ARGO

CALREC

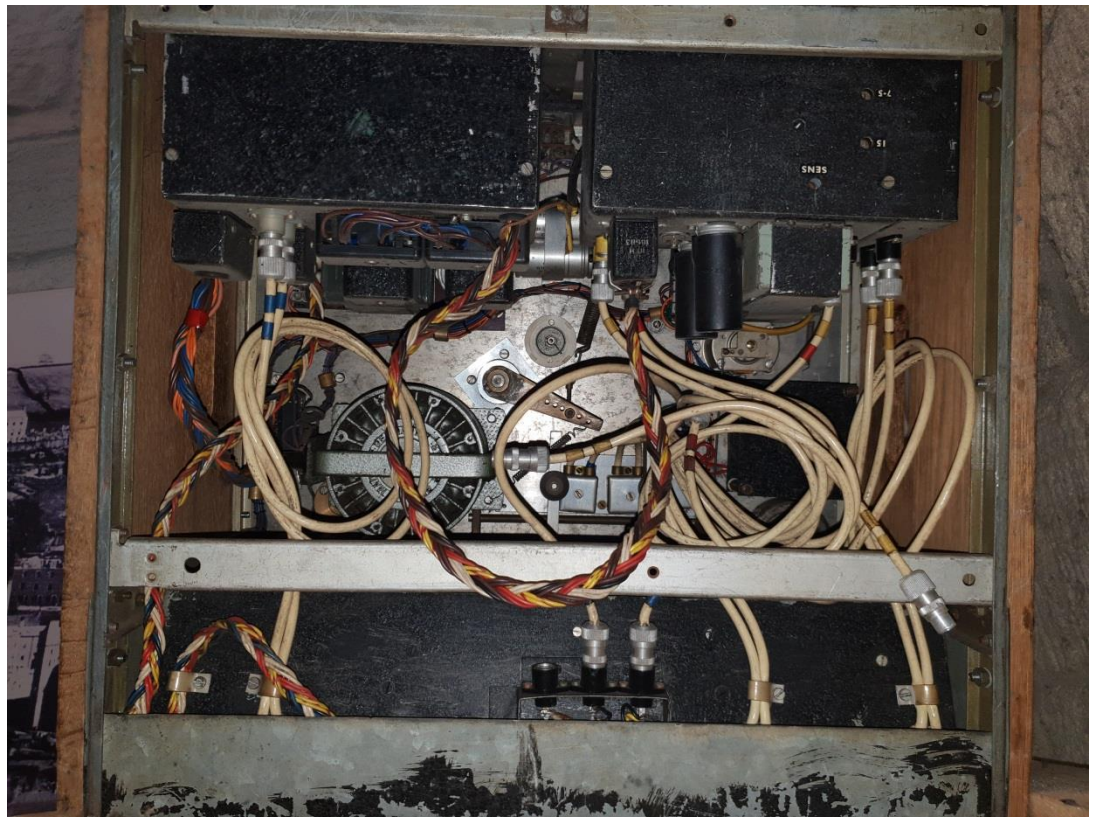
Calrec HQ - Nutclough Mill

Where it Began (1956)

First Calrec console

CALREC


RECORD
RUN
SPOOL
STOP

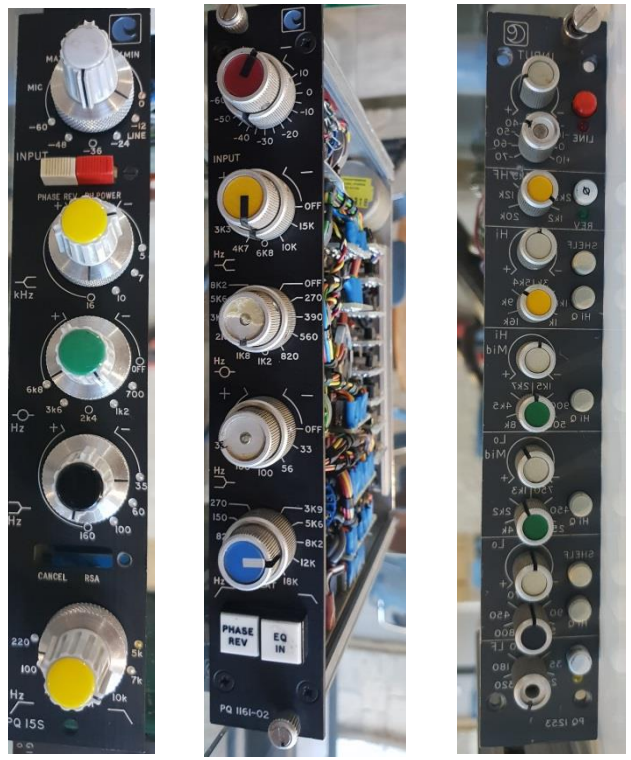


Musical Heritage

- Calrec UA8000 installed and used in ABBA’s famous POLAR studios

Musical Heritage

- Thorough knowledge of musicality, EQ, Mic amps.



CALREC

History

First contract with the BBC

World's first surround microphone

Broadcast specialists

All-digital consoles

Calrec Audio formed

1960s

1970s

1980s

1990s

2000s

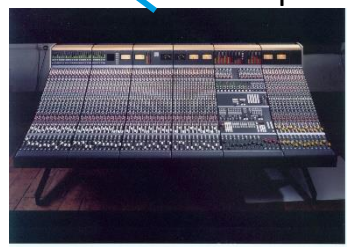
Bluefin

World's first FPGA audio processor

World's first stereo broadcast console

World's first assignable console

World's first digitally-controlled analogue console



First sales into USA

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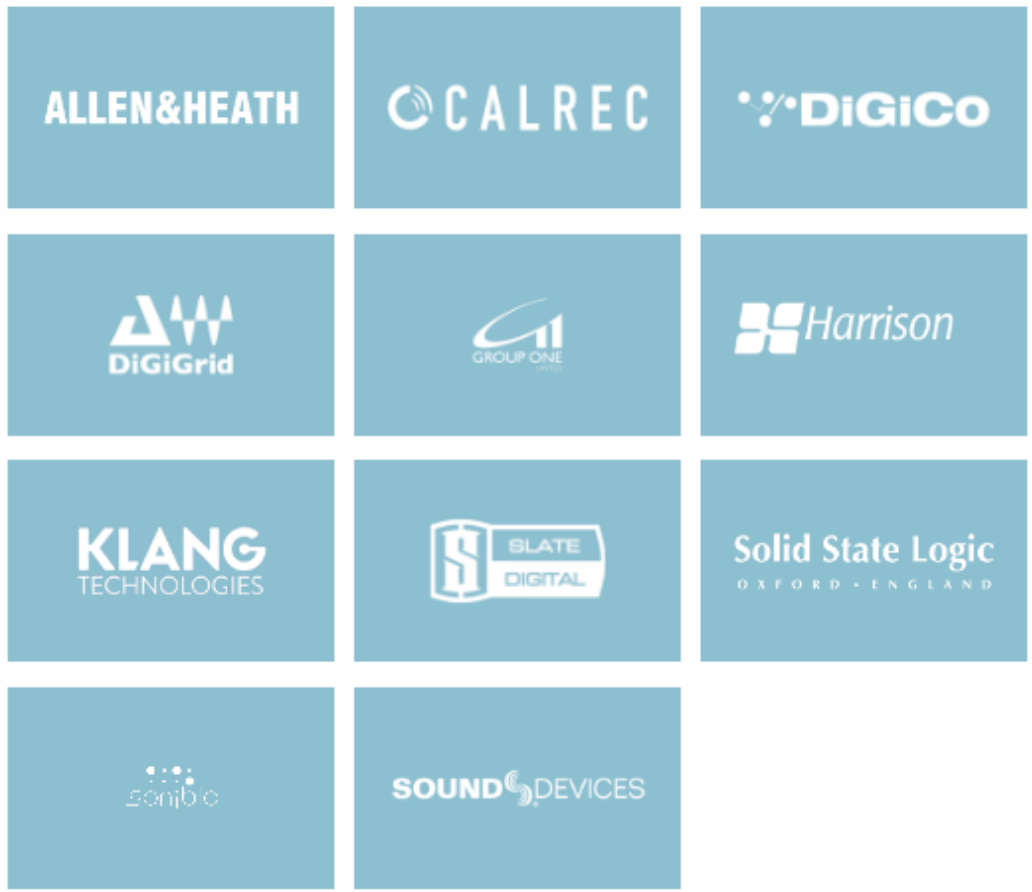
Audiotonix



CALREC

Complete In-house Manufacturing

- Except bare PCBs and metalwork coating, all manufacturing in house
- CNC machines, Surface mount, wiring and final assembly
- Absolute control of quality and delivery
- Integrated CAD system

CALREC

Calrec core values

- Excellent Audio Quality - an open, transparent sound with high input headroom and low noise
- Ergonomic Design - simple operation
- Fully Featured - broadcast specific features for live to air production
- Security/Redundancy - built in automatic redundancy for absolute reliability
- Customer Support - fast response, training courses, remote diagnostics on digital designs, 24/7 on-call engineers
- Secure upgrade path.

