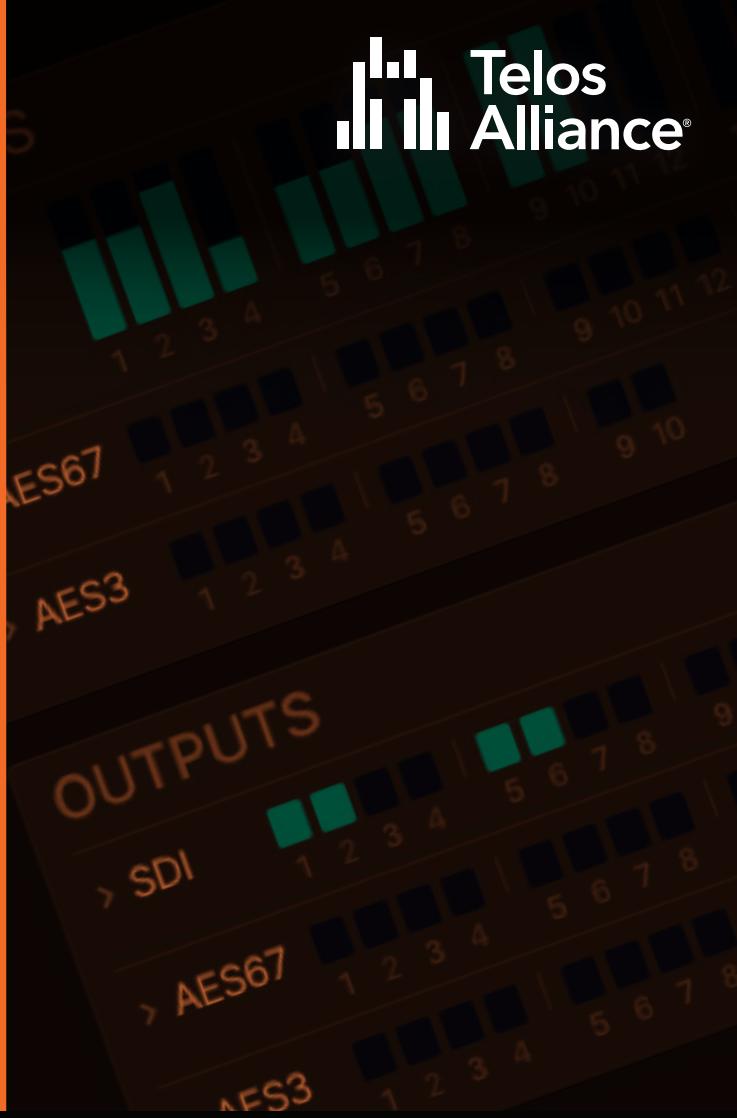
LA-5300

LA-5300 makes it easy to capitalize on all the added benefits of Next Generation Audio, including Dolby® Atmos immersive audio experiences being delivered via Dolby® AC-4 and/or Dolby® Digital Plus with Atmos, with the option of backward compatibility with existing HD services. LA-5300 is your complete audio solution for Next Generation Audio.

