



Dolby Atmos Cinema Processor CP950A



INTRODUCTION

Fully featured, fully immersive Dolby Atmos

The Dolby Atmos Cinema Processor CP950A, the newest addition to Dolby's market-leading line of cinema processors, is designed to deliver an exceptionally immersive Dolby Atmos experience in a flexible, modular, cost-efficient solution.

With an integrated Dolby Atmos media block card (CAT1710) and higher wattage power supply (CAT1741), CP950A will support up to 64 channels of digital output using either AES67 or BLU Link.

FEATURES AND BENEFITS

Complete Dolby Atmos capability (with full Dolby Atmos license) and rendering up to 64 speaker feeds

Dolby high-resolution multi-rate EQ optimizes playback for all content types

Internal crossovers to enhance sound and reduce installation cost

Built in booth monitor to simplify operations and QA

Touchscreen front panel interface for easy control

Web user interface for remote configuration and control

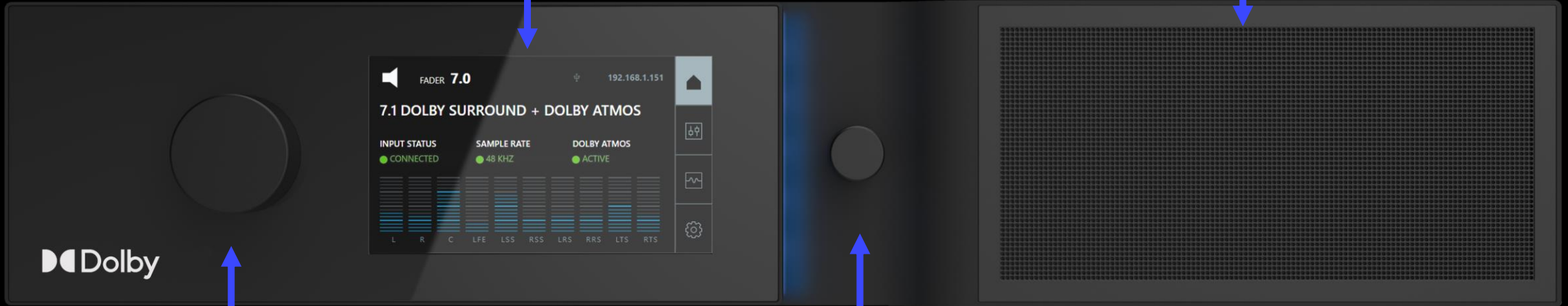
Modular mechanical design allows for field upgradability and serviceability

Dolby Atmos Designer compatibility for automated setup and precise system calibration

