



### Feature:

1. This product is a network audio processor, designed with Cortex-A9 dual-core + FPGA + DSP architecture, using Linux operating system, 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-Designer 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 audio interconnection with Dante-AES67 and QLAN-AES67
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 32\*32 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. Supports SPDIF data Digital audio interface audio input/output
12. Support 4 Gigabit Ethernet ports for network audio cascading, network backup connection, FT-Designer 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.

### 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 Block: Each module supports 4 channels of sound, level meter display, label customization, phase reverse, fader adjustment
3. Delay module: maximum support 1000mS delay, minimum support 0.02mS delay
4. Routing module: maximum support 16\*16 routing function
5. Mixing module: maximum support 64\*64 mixing module, and can adjust the port gain and mute switch of input and output ports
6. Dynamic module: including automatic gain, compressor, limiter, noise gate, expander, limiter
7. Equalizer module: including maximum 16-band parametric equalizer and 31-band graphic equalizer
8. Filter module: including 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, supporting all-pass filter, FIR filter, etc.
9. Filter module: including 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
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