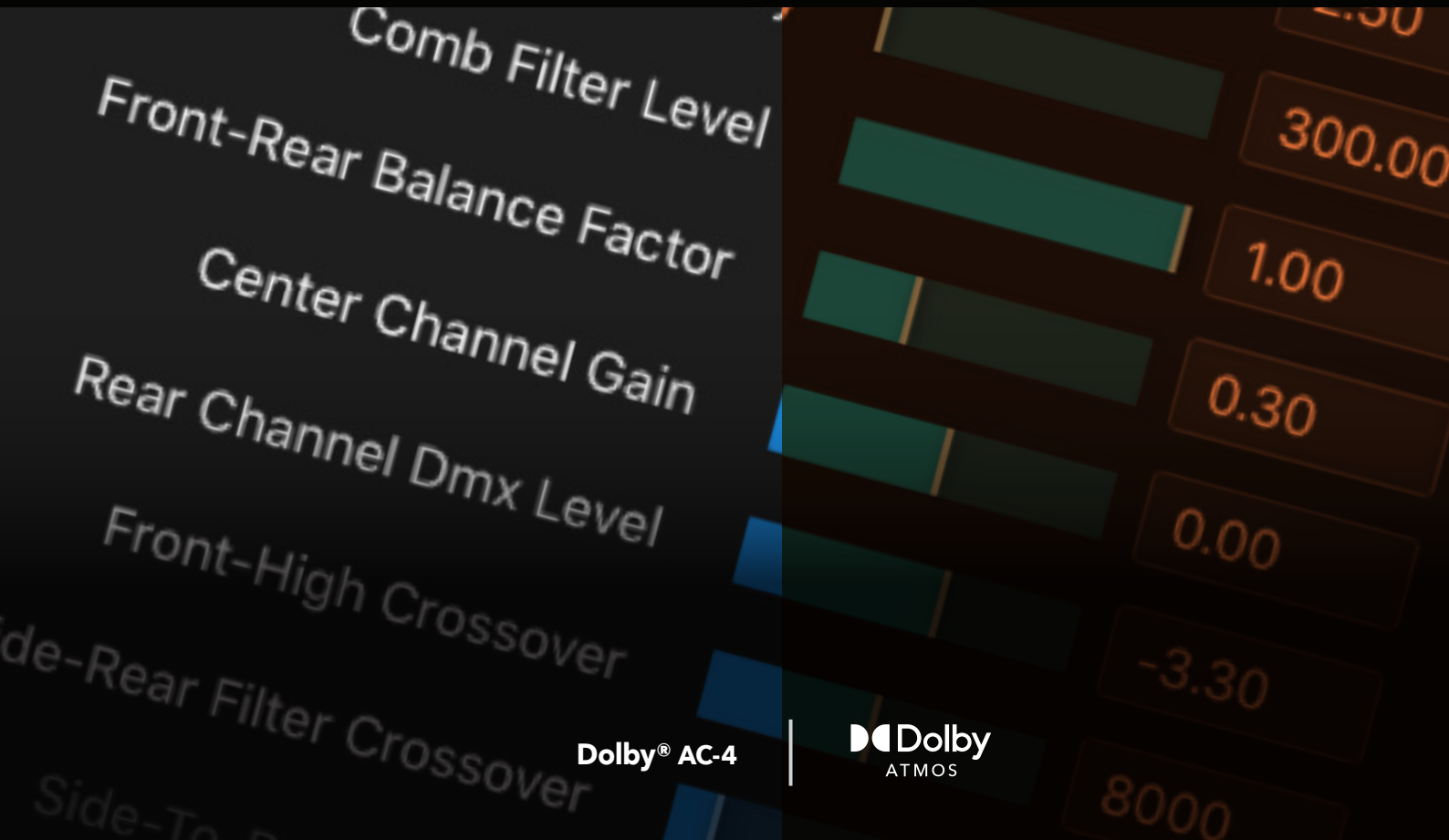
Telos Alliance®



Linear Acoustic® LA-5300

The Complete Solution for Next Generation Audio

INTERNATIONAL VERSION



Dolby® AC-4 | Dolby ATMOS



Next Generation Audio Workflows, Today

Next-Generation TV Made Easy

Watching TV today is a very different experience than it was just a decade ago. Viewers can watch broadcast TV “off the air”, from cable and satellite providers, or via streaming services. Media consumption continues to evolve rapidly to match our on-demand lifestyle. Add the new capabilities of next generation TV services, and now broadcasters can deliver a truly cinematic experience to audiences, whether they are watching on a big-screen TV or on a mobile device.

The Linear Acoustic® LA-5300 Broadcast Audio Processor provides everything broadcasters need to be ready for next-generation TV services utilizing Dolby® Atmos, with the option of backward compatibility for existing HD services.

LA-5300 offers a single, compact, integrated package that supports input priority switching, loudness control, upmixing, downmixing, audience measurement watermarking, Dolby encoding, bitstream analysis, and confidence decoding for up to four simultaneous real-time audio programs.