CP950A FRONT PANEL

Touch Screen
Control and Configuration

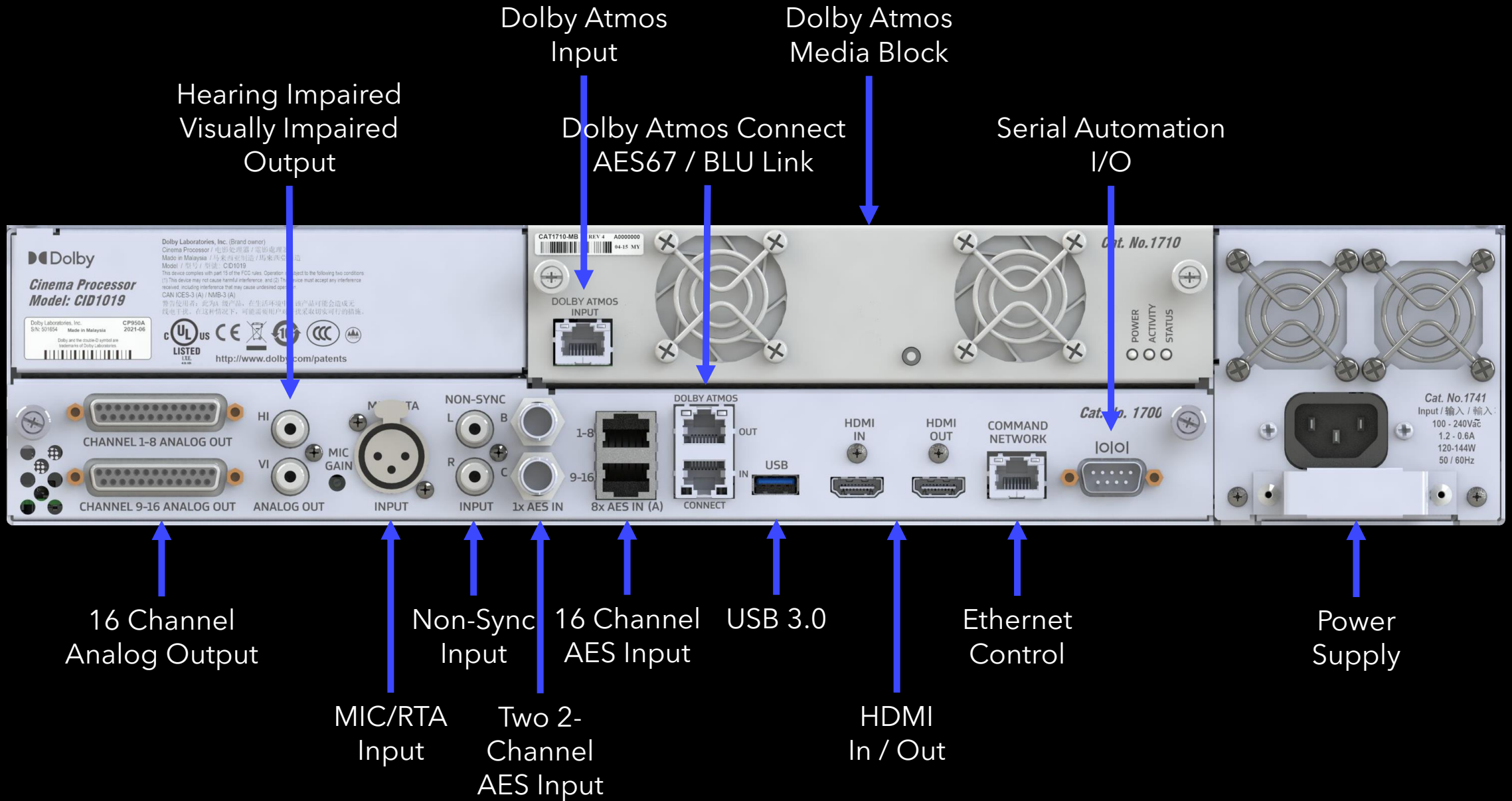
Booth Monitor
Speaker



Fader Control

Monitor Volume
Control

CP950A REAR PANEL



PRODUCT POSITIONING AND AVAILABILITY

CP950A is the replacement for the Dolby Atmos Cinema Processor CP850

- CP850 will be withdrawn from sale after March 31, 2022
- CP850 will continue to be supported until March 31, 2027

CP950A can be used in new Dolby Atmos installations or as a replacement for a CP850 in existing installations

- When replacing a CP850, the room will need to be re-tuned with the new CP950A and, depending on the room configuration, routing settings may need to be adjusted

CP950A and the CP950-UPG upgrade kit for CP950 are being made generally available in January 2022

AVAILABLE CONFIGURATIONS

CP950A

- Standalone unit. Customers do not need to buy the Dolby Atmos media block card separately.
- CP950A consists of a standard CP950 with the Dolby Atmos media block and higher wattage power supply pre-installed.

CP950-UPG

- Hardware upgrade kit adds Dolby Atmos capability to standard CP950
- Works with any previously purchased CP950. CP950-UPG is field installable and includes a CAT1710 Dolby Atmos media block card and a higher wattage (CAT1741) power supply.

ATMOS-FULL-AC

- CP950A and CP950-UPG use the same software entitlement model as CP850 and IMS3000.
- Customers need to order ATMOS-FULL-AC along with CP950A or CP950-UPG to enable full Dolby Atmos support.

