

HYPERION

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HDMI 2

57%

-25.5 dB

48kHz / 24-bit

7.1 Surround

APR-16 Home Theater Processor

IMMERSIVE SOUND PRE-AMP PROCESSOR

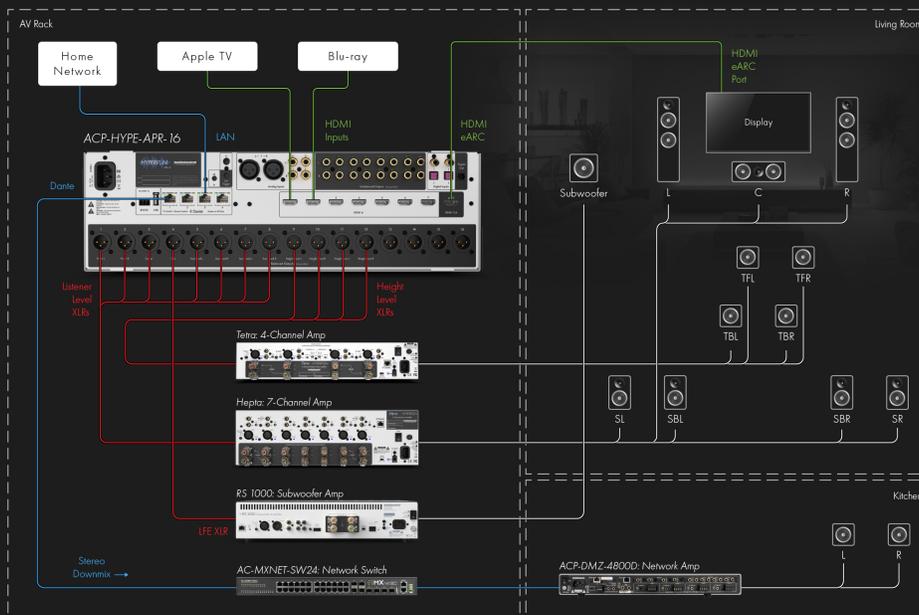
ACP-HYPE-APR-16



The APR-16 is Hyperion's flagship 16-channel processor, engineered for reference-grade residential cinema installations. Built on a unique dual-ARM DSP architecture, the APR-16 supports decoding Dolby Atmos and DTS:X audio with configurable speaker layouts from 2.0 to 9.1.6 using the 16 balanced XLR or unbalanced RCA connections. Seven HDMI 2.1 inputs support 48 Gbps video signals delivering ISF-certified pixel-accurate video passthrough to any display. The built-in four port ethernet switch enables network control and enables uncompressed Dante/AES67 networked audio distribution to compatible amplifiers over standard Cat cable. Paired with Dirac Live-enabled for Room Correction, Bass Control, and Active Room Treatment, the APR-16 adheres to all CEDIA/CTA-RP22 technical benchmarks.