Backwards Compatible with Existing HD Services



Features

- Linear Acoustic UPMAX® ISC upmixing
- Linear Acoustic APTO™ loudness control
- Optional Dolby AC-4 encoding (stereo, 5.1, and Dolby Atmos® configurations)
- Optional Dolby Digital Plus / Dolby Digital encoding (stereo, 5.1, and Atmos configurations)
- Dolby Real-Time Loudness Leveler when encoding to a Dolby format
- Confidence Dolby decoding for each Dolby-enabled program
- Optional Verance® Aspect® or Nielsen watermark encoding
- Dual 3Gb/s HD/SD-SDI, 5 pairs of AES3 I/O, and AES67 I/O in support of SMPTE ST 2110-30 workflows
- Optional Quad-Link 3Gb/s SDI I/O for supporting 4K workflows or MADI I/O (mutually exclusive)
- Dual Gigabit Ethernet connections (Control and AES67 / ST 2110-30)
- SNMP alarm and status reporting
- Web-based user interface provides comprehensive setup, configuration, routing, control, and metering

* Dolby Digital Plus w JOC supports Dolby Atmos configurations. Dolby Digital (AC-3) supports a maximum of 5.1-channels



Get Ready for Immersive Audio

The Complete Solution for Next Generation Audio Services (NGA)

The roll-out of next generation TV services offers great benefits for both the broadcaster and the viewer alike. Not only does the viewer benefit from video features like UHD and HDR, but new audio features such as personalization, dialog enhancement, and Dolby Atmos (immersive audio) all bring a more enriching experience to your audience.

The Linear Acoustic LA-5300 provides a single solution for loudness control, upmixing, audience measurement watermark insertion, bitstream analysis and monitoring, and encoding into select Dolby emission formats which include AC-4, Dolby Digital (AC-3), Dolby Digital Plus, and Dolby Digital Plus with Atmos (Dolby Digital Plus with JOC).

The ability to handle up to four audio programs means one LA-5300 can provide unique encoded streams for the main UHD program audio, legacy HD program feeds, additional language audio programs, or video descriptive services—all in a single 1RU solution.

I/O for Any Facility

The LA-5300 comes standard with 5 pairs of AES3 I/O, dual 3G SDI I/O, and AES67 I/O to support SMPTE ST 2110-30 workflows. Optional interface cards include Quad-Link 3G SDI for facilities utilizing 4K workflows, or MADI I/O. Two Gigabit Ethernet ports are provided, one for AES67, and one for remote control via the web-based GUI.