WARRANTY INFORMATION

Standard New Product Limited Hardware Warranty Term for CP950A

- Three (3) years

Standard New Product Software Maintenance Term for the CP950A

- Five (5) years

Extended Hardware Warranty and Extended Software Maintenance are available

CP950 - CP950A DIFFERENCES

The Dolby Cinema Processor CP950 is a 16CH audio processor that will play back Dolby Surround 7.1 and 5.1 formats

The Dolby Atmos Cinema Processor CP950A supports up to 64 speaker feeds and can play back Dolby Surround 7.1 and 5.1 formats as well as fully immersive Dolby Atmos content.

Both are built on the same modular platform but there are few key hardware and software differences

CP950 - CP950A DIFFERENCES

Status LEDs illuminate green when playing regular 5.1 or 7.1 content

On CP950A, the status LEDs illuminate blue when playing Dolby Atmos content

CP950A also adds top surrounds to the VU meters



CP950 - CP950A DIFFERENCES

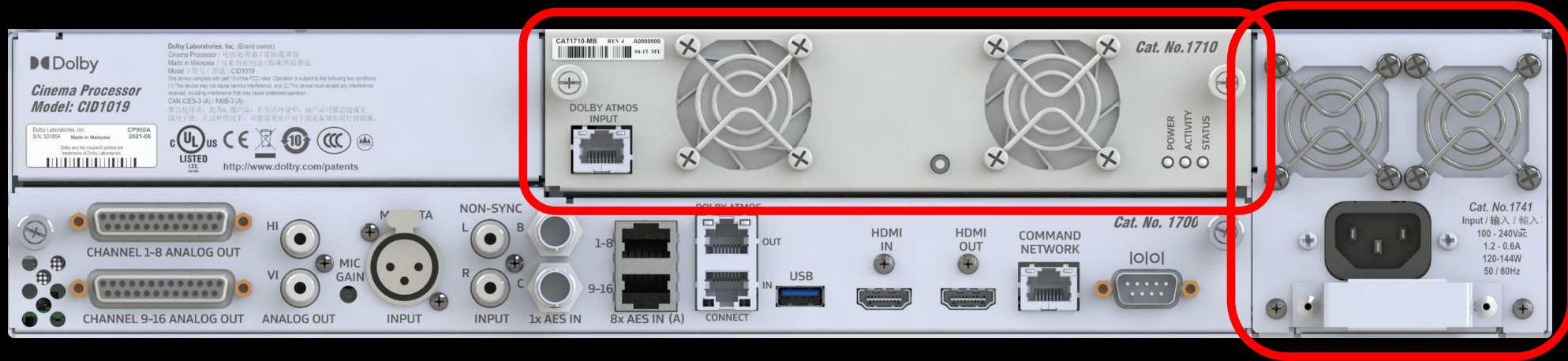
CP950A uses a higher wattage power supply, known as CAT1741

