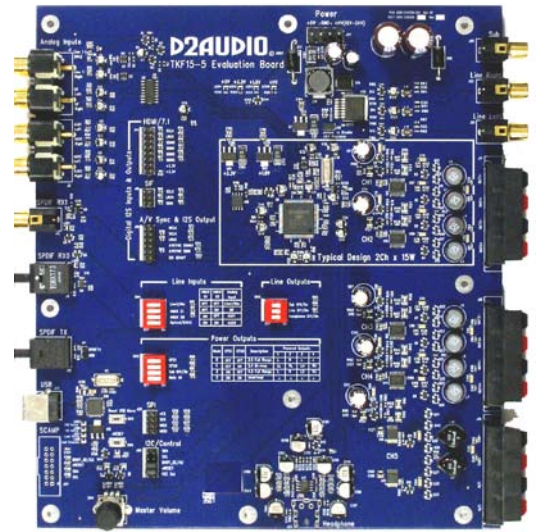


D2AUDIO® TKF15-5

Digital Audio Amplifier DAE-3 For Digital TV



- DAE-3™-Based DTV Reference Design
- Powered Main Outputs: 2.0, 2.1, 4.1, Stereo Bi-Amp
- Scalable Power Level: 10W~25W Per Channel
- THD+N < 0.3% FS, (<0.1% 1W)
- Frequency Response < +/-0.25dB, 20Hz-20kHz
- Subwoofer Power Up To 40W
- 4 HDMI Channels of I2S Inputs
- Stereo Analog Multiplexed Input Sources
- Line Outputs Included (Aux L+R, Sub)
- Headphone Outputs
- Single Supply Voltage, from +12V to +24V
- Over-Current and Over-Temperature Protection
- A/V Sync Over I2S I/O Ports
- Advanced Sample Rate Converters



The D2Audio DAE-3 Technology Delivers Premium Sound

CE brands adopting D2Audio's DAE-3™ Digital TV sound processing stand apart from their competition. Integrated 8-Channel Sample Rate Converters (SRC) provide noise-free operation from multiple asynchronous digital sources, as well as eliminating the jitter inherent from HDMI sources. Multiple input and output options provide cost-effective alternatives to accommodate any combination of sources and listening environments for Digital TVs. The D2Audio DSP IP enables efficient enhancement compensation for speaker limitations in small-enclosure applications of modern flat panel TV designs. True Home Theater quality performance is now available, without any added cost.

D2Audio® SoundSuite™ Immersive Processing Software

The TKF15-5 includes a wide range of audio enhancement features that include:

- D2Audio® DeepBass™ Delivers rich booming content of digital media from tiny speakers
- D2Audio® WideSound™ Broadens the audio sound stage for a much wider stereo effect
- D2Audio® DigitalEQ™ Provides consumer personalized adjustments in sound character
- D2Audio® AudioAlign™ Elevates sound from bottom-mounted speaker and aligns with video

Additional 3rd Party Algorithms for Further Enhancement Also Include Dolby® Virtual Speaker™, and SRS® TruSurround™ HD/HD4.



The D2Audio Brand Name Brings Value

Modern digital TV supports several secondary audio outputs including the stereo line outputs, stereo headphone outputs, plus an external subwoofer output. The DAE-3 family of Digital TV solutions includes up to 12 high-quality digital PWM output channels to drive these secondary signals as well as the various power speaker configurations like the new SRS Labs® TruSurround HD4™ advanced audio processing algorithms with powered speaker support options up to 4.1 channels. A typical digital TV can require from 7 channels to as many as 12 independent output channels from the amplifier. Only the D2Audio DAE-3™ family of digital TV solutions truly supports the complex I/O and amplifier drive configurations needed for modern digital TV designs.



TKF15-5 Performance and Operation

- Multiple DTV Powered Main Outputs: 2.0, 2.1, 4.0, Stereo Bi-Amp
- Single Supply Voltage Operation, from +12V to +24V: Scalable
- Scalable Power Level: 10W~25W Per Channel
- Frequency Response < +/-0.25dB, 20Hz-20kHz
- THD+N < 0.3% FS, (<0.1% 1W)
- Asynchronous I/O from 32kHz up to 192kHz
- Subwoofer Power up to 40W

TKF15-5 Reference Design Standard Features

- 12 High-Resolution PWM Engines - Independent Processing
- Advanced Sample Rate Conversion (SRC) - All digital inputs
- D2Audio® SoundSuite™ Immersive Processing Software
- Up to 6 Channels Audio DSD with Professional Decimator
- Over-Current and Over-Temperature Protection
- Active Crossovers (Butterworth, Bessel, Linkwitz-Riley, Custom)
- D2Audio Canvas™ Graphical User Design Interface (GUI)
- A/V Sync Enabled Through I2S
- Two-Wire SPI, Master or Slave
- Simple Software Control API
- Anti-Pop Turn-On/Off
- Standby control
- Mute control