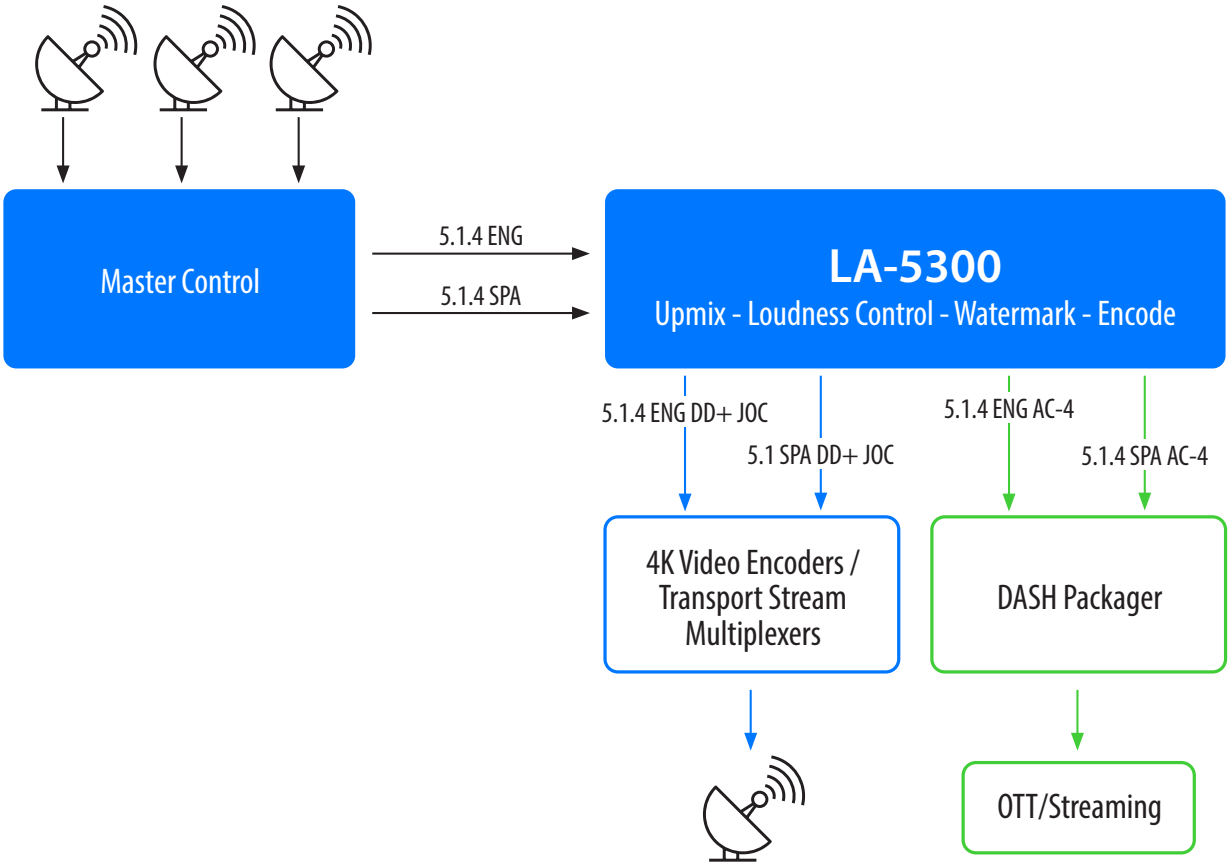
Ready for Today, Ready for Tomorrow

The LA-5300 meets the immediate requirements for next-generation audio services, with channel-based Dolby AC-4 or Dolby Digital Plus with Atmost encoding, loudness control, and upmixing to either 5.1 or Dolby Atmos (immersive audio) configurations for multiple programs. As NGA adoption grows, support for its additional features and benefits such as object-based audio, interactive consumer control, personalized audio, and multiple presentations within a single stream can be incorporated into the LA-5300 via software updates.