The Dolby Atmos media block, CAT1710, is installed in the expansion slot

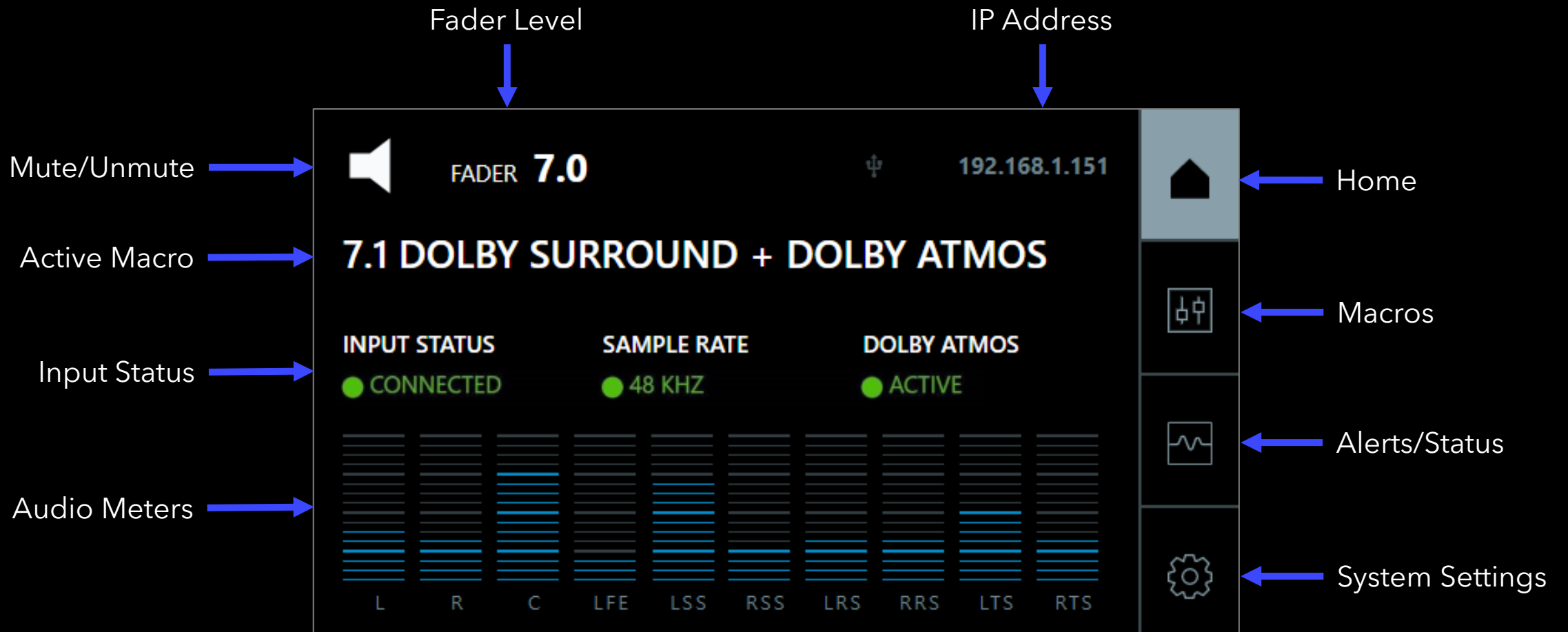
CP950



CP950A



TOUCHSCREEN FRONT PANEL USER INTERFACE



WEB USER INTERFACE

The CP950A has a comprehensive web browser user interface that allows you to control and configure everything from anywhere on the network

The screenshot shows the top section of the web interface. At the top, it displays the active macro as "7.1 Dolby Surround + Dolby Atmos" and the monitor mix as "L, C, R". Below this, there are controls for "fader" (set to 7.0) and "mute". A channel level meter is visible on the right. The left sidebar contains navigation options: status, setup, macro editor, equalization, auditorium, system, preferences, logs, user access, network, maintenance, reboot, downloads, and support. The main content area is divided into three sections: "macro info" (name: 7.1 Dolby Surround + Dolby Atmos, macro order: 2, input: 16ch MediaBlock + Dolby Atmos, global audio delay: 80.0 ms, format: 7.1, channel assignment: Dolby Atmos, eq preset: AutoEQ, comment:), "bitstream info" (sample rate: 48 kHz, Dolby Atmos content: n/a, ignore Dolby Atmos button, frame rate: n/a, main CPL title: n/a, main CPL audio: n/a, main audio valid: n/a, main audio frame: n/a, encrypted: n/a, Dolby Atmos version: n/a), and "network interface status" (hostname: HULK, screen server connected: green, IP address: 10.202.31.33).