CALREC

Calrec Support

- Large extensive stock of spare parts
- Still supporting first generation Digital consoles from 2003
- Advance Exchange policy for fast economic turn around
- Extended Warranty support contracts
- Remote diagnostics and software upgrades
- Consoles commissioned by Calrec engineers.
- Training – on site or in UK.
- On-Air support

CALREC

Product Range

CALREC

Console Range

APOLLO

ARTEMIS

CALREC

Console Range

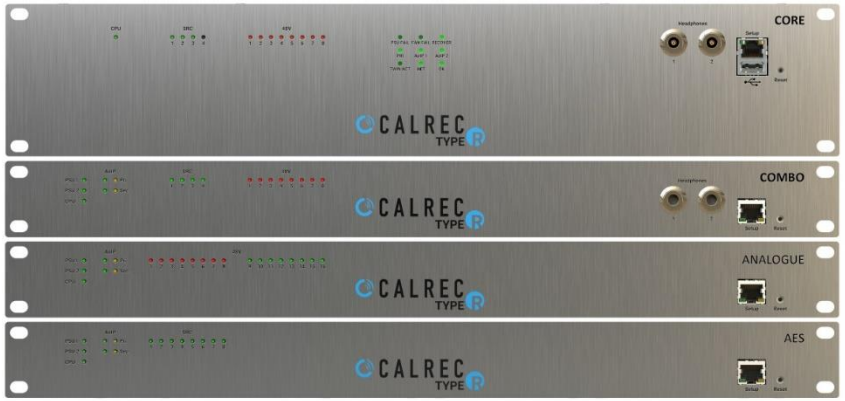
SUMMA

brio·36

CALREC

Console Range

TYPE R



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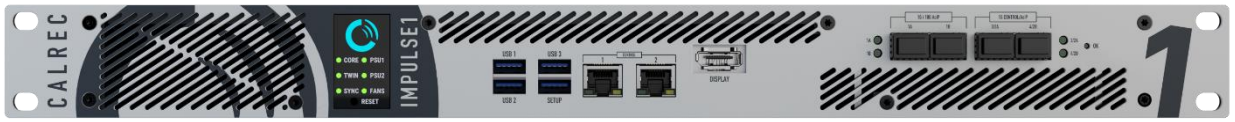
IP Processing Cores

IMPULSE

TYPE R



Introducing IMPULSE1

CALREC

ARGO

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Argo S

Argo Q

CALREC

Flexible control surface design

- Argo Q - Two panels in mid section

ARGO

Flexible control surface design

- Argo Q - Two panels in mid section
- Argo S - One panel in mid section

CALREC

ARGO

Control surface Details - Chassis

- Each surface section is 12 faders wide & fully self-sufficient
- Control surfaces from 1 to 20 sections
  - Up to 8 sections in one chassis, 96 faders
  - Chassis for 12, 24, 36, 48, 60 & 72, 84. 96
  - Multiple surfaces linked for sidecars, 240 faders
- Sections can be physically remote from their processing engine as well as each other. Each section completely independent.
- Fully IT friendly surface links

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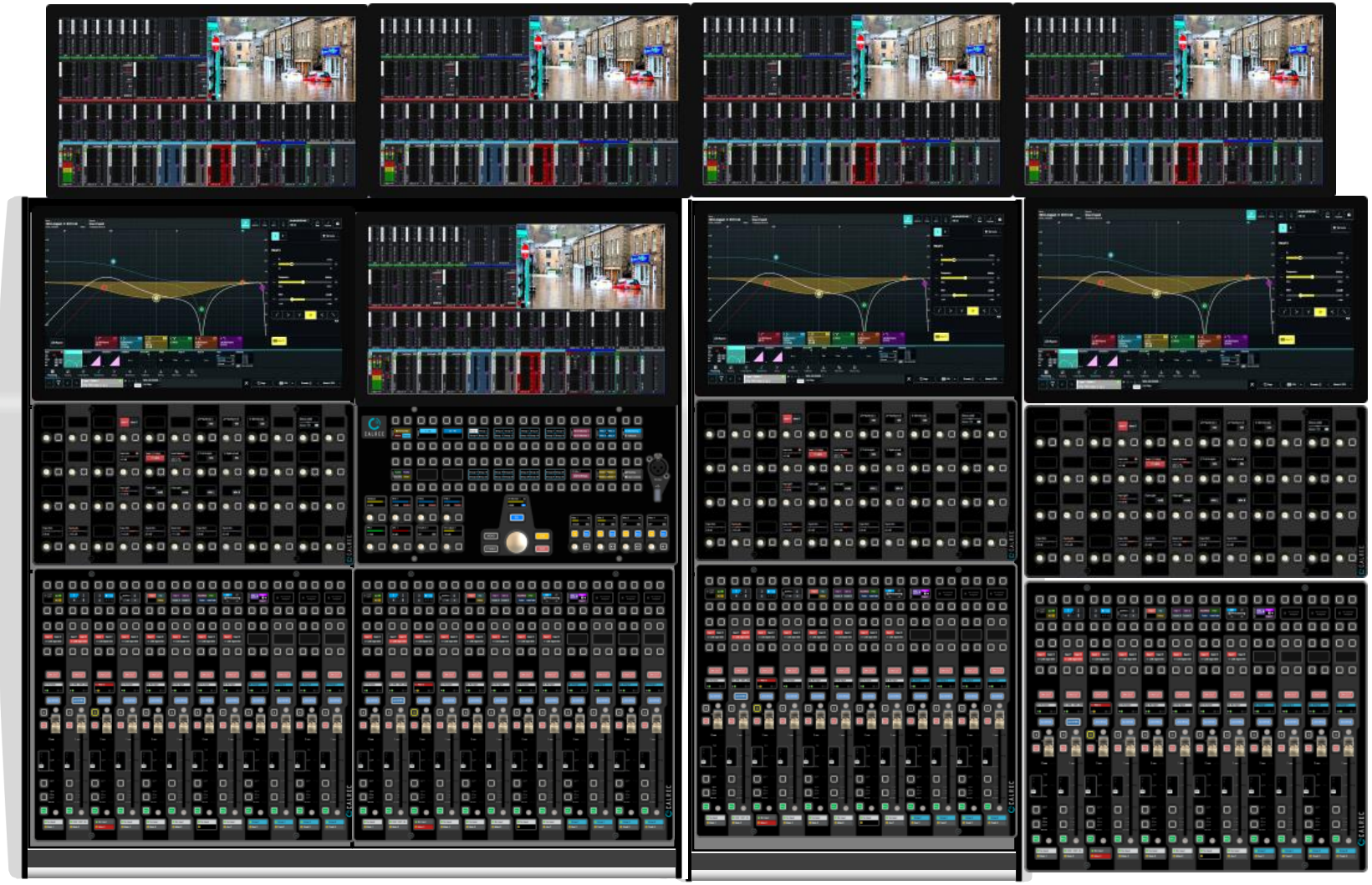
Control surface Details - Chassis



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ARGO

Flexible control surface design

- Argo Q - Two panels in mid section
- Argo S - One panel in mid section
- Interchangeable panels
  - Any panel, anywhere

CALREC

ARGO

Flexible control surface design

- Argo Q - Two panels in mid section
- Argo S - One panel in mid section
- Interchangeable panels
  - Any panel, anywhere
- Two large screens
  - Control
  - Meters inc. integrated display input
  - External video input
  - Picture in picture
  - Full screen

CALREC

ARGO

Flexible control surface design

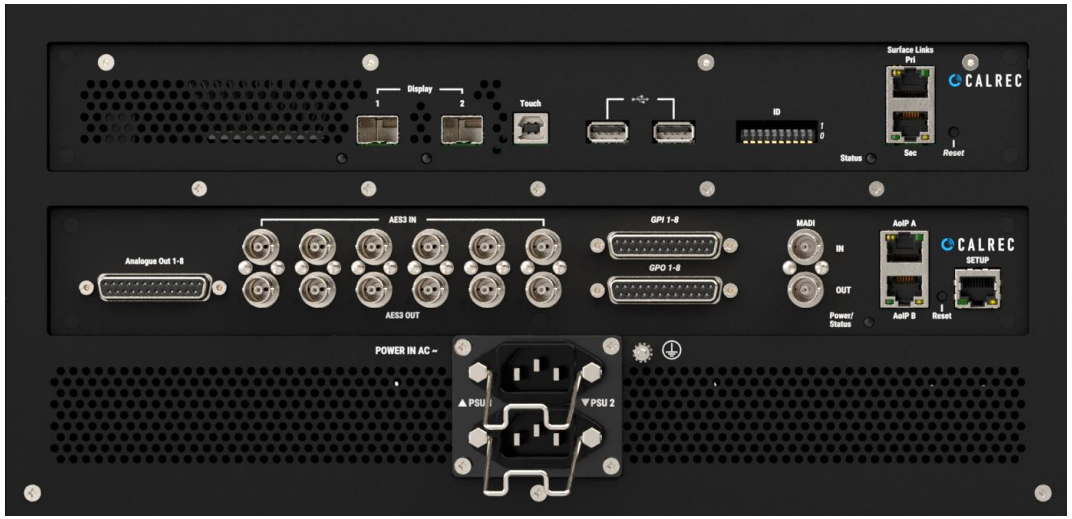
- Argo Q - Two panels in mid section
- Argo S - One panel in mid section
- Interchangeable panels
  - Any panel, anywhere
- Two large screens
  - Control
  - Meters inc. integrated display input
- Up to 240 faders

CALREC

ARGO

Flexible control surface design

- Argo Q - Two panels in mid section
- Argo S - One panel in mid section
- Interchangeable panels
  - Any panel, anywhere
- Two large screens
  - Control
  - Meters inc. integrated display input
- Up to 240 faders
- 4 x Rear I/O Options



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ARGO

Flexible control surface design

- Argo Q - Two panels in mid section
- Argo S - One panel in mid section
- Interchangeable panels
  - Any panel, anywhere
- Two large screens
  - Control
  - Meters inc. integrated display input
- Up to 240 faders
- 4 x Rear I/O Options
- Waves Plugins