Ready for Today, Ready for Tomorrow



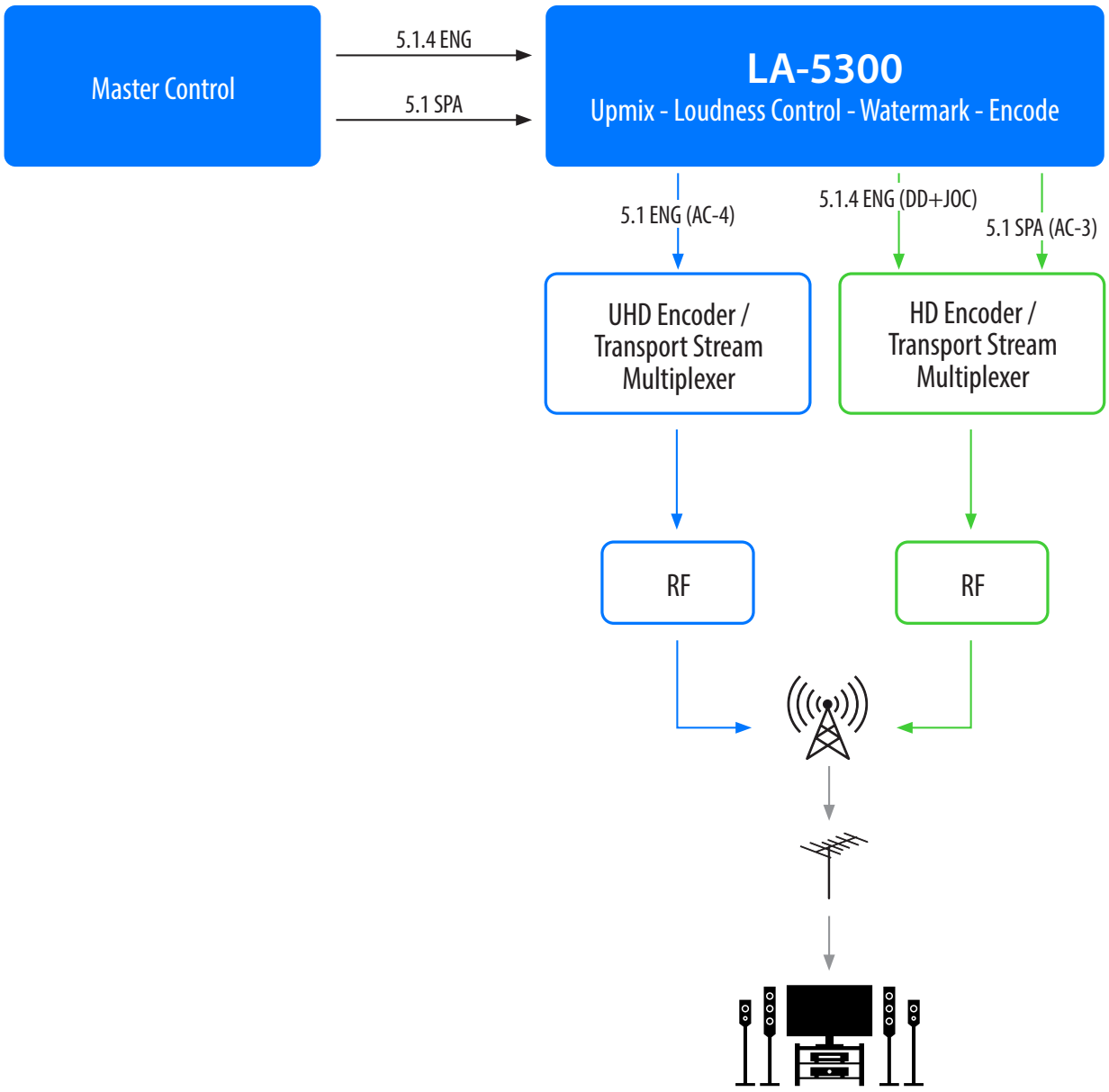
Cable / Satellite Facility Workflow





Supports HD and UHD Workflows

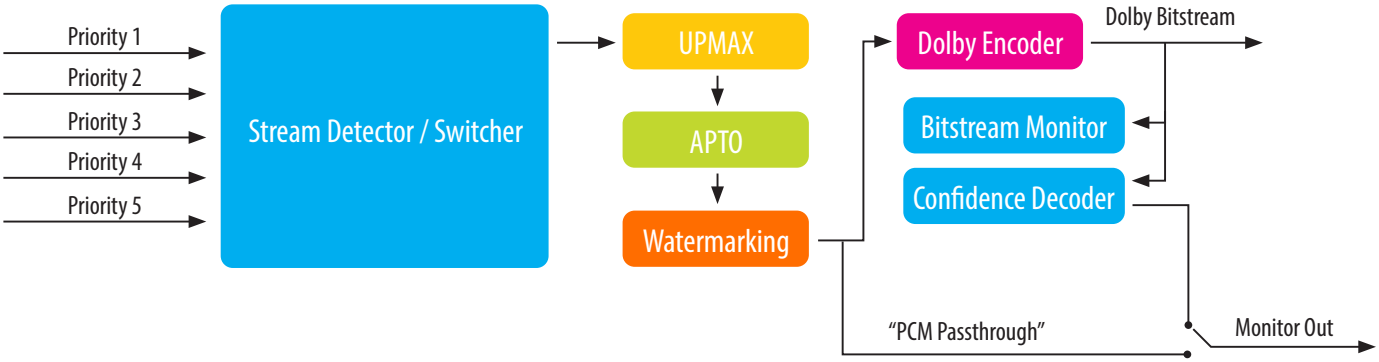
UHD / HD Broadcast



Optional Dolby AC-4 and Dolby AC-3 Encoding



Block Diagram



Specifications

Processing

- Processing for up to 4 independent audio programs
- Linear Acoustic UPMAX ISC® upmixing to 5.1 or immersive configurations, and downmixing to 5.1 or stereo configurations
- Linear Acoustic APTO™ Loudness Control
- Dolby Real-Time Loudness Leveler (RTLL) when encoding to Dolby formats
- Input source priority switching
- Optional Nielsen and Verance® Aspect® audience measurement watermarking