This screenshot shows the "macro editor" section of the web interface. It features a dropdown menu for the active macro, currently set to "7.1 Dolby Surround + Dolby Atmos". Below this, there are controls for "front panel macro order" (set to 2), "fader preset" (7.0, 0 dB), and "global audio delay (ms)" (80). The "input" is set to "16ch MediaBlock + Dolby Atmos" and the "format" is "7.1". The "channel assignment" section shows a "presets" dropdown set to "Dolby Atmos" and a "custom" section with 16 AES channel assignments: AES 1 Left, AES 2 Right, AES 3 Center, AES 4 LFE, AES 5 Left surround, AES 6 Right surround, AES 7 HI, AES 8 VIN, AES 9 not used, AES 10 not used, AES 11 Left rear surround, AES 12 Right rear surround, AES 13 not used, AES 14 Dolby Atmos sync, AES 15 not used, and AES 16 not used. The "bitstreams supported in this input" section lists Dolby Atmos, Dolby Digital, Dolby Digital Plus, Dolby E, True HD, and PCM. The "sample rates supported in this input" section lists 48 kHz. The "eq preset" is set to "AutoEQ" and there is a "comment" field at the bottom.

WEB UI ALERTS

CP950A builds on the detailed alerts pages that were introduced with CP950 to provide more in-depth troubleshooting information for technicians

The image shows a web UI alert system. At the top, a grey bar contains the text "messages and alerts". Below this, a white alert message is displayed: "2021-08-17 16:20:50 Center channel bypass is enabled." To the right of the message are three buttons: "details", "suppress", and "clear". A "close" button is located at the bottom right of the alert message area.

The "details" button is selected, opening a modal window titled "alert details". The modal window has the Dolby logo and "Dolby Cinema Processor CP950" at the top. It contains the following information:

- alert: Center channel bypass mode on
- code: CP950-1007
- description: This function allows the CP950 to move center channel audio to the left and right speakers. It is used when one or more drivers on the center channel are damaged or disconnected.

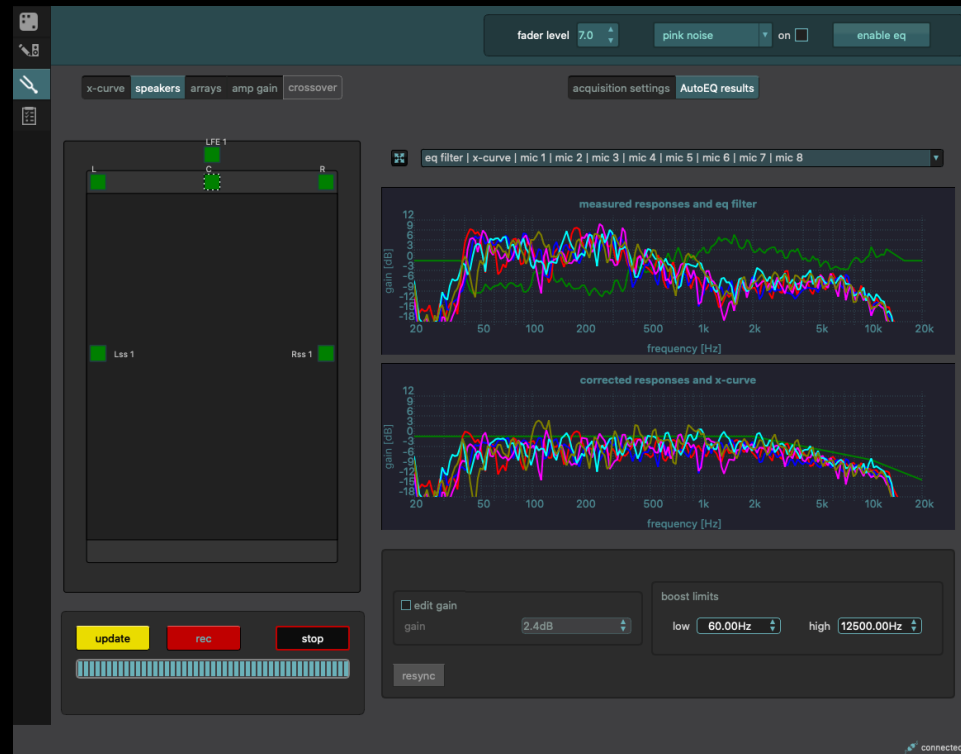
Below the description, there is a paragraph of text: "Check or replace any failed components on the speaker or wiring to restore function to the center channel. Disable center channel bypass mode on the 'preferences' tab in the webUI, or the Settings/Device Tools page in the Front Panel User Interface, to test and begin using the center channel again."