- Multiple sections can be:
  - Conjoined
  - Geographically diverse

CALREC

ARGO

Control surface Details - Display

- Each section has two video SFP slots. options including:
  - SDI
  - HDMI
- External video sources display in the upstand, as either
  - full-screen
  - Quarter screen picture-in-picture
    - Calrec meters in the other ¾ of the display
- Meters can be switched on to lower screen

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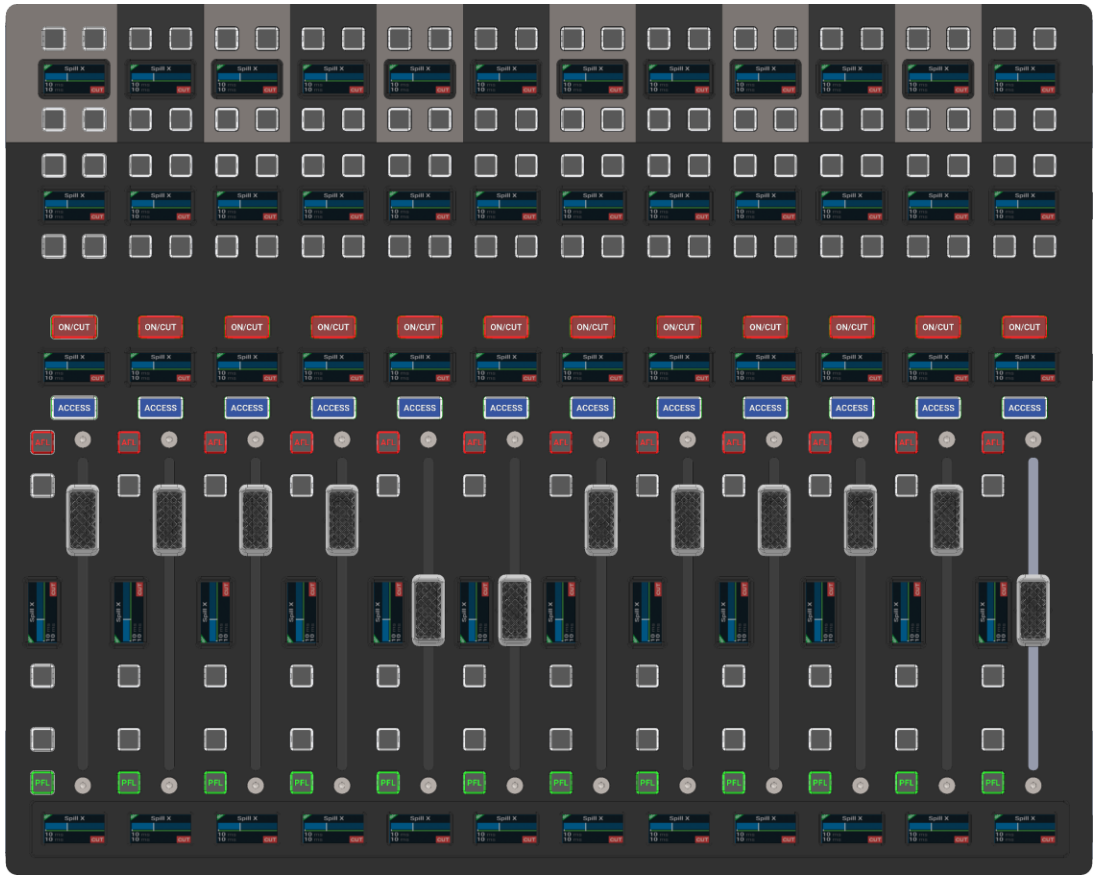
Control surface Details – Fader panel



Menu row – layers, processing access, etc.

Wild/Strip controls – user programmable

Cut & Access & Display for fader details

3 programmable buttons.

Dedicated small TFT for each fader.
Input meter

Dedicated display for fader labelling

These can be colour coded

CALREC

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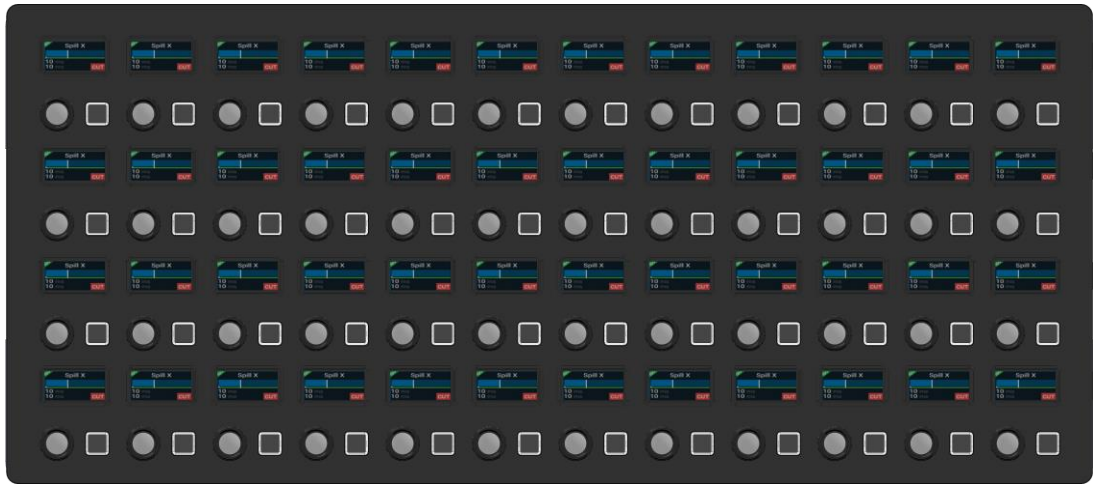
Control surface Details – Wild Assign panel



- 48 Rotary and buttons

- Each with an Individual display
- Work as assignable section or fader strips

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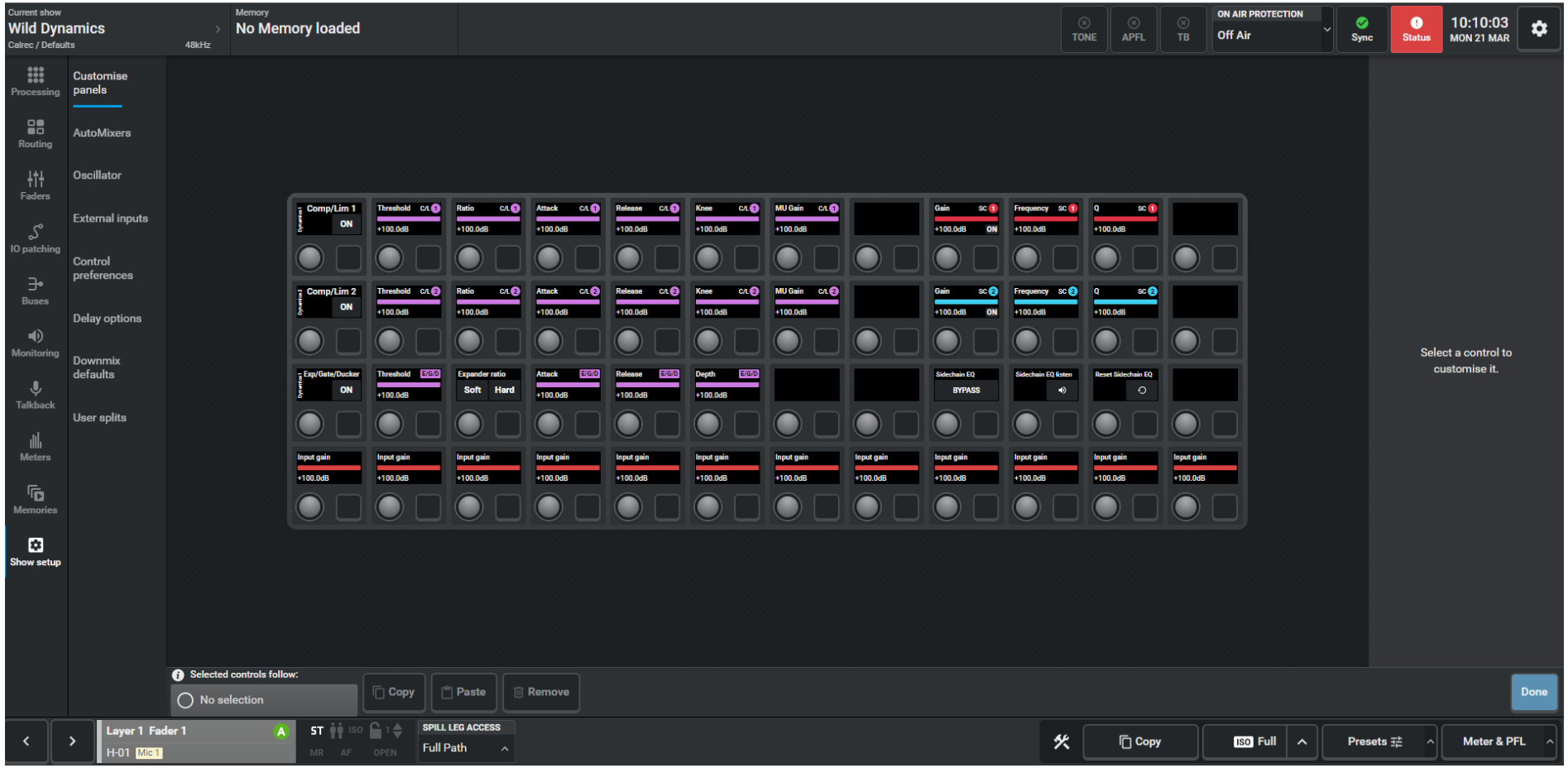
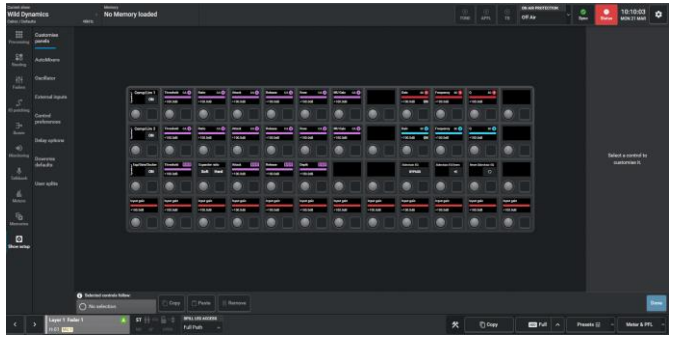
Control surface Details – Wild Assign panel