Remote Control

- HTML5 web browser-based remote control
- NMOS IS-04 and IS-05

Encoding

- Optional encoding to Dolby AC-4 (stereo, 5.1, and Dolby Atmos configurations)
- Optional encoding to Dolby Digital (AC-3) / Dolby Digital Plus (E-AC-3) in stereo and 5.1-ch configurations, and encoding into Dolby Digital Plus with Atmos (Dolby Digital Plus w JOC)



Processing for Up to Four Independent Program Streams

Decoding

- Confidence decoder for all enabled encoder formats

Bitstream Analysis and Monitoring

- Bitstream analysis of all streams simultaneously plus confidence decoding/ monitoring
- Multichannel output of either the PCM processing path or Dolby confidence decoder

Watermarking

- Optional Nielsen (N2, N6, CBET) audience measurement watermarking
- Optional Verance® Aspect® audience measurement watermarking

Audio Core

- Thirty-four channel audio core for processing and passthrough, including compensating delay

HD/SD-SDI I/O

- Two independent auto-sensing 3Gb/s HD/SD-SDI inputs (SMPTE ST 425-1, 292M, and 259M) up to 1080p/60/59.94/50Hz, each with de-embedding/re-embedding for up to 8 audio pairs
- Optional Quad-Link 3Gb/s SDI for 4k workflows (mutually exclusive with MADI option)

AES3 I/O

- 5 inputs/outputs via 75 Ohm BNC unbalanced female connectors, internally terminated; signal levels per SMPTE 276M/AES-3ID-2001

AES67 I/O

- Up to 32 channels of bi-directional AES67 I/O in support of SMPTE ST 2110-30 (Level A) workflows

Legendary UPMAX ISC for Upmixing to 5.1 or Immersive



MADI I/O

- Optional MADI I/O supports up to 32 channels for processing (mutually exclusive with Quad-Link SDI option)
- Passthrough and shuffling for up to 64 channels
- I/O via coax or optical SFP socket (SFP sold separately)

Clock Reference

- 48kHz reference via SDI, PTP, AES3, internal clock (standalone use only)
- MADI (when MADI option is installed)
- Vref

Sample Rate/Resolution/Frequency Response

- 48kHz, 24-bit, 20Hz – 20kHz

Ethernet

- Two Gigabit RJ-45 connections – one for AES67 / SMPTE ST 2110-30, one for networked remote control

Parallel GPI/O Control Port

- 15-pin female D connector, 0-5V TTL levels, 5 GPI/O inputs, 5 GPI/O outputs

Power

- Dual internal redundant auto-ranging power supplies
- 95-240 VAC, 50/60 Hz, 100W maximum total



Decodes Dolby AC-4, Dolby Digital, Dolby Digital Plus

Dimensions and Weight

- 19” W x 15.5” D x 1.75” H (approximately 48.2 x 39.4 x 4.5 cm)
- Net weight: Approximately 9.0 lbs (4.08 kg)
- Shipping weight: Approximately 16.0 lbs (7.26 kg)

Regulatory

- North America – FCC and CE tested and compliant with UL-approved power supplies
- Europe – Complies with European Union Directive 2011/65/EU + (EU) 2015/863 of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)
- Compliant with the CE EN 62368-1:2020, EN 55032:2015 and EN 55035:2017 requirements

Warranty

- Standard Telos Alliance 2-year limited parts and labor
- Please visit https://telosalliance.com/Warranty-Information for details

Dolby Atmos

Dolby Audio

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