At the bottom of the modal window, there is another paragraph: "If you cannot correct the problem, download logs from the CP950 and provide them to your support team or Dolby Cinema Solutions and Support. Dolby's contact information is listed in the SUPPORT tab in the CP950 webUI."

DOLBY ATMOS DESIGNER SUPPORT

CP950A is compatible with Dolby's AutoEQ and the advanced room configuration functions in Dolby Atmos Designer (DAD)

- The latest version of the DAD installer is included in the WebUI for easy access



FAILOVER CONFIGURATIONS

CP950A introduces a new concept of failover room configurations

- In the event of a CAT1710 media block failure, the system can automatically revert its configuration to a specific 16CH failover routing that is defined in Dolby Atmos Designer (DAD) during the setup.

The screenshot displays the Dolby Atmos Designer (DAD) interface for configuring failover routing on a CP950A system. The interface is divided into two main sections: a speaker layout diagram on the left and a configuration panel on the right.

Speaker Layout Diagram (Left):

- The diagram shows a 5.1.2 speaker configuration with various channels: L (Left), Lc 1 (Left Center), C (Center), Rc 1 (Right Center), R (Right), Lw 1-2 (Left Width), Lts 1-7 (Left Surrounds), Rts 1-7 (Right Surrounds), Rss 1-5 (Right Surrounds), Lrs 1-3 (Left Rear Surrounds), and Rrs 1-3 (Right Rear Surrounds).
- Channels are assigned to physical outputs (D1-D15) via yellow boxes: D1 (L), D2 (R), D3 (C), D4 (LFE 1), D5 (Sub 1), D6 (Lss 2), D7 (Lss 4), D8 (Lss 5), D9 (Rss 2), D10 (Rss 3), D11 (Rss 4), D12 (Rss 5), D13 (Lrs 1), D14 (Lrs 2), D15 (Rrs 1).

Configuration Panel (Right):

- target device:** CP950A
- Note:** CP950A with CAT1710 media block supports up to 64 physical outputs. If the CAT1710 is removed or not functioning, the system can continue playing audio to the first 16 physical outputs. With automatic routing, a failover configuration is created using the stage speakers, LFE, and an equal number of surrounds as available in physical outputs 1-16. With manual routing, it is possible to create routing that is not optimized in a failover situation. If applicable, the failover routing is highlighted.
- automatic routing:**
 - analog outputs to use: 0
 - auto assign from output: 1 - digital
 - button: apply automatic routing
- manual routing:**
 - incremental routing:
 - incremental routing start: 9 - digital
 - physical output: unassigned
 - button: clear all routings

CINEMA SERVER INTEGRATION

IMS3000 requires Software Bundle 3.4.11 and Accumulated Hotfix 1.0.1

IMS2000 requires SM 6.1.136 or later and software 2.8.30 with Accumulated Hotfix 1.0.5

IMB / ShowVault requires SM 5.1.117 or later and software 2.8.30 with Accumulated Hotfix 1.0.5