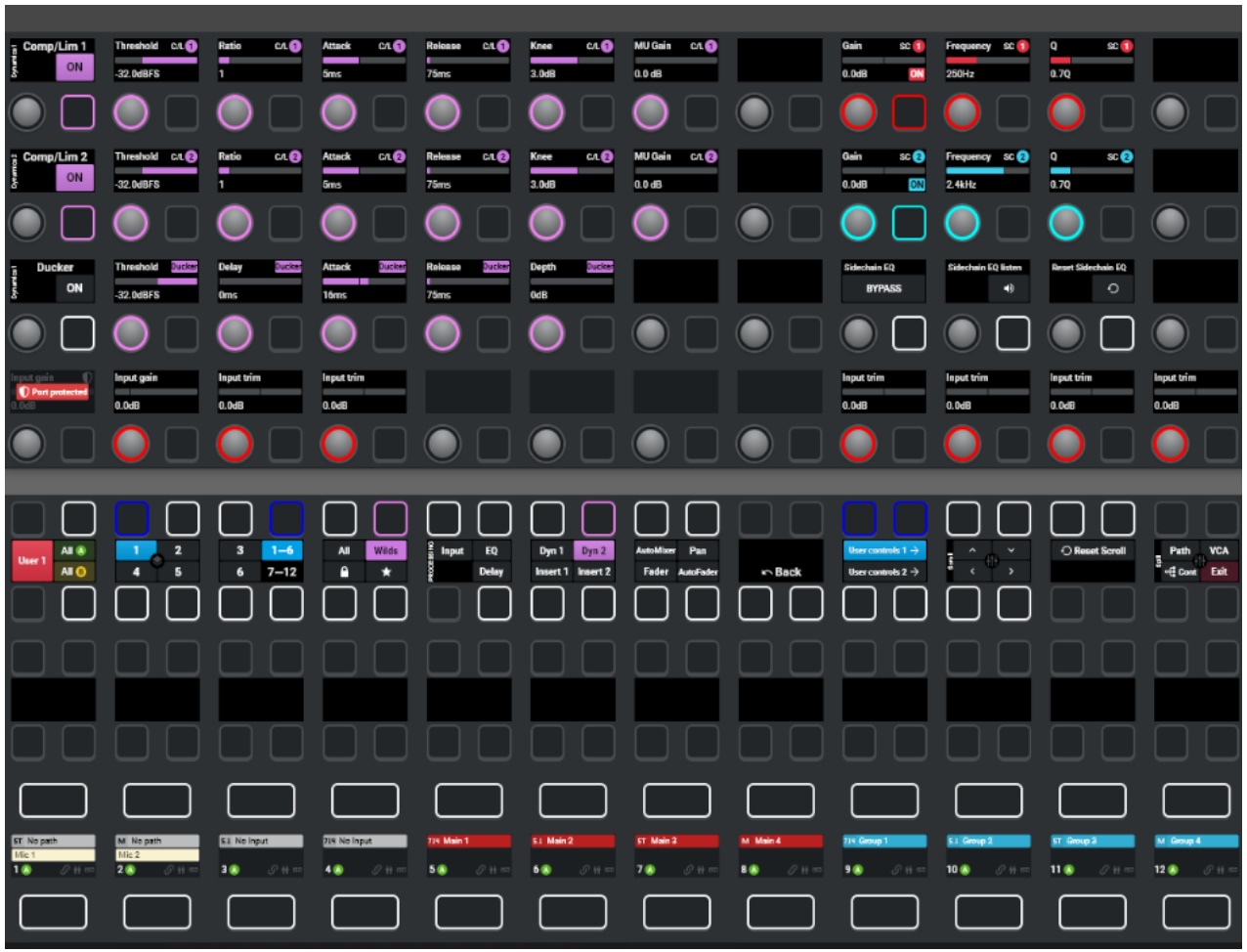
Flexible panel layouts



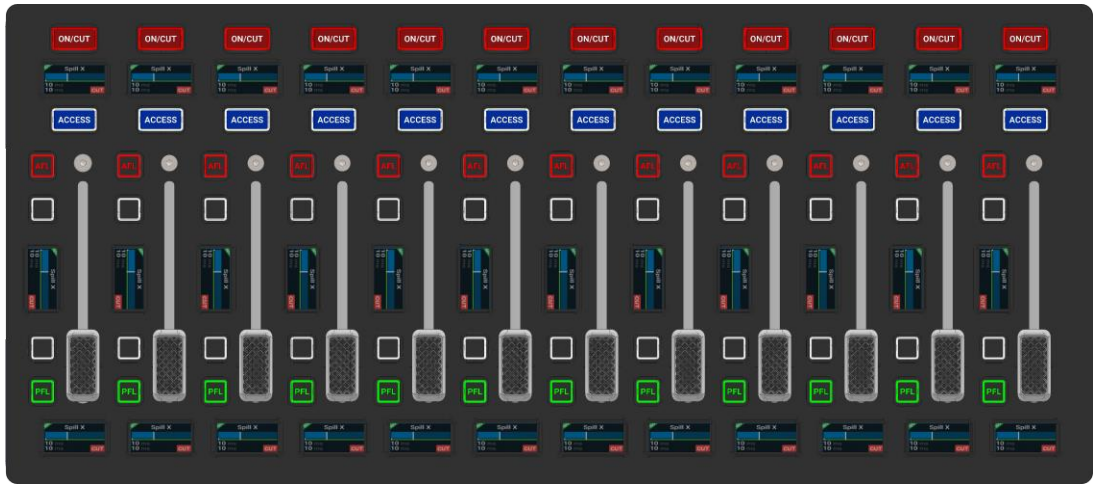
Control surface Details – Wild Assign panel

Flexible panel layouts





Control surface Details – Small Fader panel



- Same as A fader layout
  - Cut & Access & Display for
  - 2 programmable buttons
  - Input meter
  - Dedicated display for fader labelling
- Short throw fader
- 36 faders in a single section

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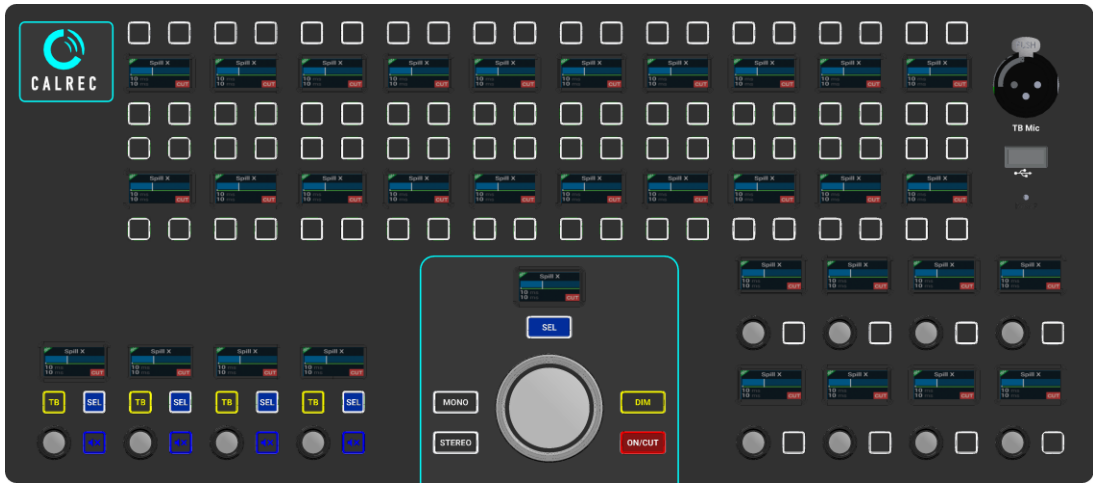
Control surface Details – Monitoring panel



- Specifically designed for monitoring
- Built-in:
  - Talkback XLR
  - USB

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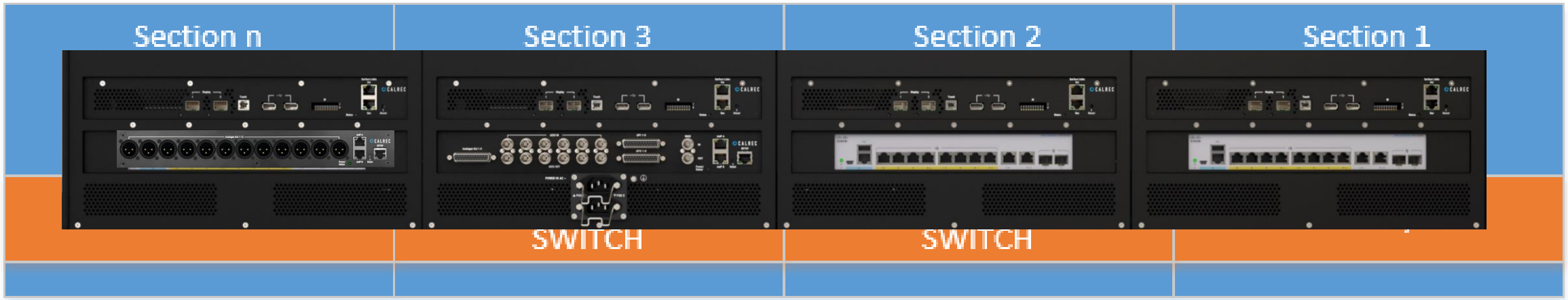
Control surface Details – Rear Options