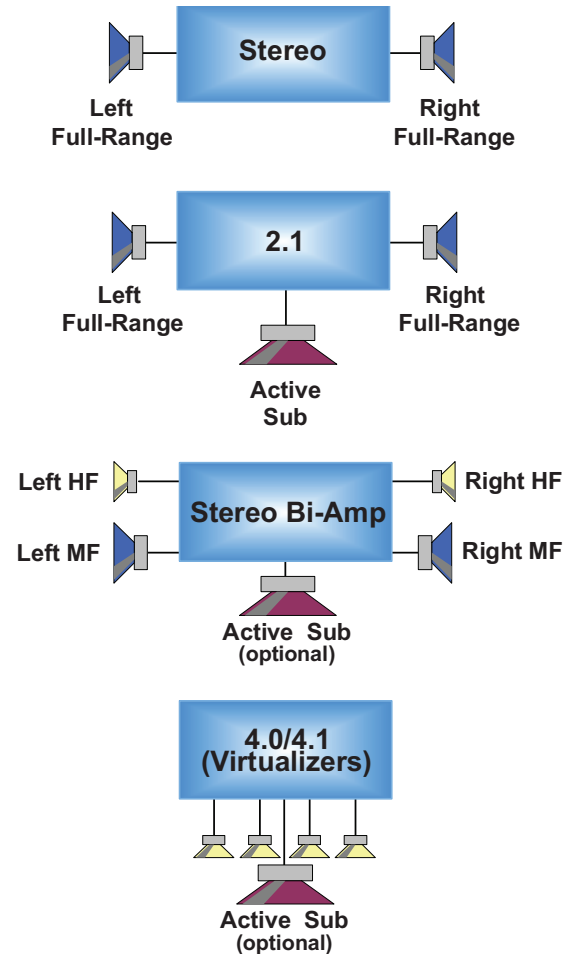
TKF15-5 Reference Design Inputs

- 4 HDMI Stereo Pairs (8 Channels) of HDMI I2S Inputs
- SIF Inputs (through decoder) for Worldwide Support
- 2 SPDIF Multiplexed Inputs (Optical + Coax)
- Stereo Analog Multiplexed Input Sources
- Mic/Line, Aux Stereo Analog Inputs

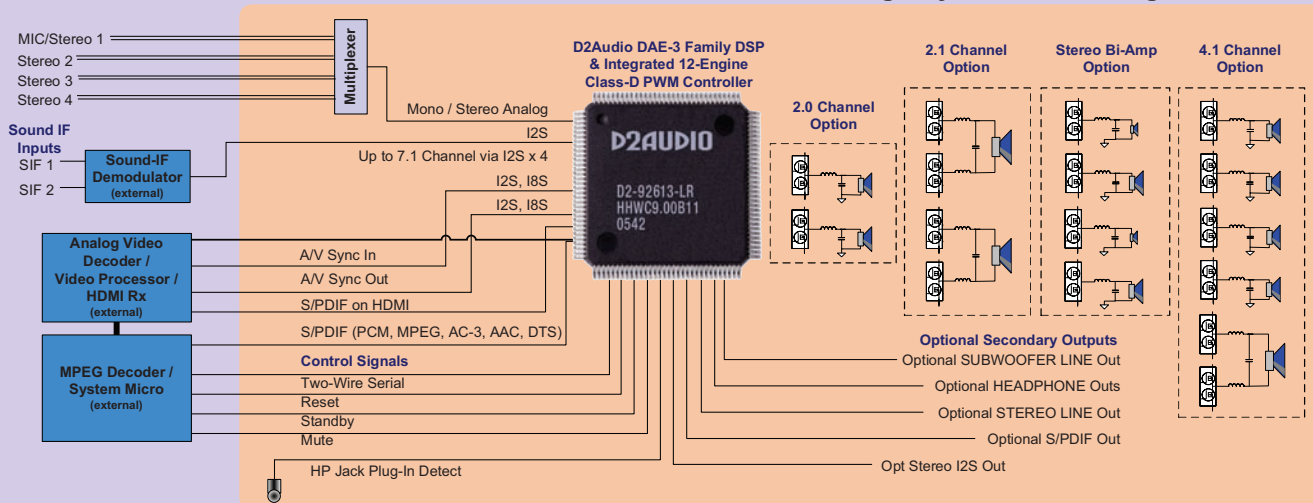
TKF15-5 Reference Design Outputs

- SPDIF Optical Transmitter
- Line Outputs Included:(Aux L+R, Sub Line-Level)
- Headphone Outputs

TKF15-5 Individually Driven Powered Output Options



D2Audio's DAE-3 TFK15-5 Reference Design System Block Diagram



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