DCP-2000 or DCP-2K4 do not include a CP950A selection in the Device Manager

- The CP850 selection can be used instead

DSS200 and DSS220

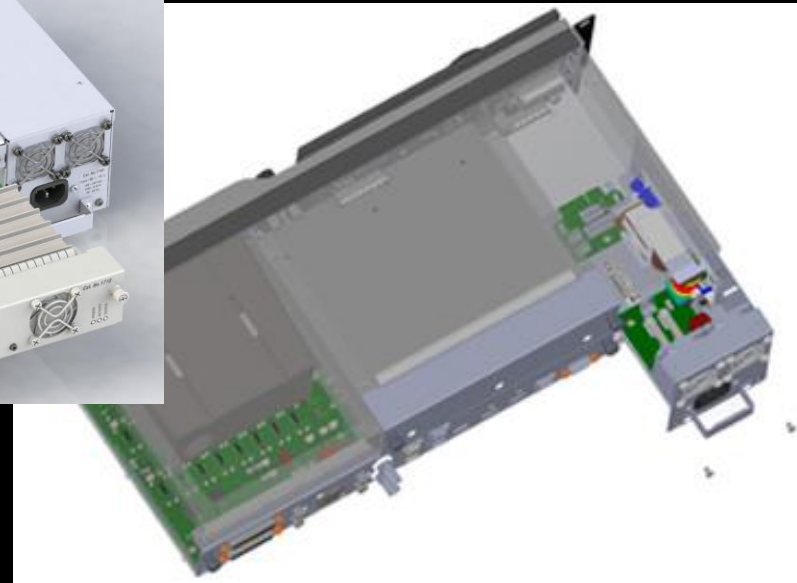
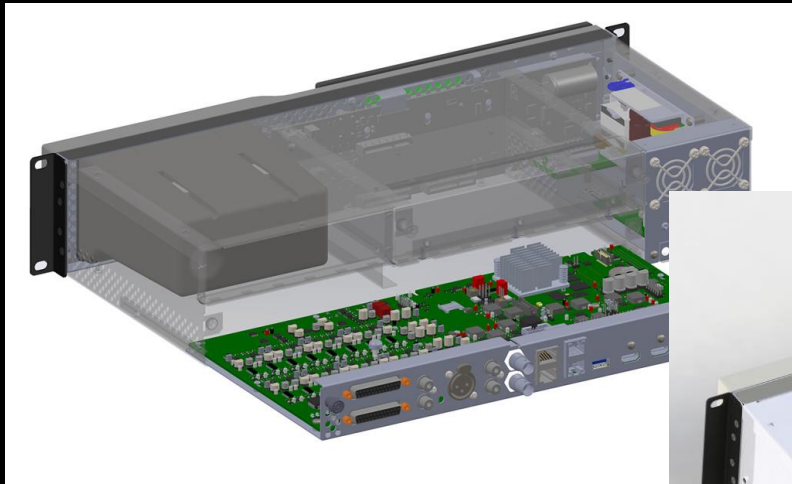
- Automation commands for CP950 were added in software v4.9.4.5
- Support for CP950A was added in v4.9.6.4. You must be running v4.9.6.4 or later for Dolby Atmos playback

Third-party server validation and support includes Barco, Christie, GDC, Qube and Sony

MODULAR DESIGN

CP950 and CP950A were designed with upgradability and ease of service in mind

- The system can be broken down into several main components



UPGRADING CP950 TO CP950A

All CP950s sold can be upgraded to CP950A

- CP950-UPG includes CAT1710 media block card and CAT1741 power supply



CP FEATURE COMPARISON

FEATURE	CP750	CP850	IMS3000 w/audio	CP950	CP950A
LCD touchscreen for configuration and control				✓	✓
Web interface for remote configuration and control		✓	✓	✓	✓
Built-in monitor speaker				✓	✓
Internal Crossovers		✓	✓	✓	✓
High resolution multi-rate EQ		✓	✓	✓	✓
Automated calibration (auto EQ)		✓	✓	✓	✓
16CH AES input accepting main audio from cinema server	(8CH)	✓	✓	✓	✓
HDMI audio input and video passthrough		✓	✓	✓	✓
16CH analog output		✓		✓	✓
AES67 output		✓	✓	✓	✓
BLU Link output with loopback		✓		✓	✓
8CH analog input	✓				
Dolby Digital, Dolby Digital Plus, Dolby TrueHD		✓	✓	✓	✓
Consumer Dolby Atmos playback via HDMI		✓	✓	✓	✓
Modular mechanical design that allows for field upgradability and repair				✓	✓
Dolby Atmos media block card		✓		(OPTIONAL)	✓
Dolby Atmos input accepting Dolby Atmos bitstream from cinema server		✓		(OPTIONAL)	✓
Support for up to 64 speaker feeds		✓		(OPTIONAL)	✓
TOSLINK optical input	✓	✓			
GPIO	✓	✓	✓		
Optional Remote Fader support	✓	✓	✓		