- Optional switches for section & surface-core connections
- Optional Rear AoIP I/O options

Example 48 fader layout



Control surface Details – Combo BNC

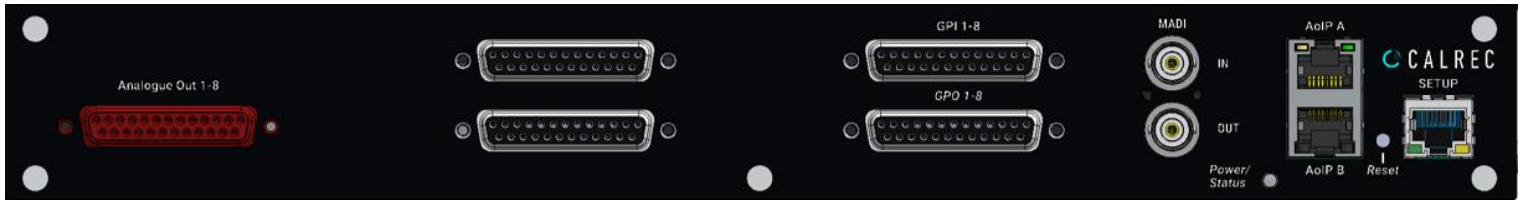
- 6 x AES3 In BNC
- 6 x AES3 Out BNC
- 8 x Balanced Analogue Out
- 1 x MADI in
- 1 x MADI Out
- 8 x GPI
- 8 x GPO

Internal Use:

- 4 x Balanced analogue out
- 1 x Mic/Line input

Control surface Details – Combo D-Type

- 6 x AES3 In D type
- 6 x AES3 Out D type
- 8 x Balanced Analogue Out
- 1 x MADI in
- 1 x MADI Out
- 8 x GPI
- 8 x GPO



Internal Use:

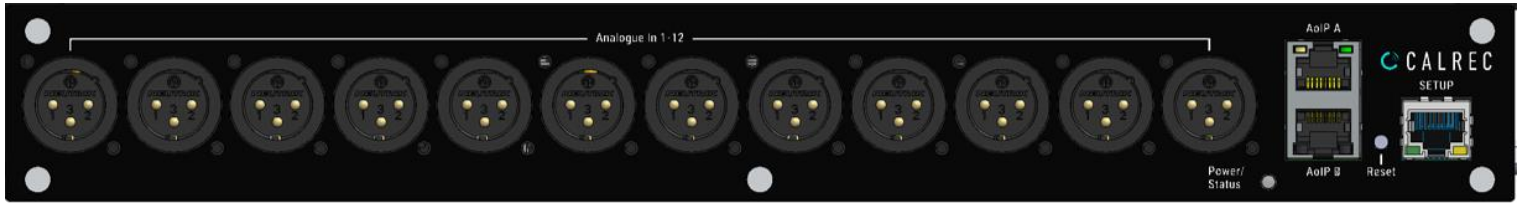
- 4 x Balanced analogue out
- 1 x Mic/Line input

Control surface Details – Analogue

- 8 x Analogue Outputs

Internal Use:

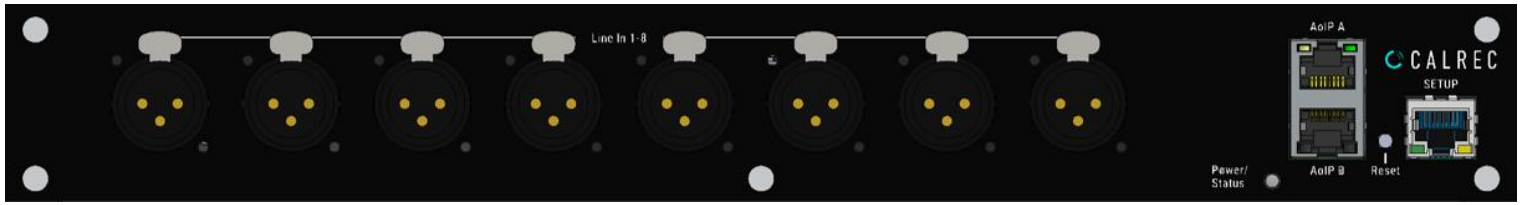
- 4 x Balanced analogue out
- 1 x Mic/Line input



Control surface Details – Mic/Line

- 8 Mic/Line inputs

No Internal I/O



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Control surface Details – Misc. Options

- Headphone Socket with level control Per section
- LS Panels
- USB sockets can be mounted under the front trim of any/all sections.
- Sliding Script-Tray
- Option without top meterbridge

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ARGO

Operational features

- FULL DSP always available on all channels and busses
- Key Inputs & Ducker
- Auto mixer on Stereo paths
- 6 x EQ, 2 x Dynamics, inserts, direct outputs
- Variable Slopes on Shelves & Filters
- 8 x automixers
- Control Links
- Immersive Spill
- VCA spill

CALREC

ARGO

Operational features

- Offline Editor
- Scroll within Spill
- Multiband Compressor
- User configurable colours for faders
- Flexible DSP order
- N-x (Studer style) Routing