Hyperion APR 16 Home Audio Distribution

XLR Cable	Speaker Wire
HDMI Cable	Category Cable



SUPERIOR CINEMATIC EXPERIENCE

INPUTS	
HDMI Inputs	7× 48 Gbps HDMI 2.1
Digital Inputs	2× Optical TOSLINK, 2× Coax S/PDIF
Analog Inputs	1× Stereo XLR (balanced), 2× Stereo RCA (unbalanced)
Analog Input Impedance	47 kΩ
Analog Input Sensitivity	2 Vrms
Dante / AES67 Inputs	2 Audio over IP channels
OUTPUTS	
Preamp Outputs	16× RCA unbalanced + 16× XLR balanced
Digital Output	1× Optical TOSLINK
HDMI Output	1× HDMI (eARC)
Dante / AES67 Outputs	2 Audio over IP channels
AUDIO	
DAC	ESS SABRE ES9039Q2M
Frequency Response	20 Hz – 20 kHz (±0.05 dB)
THD+N	<0.0004%
SNR (20–20 kHz A-wtd)	>122 dB (ref 4.2 Vrms) / <-129 dB (ref 10 Vrms)
Max Output Swing – XLR	10 Vrms / +22 dBu @ 0 dBFS (Balanced)
Max Output Swing – RCA	4 Vrms / +14.2 dBu @ 0 dBFS (Unbalanced)
Max Input Level	RCA: 2.1 Vrms / XLR: 4.2 Vrms
Input Impedance	RCA: >10 kΩ / XLR: >10 kΩ
PROCESSING	
Sampling Rate	Up to 24-bit / 192 kHz
HDMI Version	HDMI 2.1, HDCP 2.3
Max Resolution	4K/120 Hz / 8K/60 Hz
Max Bandwidth	48 Gbps
Audio Formats	Dolby Atmos, DTS:X
Speaker Layouts	2.0 – 9.1.6
CONTROL	
IP Control	Full API over Ethernet (port 8080); Web GUI at hyperion.local
Serial	RS-232
IR Input	3.5mm TR, 5-24V
Trigger	Trigger Input (3.3–12V) + Trigger Output (+5V or +12V)
Network Audio	Dante / AES67 (4-port built-in Ethernet switch)
POWER	
Input Voltage	AC 100-240V ~ 50/60 Hz
Power Consumption (Max)	<50 Watts
Physical	
Dimensions (H×W×D)	"cm: 13.44 × 43.82 × 45.09 inches: 5.25 × 17.25 × 17.75"
Weight	18.70 lbs / 8.48 kg
Rack Space	3U
CERTIFICATIONS	
Standards & Best Practices	CEDIA/CTA-RP22 (all 21 benchmarks), ISF Certified, FCC Class B
*Specifications subject to change without notice. Mass & dimensions are approximate	

HIGH PERFORMANCE DAC

The APR-16 employs 16 ESS SABRE ES9039Q2M Hyperstream IV 32-bit DACs with eight dedicated to the true differential driven, balanced XLR output stage and eight to the single-ended RCA outputs. Engineered to deliver audiophile-grade paired-channel decoding across all analog outputs. Measured performance includes a dynamic range of +130 dB and THD+N of -120 dB.

ENGINEERED FOR FLEXIBILITY

Sixteen fully matrix-assignable XLR and RCA outputs support loudspeaker configurations from 2.0 stereo to 9.1.6 immersive, including multiple subwoofer support within a single installation. Matrix-assignable outputs can be assigned to the same channel, enabling bi or tri-amping for superpowered systems. Every output is independently configurable with 6-band PEQ, high/low shelf filters, and up to ±60 dB of gain and trim per channel.

IMMERSIVE HOME STANDARDS

RP22 and RP23, the Immersive Audio Design Recommended Practices published by CEDIA/CTA, define the framework for designing, installing, and calibrating residential immersive audio systems. The APR-16 meets or exceeds all technical benchmarks outlined by both standards, providing independently verified, science-based proof of performance in any home cinema environment.

ISF CERTIFIED

The APR-16's HDMI video platform was engineered by AVPro Edge exclusively for Hyperion, with seven HDMI 2.1 inputs operating at 48 Gbps. Video signals pass through without OSD processing, preserving pixel-accurate fidelity from source to display. ISF certification independently verifies that video performance meets the industry standard for unmodified signal integrity.

DANTE/AES67 NETWORK AUDIO

The APR-16 includes a built-in four-port Ethernet switch with Dante/AES67 hardware support, currently providing 2-channel audio over IP input and output. A future firmware update will expand this to full 16-channel Dante/AES67 operation, enabling uncompressed networked audio distribution to compatible amplifiers over standard category cable. The infrastructure is already built in with no additional hardware required to unlock the full capability when the update arrives.

DIRAC LIVE READY

The APR-16 is Dirac Live-Ready with hardware-capable of supporting Dirac's full suite of room optimization software. Once enabled via a future firmware update, users can purchase and activate up to three tiers directly from Dirac: Room Correction, Bass Control, and Active Room Treatment (ART). A precision calibration microphone is included in the box, ready for use when Dirac Live support is activated.