

Features

- Immersive Audio Processor
- Atmos/DTS:X support
- Powered by Dirac Research (Dirac Live, DLBC, ART)
- Audiophile performance

Hardware

- Quad Core ARM processor for Audio Processing & Control
- HDMI 4k 3x1 switch with eARC
- 16ch Audiophile ESS DAC with 118dB SINAD/125dB SNR
- Multichannel USB audio (8ch)
- OLED color screen

Software Control

- Real time live control
- Web User Interface
- Network control to Win/Mac Device Console software
- Over the Air Upgrade

Applications

- Home Theater
- Immersive Audio Room
- Multi-way speaker processing
- Studio/Mastering applications

The **Tide16** is miniDSP's first immersive-audio platform offering Dolby Atmos, DTS:X and the full Dirac Research room correction suite. A powerful Quad-Core ARM processor delivers pristine audio processing with low power consumption and minimal heat. With this future-proof architecture and superb audiophile specifications, the miniDSP **Tide16** delivers an unprecedented level of performance and flexibility for home theater, professional studios and audiophile use.

The **Tide 16** can decode up to 16 channels from HDMI depending on speaker layout and Atmos/DTS:X content. It provides three HDMI inputs plus eARC (enhanced Audio Return Channel) for sources routed through an eARC-capable TV. At its core for speaker processing, miniDSP is once again partnering with Dirac Research by including Dirac Live (RC), Bass Control (BC) and Active Room Treatment (ART) licenses at no extra cost. A flexible matrix mixer, advanced bass management and miniDSP's full processing suite operate on all sixteen outputs, simplifying setups with multiple subwoofers, active speakers or multi-speaker studio configurations.

Stereo functionality remains robust: numerous stereo inputs are available, including multichannel USB Audio, Bluetooth (LDAC and APTX HD), analog on RCA and XLR, and four S/PDIF digital inputs (coax and optical). Audiophile-grade analog circuitry and converters preserve stereo fidelity while the Tide16 simultaneously handles advanced home-theater processing, making it ideal for combined stereo and home-theater systems.

FRONT & REAR PANELS

COMPATIBLE WITH
Dolby Atmos

Dolby Vision

dts x

DIRAC

HDMI

LDAC



TECHNICAL SPECIFICATIONS

	Description
Digital Signal Processing Engine	Quad Core A53 ARM processor, 1.8GHz
Processing resolution & Sample rate	32 bit floating point / Sample rate 48 kHz
Multichannel Surround Processing	Dolby Atmos, Dolby Atmos Height Virtualization, Dolby Atmos Music, Dolby TrueHD DTS HD Master, DTS:X, DTS Neural:X, DTS Virtual:X
Multichannel Upmixing capabilities	Atmos Upmixer (up to 16ch), Neural-X upmixer (up to 12ch) for PCM to multichannel upmixing
Surround decoding capabilities	Decoding up to 16channels, Flexible Subwoofer configuration (up to 4)
HDMI capabilities (FlexiSLOT)	3 x In, 1 x out HDMI switch, HDMI 1.4/2.0b compliant Resolution: 4k60Hz UHD, 18Gb/s input/output capable, 24/25/30/50/60fps 4k to 1080 conversion for HDMI 1.4 compliance HDMI 2.1 EARC/ARC compliant HDMI 2.1 Variable Refresh Rate (VRR) HDCP 2.3 compliant / Dolby Vision Compatible
Digital Audio Input Connectivity	Supported Sample Rate: 44.1k ~192 kHz sample rate converted to processing rate (48kHz) 2 x SPDIF on RCA connector (Bitstream/PCM) 2 x OPTICAL on Toslink connector (Bitstream/PCM) 1 x Bluetooth with support for: LDAC™/aptX™ HD/aptX™/AAC/SBC Supported Sample Rate: 48kHz 1 x USB audio input (2ch/8ch PCM input, UAC2 interface)
Connectivity	Wifi(802.11a/b/g/n/ac), Ethernet (Gigabit), 1xUSB Host, 1 x USB device (USB audio)
Analog Audio Input Specifications	Converter: ES9842QPRO Stereo RCA (unbalanced) Zin: 100 kΩ Max Level: 4Vrms Frequency response: 20 Hz – 20 kHz ± 0.05 dB SNR (Digital to analog): 122dB THD+N (Analog to Digital): -116dB Crosstalk (Analog to Digital): -120dB Stereo XLR (balanced) Zin: 50 kΩ Max Level: 4Vrms Frequency response: 20 Hz – 20 kHz ± 0.05 dB SNR (Digital to analog): 122dB THD+N (Analog to Digital): -116dB Crosstalk (Analog to Digital): -120dB
Analog Audio Output Connectivity	16 channel fully differential balanced Audio Output, Neutrik XLR connectivity
DAC16 I/O card Analog Audio Output Specifications	Converter: 8x ESS ES9017 with output relays Zout: 200 Ω Max Level: 4Vrms Frequency response: 20 Hz – 20 kHz ± 0.05 dB SNR (Digital to analog): 125dB THD+N (Digital to analog): -118dB Crosstalk (Digital to analog): -120dB
Filtering Technology	Dirac Live® 3.x Full Range correction (20 Hz – 20 kHz) Dirac Live Bass Control license (DLBC) Dirac Active Room Treatment license (ART) Advanced Bass Management toolbox miniDSP's flexible Digital Signal Processing toolbox for Matrix/Crossovers/EQ/Delay with Device Console software. Configures multiway speakers as required
DSP/Configuration Presets	Unlimited
Control/Communication	Web Enabled User Interface for basic live control (Volume/Preset/Source/Settings) LAN/Wifi control via Device Console software (Mac/Win) Control API for 3rd party control
Dimensions (W x D x H)	433x255x90 mm
Power Specifications	Input: 90~240VAC, 50/60Hz / Passive cooling - No fan Consumption: 23 W (idle) / 1.3 W (standby) Triggers: 1 x 12V trigger input, 2 x 12V trigger out, 1 x IR input
Measurement Microphone accessories	1 x UMIK-1 measurement microphone with unique calibration file (optional)
Accessories provided	IR flasher, Tide16 IR remote, AC cable (UK/US/AU depending on region), Wifi/BT antenna