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Integrated Calrec Assist

Calrec Assist Web-UI

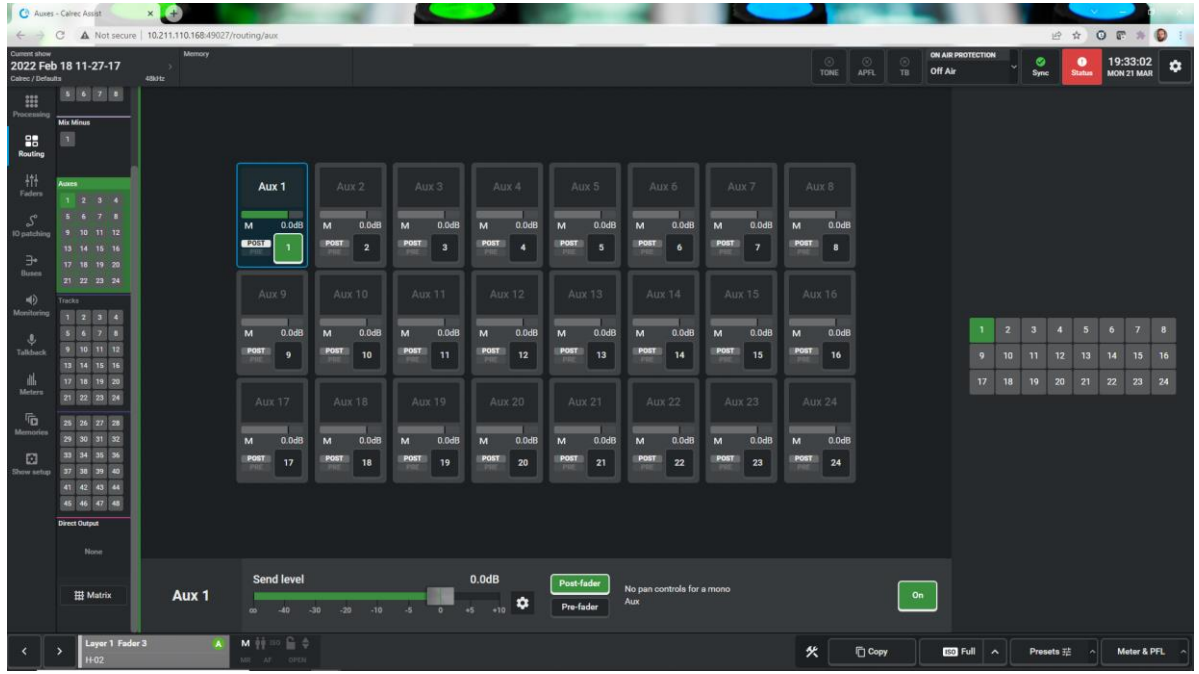
Launched At NAB 2022

Argo Surface Touch-UI

No console PC

Integrated Calrec Assist

Calrec Assist Web-UI



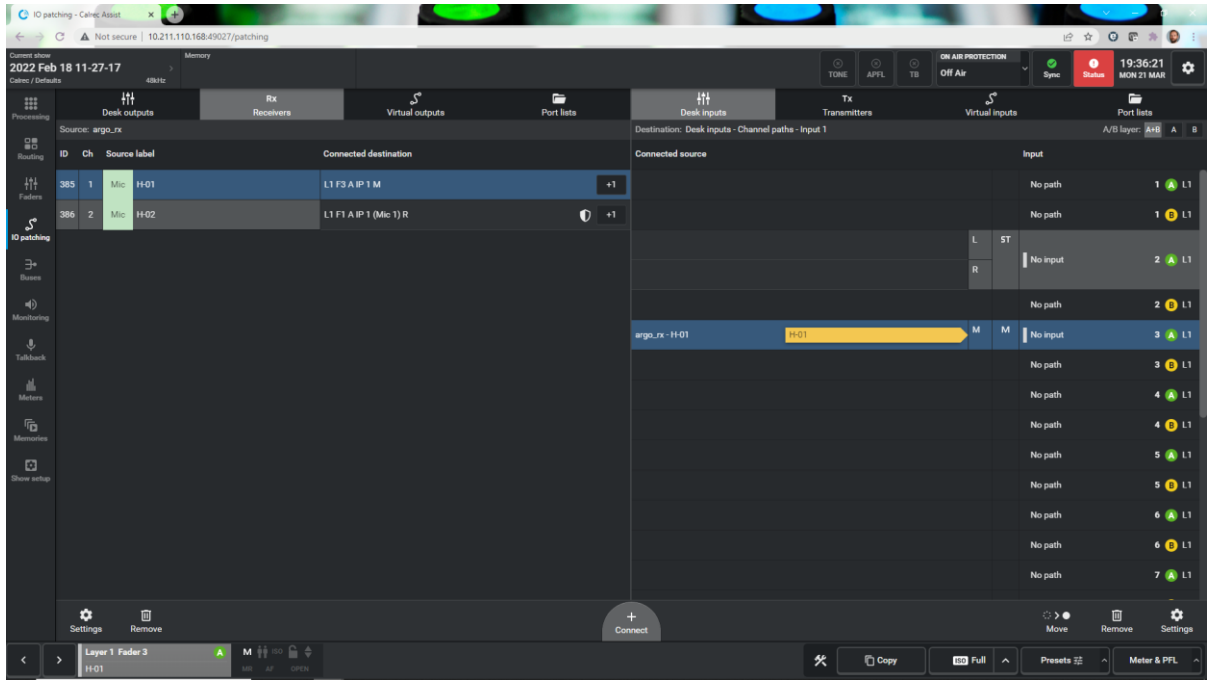
Launched At NAB 2022

Argo Surface Touch-UI

No console PC

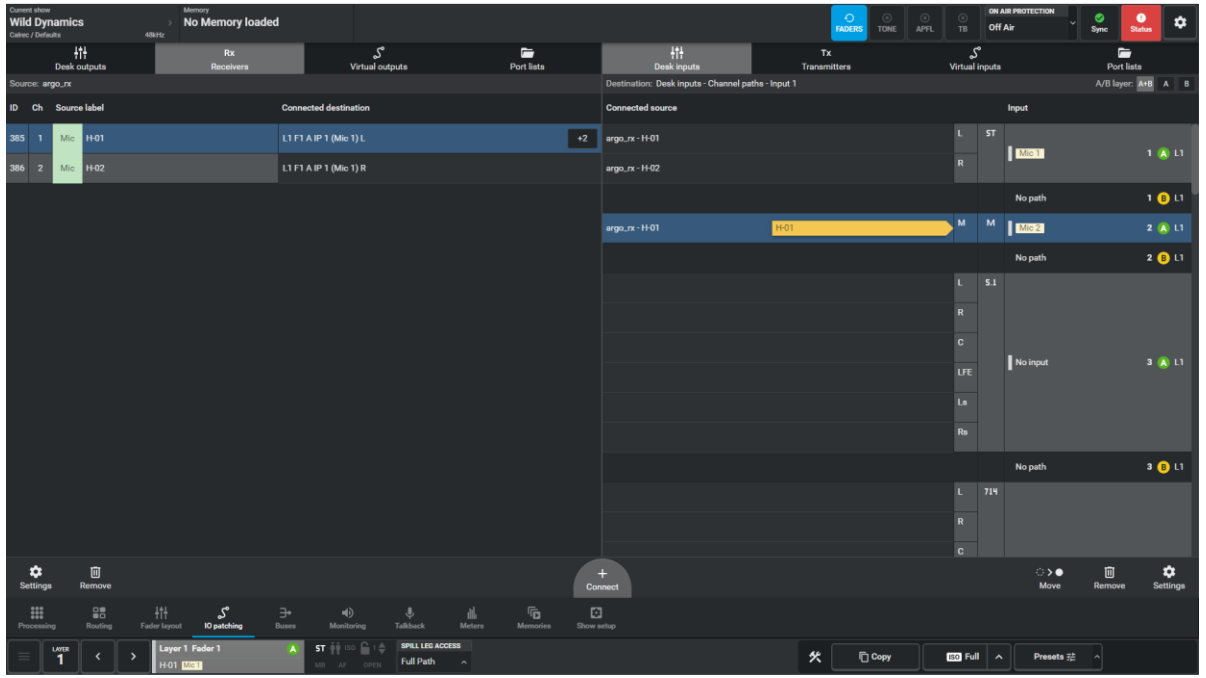
Integrated Calrec Assist

Calrec Assist Web-UI



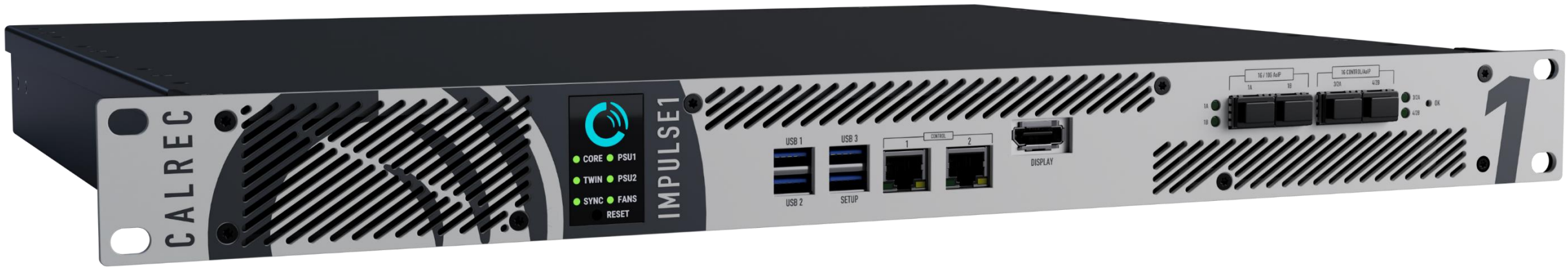
Launched At NAB 2022

Argo Surface Touch-UI



No console PC

Introducing IMPULSE1



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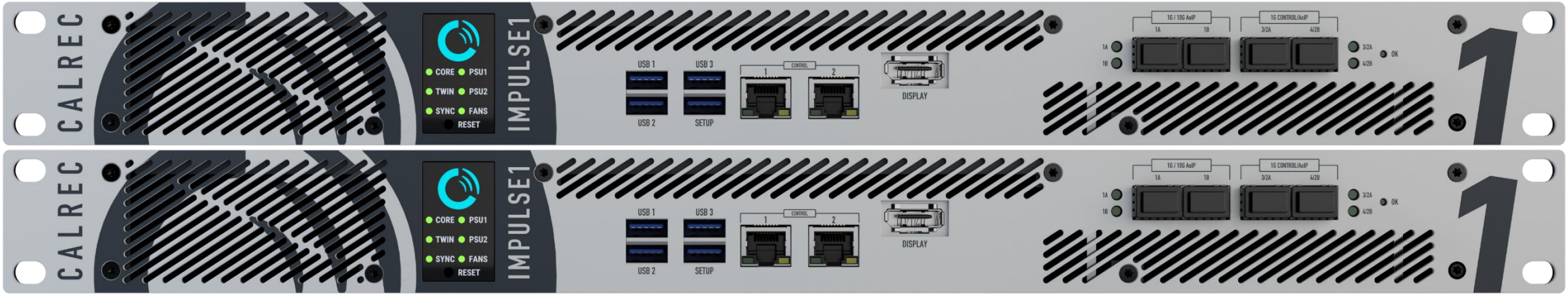
Introducing IMPULSE1



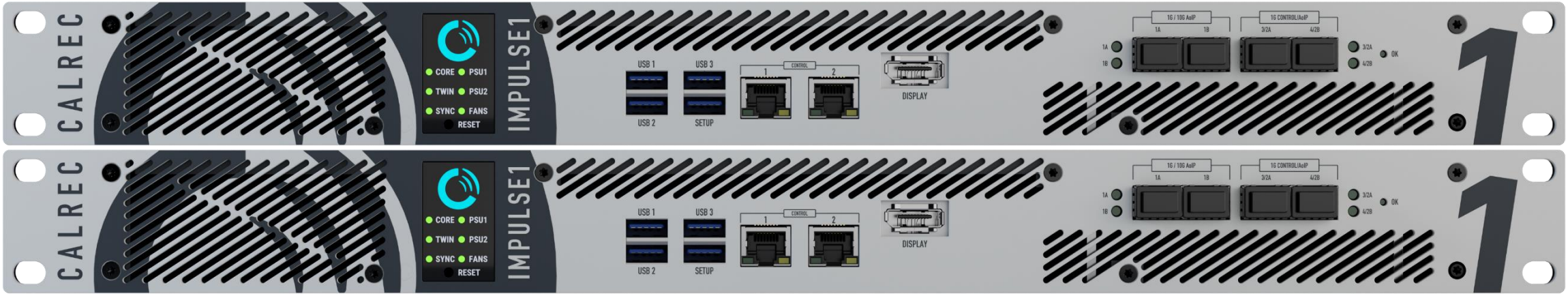
- Secondary core for failover redundancy

OR

- Optional non redundant single core available with 128 & 256 licenses

CALREC

Introducing IMPULSE1



- Designed for Argo S, Argo Q & Assist (headless) operation
- Fully self contained DSP core
- Offers native AES67 / ST2110-30
  - SMPTE ST2022-7 packet merging redundancy
  - NMOS IS-04 & IS-05
  - Dante compatible
- Powerful with Scalable DSP and Routing

