 4 GPI interfaces and 4 GPO interfaces, differential signal
- 14. Support AEC module
- 15. Support RS232, RS485 control interface
- 16. Support network central control interface, support panel control
- 17. Use FT-Designer software to configure, control and monitor the system through the network
- 18. Compatible with other FionTu audio equipment accessories that are currently available or will be launched in the future, such as network adjustable directivity array sound column FT-L845A, G20-AES67 microphone, network audio interface box, etc.





Network Audio Processor MBP100

Audio algorithm

- 1. Input module: Each module supports 4 channels of sound, supports level meter display, label customization, phase reverse, independent phantom power switch, gain adjustment, fader adjustment
- 2 .Output module: Each module supports 4 channels of sound, level meter display, label customization, phase reverse, fader adjustment
- 3. Delay module: Maximum support for 1000mS delay, minimum support for 0.02mS delay
- 4. Routing module: Maximum support for 16*16 routing function
- 5. Mixing module: Maximum support for 64*64 mixing module, and can adjust the port gain and mute switch of input and output ports
- 6. Dynamic module: Contains automatic gain, compressor, limiter, noise gate, expander, limiter
- 7. Equalizer module: Contains a maximum of 16-band parametric equalizer and 31-band graphic equalizer
- 8. Filter module: Contains low-pass filter, high-pass filter, low-cut filter and high-cut filter. High-pass and low-pass filters provide LR and Butterworth filter types to choose from, support all-pass filter, FIR filter, etc.
- 9. Filter module: Contains crossover module and special filter module. The frequency divider supports up to 4 frequency divisions, and each frequency point can be adjusted separately. The filter types of each frequency point also have two types of filters, LR and Butterworth, to choose from. It also supports input gain, output gain and output reverse adjustment; special filters include low-pass, high-pass, low-pass slope, and high-pass slope.
- 10. Signal generator module: There are currently two modules available, white noise and sine wave signal, with adjustable gain and frequency
- 11. Level meter module: It can monitor the output level meter of the corresponding module in real time. A single module supports up to 8 level meters for simultaneous monitoring
- 12. Controller module: Mainly a 2-to-1 selector
- 13. Frequency shift howling suppressor: Howling suppression through 0~10Hz frequency shift
- 14. Notch howling suppressor: Howling suppression by notching specific frequency points
- 15. Automatic mixer: Improve the overall dynamics of the system through the gain sharing mechanism
- 16. Reverberation suppressor: Eliminate sound defects such as human voice echo

Specification:

| Analog indicators | |
|--|-----------------------------|
| Frequency response | 20Hz~20kHz: +0.21/-0.17 |
| Channel isolation | (+4 dB 1k) -85.4 dB |
| Total harmonic distortion plus noise (THD+N) | -20dBFS @ 1kHz: 0.0057% |
| Channel isolation | (+4 dB 20k) -76.4 dB |
| Noise level | (20/20k passband) -80.1dBFS |
| Equivalent noise | -120.3dBu |
| Noise level (A-weighted) | -83.1 dBFS |
| Delay | 2.5ms |
| Digital indicators | |
| Sampling frequency | 48KHz |
| Microphone input frequency response | 20Hz~20kHz: ±0.15dB |
| Quantization bit value | 24bit |
| Line input frequency response | 20Hz~20kHz: ±0.15dB |
| Output voltage | 4.78Vp-p |



Network Audio Processor MBP100

| Noise level | (20/20k passband) -126.3dBFS |
|--|---|
| Time base jitter | ≤0.003UI |
| Noise level (A-weighted) | -128.2dBFS |
| Equivalent input noise | ≤-120dBu |
| Crosstalk | Channel isolation (-20dBFS 20~20k) -105.8 dB |
| Signal-to-noise ratio | ≥105.8dB |
| Level difference | Channel level difference (-20dBFS 20~20k) 0dB |
| Total harmonic distortion plus noise (THD+N) | -20dBFS @ 1kHz: <0.0005% |
| Phase difference | Channel phase difference (-20dBFS 20~20k) 0° |
| Electrical parameters | |
| Rated power consumption | 40W |
| AC frequency | 47~63Hz |
| AC input voltage range | 88~265VAC |
| Dimensions (length, height, width) | 482.6mm×44.45mm×370.0mm |