CALREC

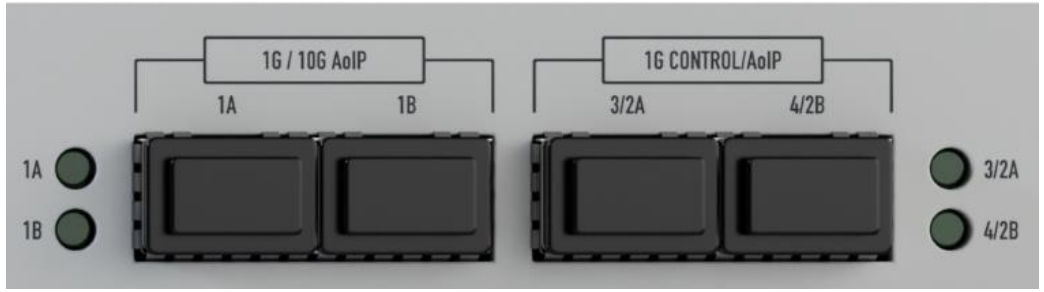
IMPULSE1 Licenses

Description	Chs	M/G	Auxes	Tracks	Total Paths
128 Mixer License	128	96	32	48	**304**
256 Mixer License	256	96	32	48	**432**
384 Mixer License	384	192	32	64	**672**

CALREC

IMPULSE1 IP capability

ST2110 AoIP connectivity is user selectable:

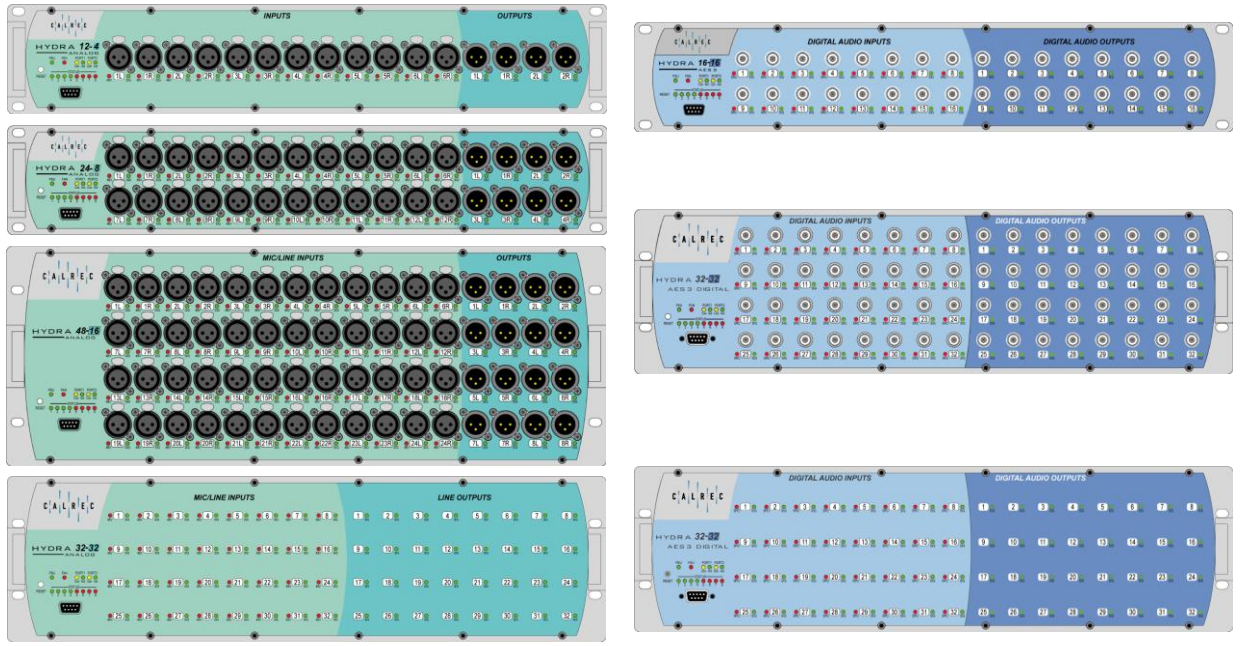


- One-pair of redundant 2022-7 A/B @ 10G
  - 512 streams (2048 channels max)
- Two-pair of redundant 2022-7 A/B @ 1G
  - 128 streams (1024 channels max)
- One-pair of redundant 2022-7 A/B @1G
  - 64 streams (512 channels max)

CALREC

AoIP Fixed Format I/O

- AoIP (AES67 / SMPTE2110)
- Existing stageboxes can be converted to IP
- 1 redundant pair of 1G SFPs



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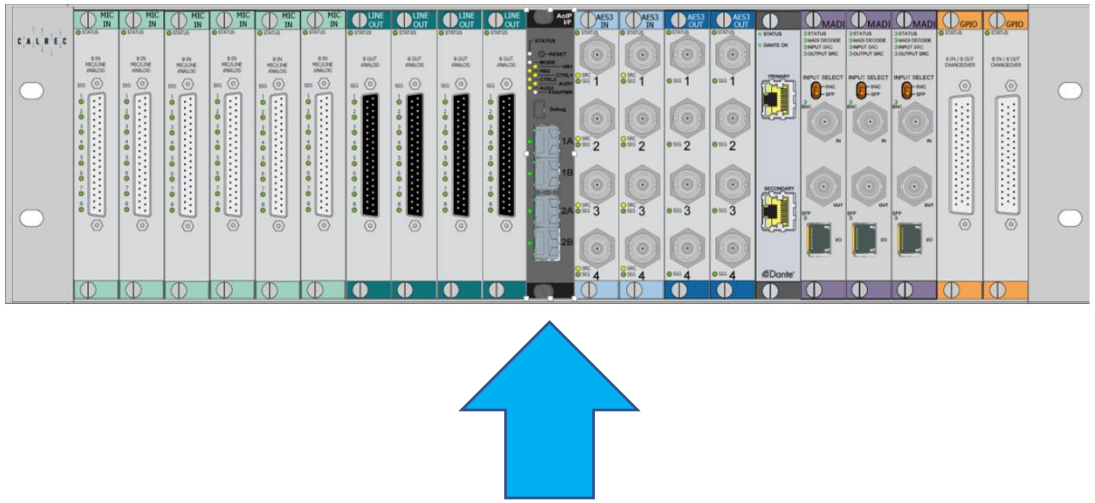
AoIP Modular I/O



AES67 / SMPTE2110

- Operates in either:
  - AoIP (AES67 / SMPTE2110)
  - *Switchable to Hydra2*
- Fits in existing Modular I/O units
- 2 redundant pairs of 1G SFPs
  - Allows 512 audio channels

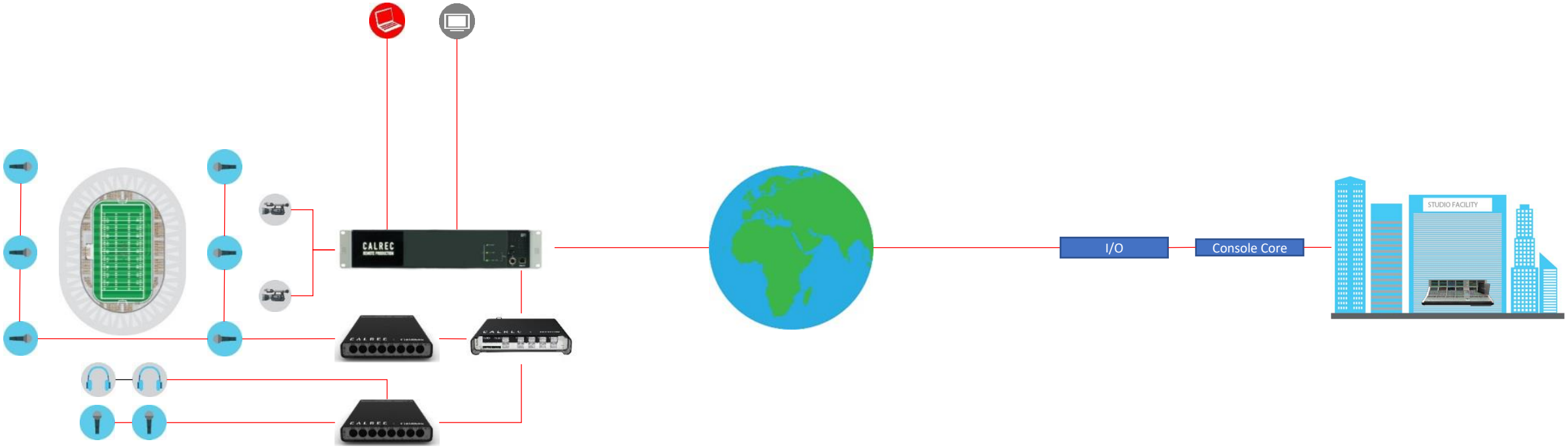
CALREC

RP1 - Remote Production Core

Simple, effective, zero latency, real-time monitoring

CALREC

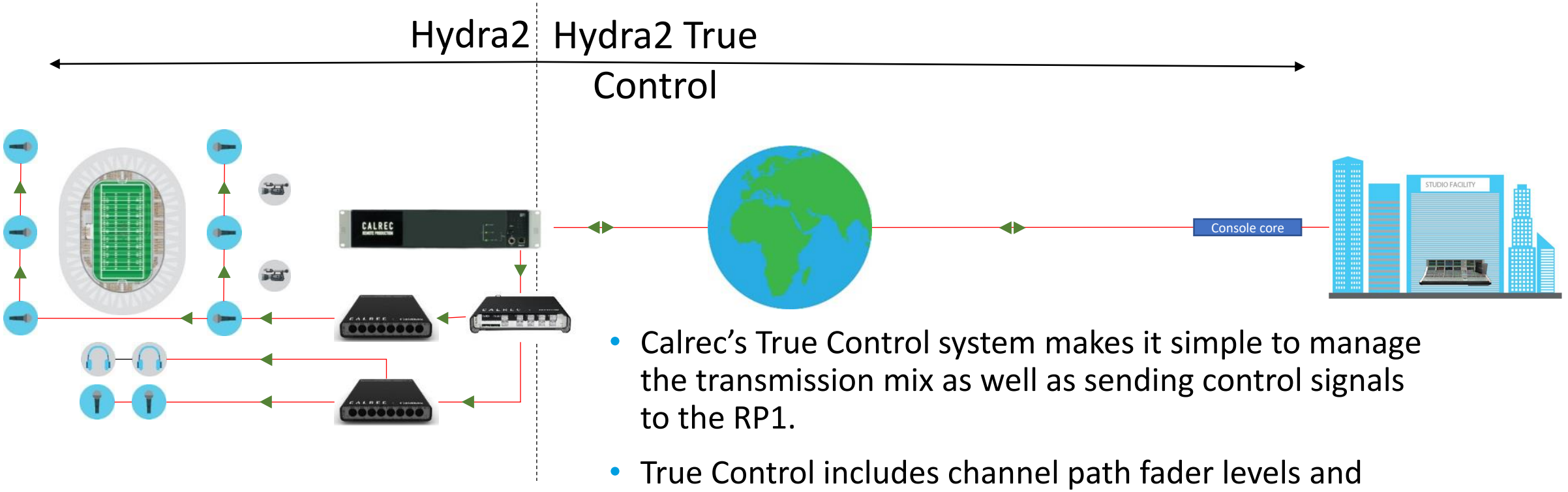
RP1 - Remote Production Core



- RP1 embeds audio into existing video transport mechanisms to ensure no synchronisation issues.
- Modular I/O backbone accepts any of Calrec's I/O cards so RP1 can connect via a range of transports.

CALREC

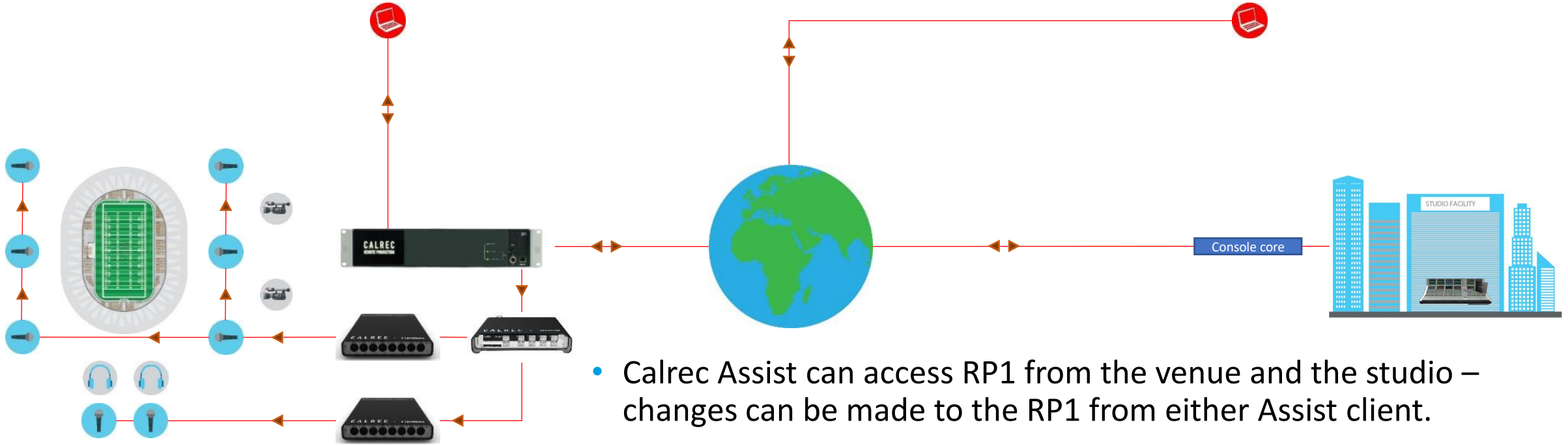
RP1 - Remote Production Core



- Calrec's True Control system makes it simple to manage the transmission mix as well as sending control signals to the RP1.
- True Control includes channel path fader levels and cuts, as well as aux send levels and cuts, and aux master levels and cuts. RP1 provides network ownership to multiple consoles, while protecting the integrity of the control signal.

- Hydra2/True Control data

RP1 - Remote Production Core

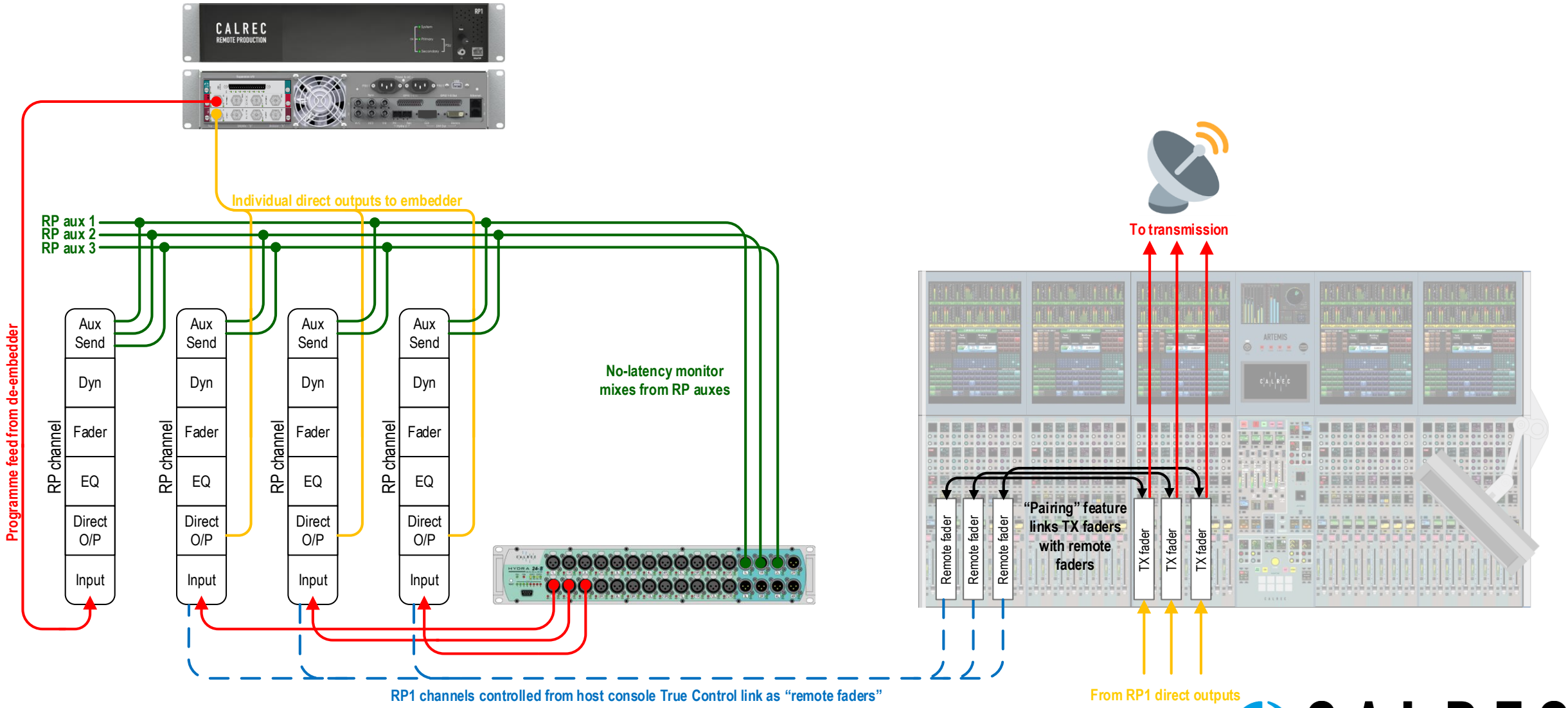


- Calrec Assist can access RP1 from the venue and the studio – changes can be made to the RP1 from either Assist client.
- Assist enables all venue infrastructure, routing and monitor feeds to be checked prior to establishing the link with the studio console, and can directly adjust RP1 input settings, such as gain and phantom power.

Remote Control data

CALREC

RP1 - Logical Connectivity



CALREC

ARGO

ImPulse DSP core

- All IP connectivity
  - Surfaces
  - Rear AoIP I/O
- Up to 4 Argos per Impulse core
- 2384 DSP paths on a single console
  - 2048 Channel processing paths
  - 336 Bus Processing paths

CALREC

ImPulse Core – Bluefin 3

- Bluefin 3 has increased Input Channel leg capacity
- Supports 3D “Immersive” software for “NGA” (Next Generation Audio).
- Mono, Stereo, 5.1 , 5.1.2 , 5.1.4 , 7.1 , 7.1.2, 7.1.4 paths
  - Input Channels
  - Groups (+ 0.0.4 Groups)
  - Main paths
  - Monitoring & Metering.
  - All path formats can coexist
    - Flexible downmix and surround panning between formats.
- Height & 3D pan controls are provided
- Includes additional Main & Group leg capacity

CALREC

ImPulse Core – Scaleable

Powerful and scalable DSP platform

- Licensable DSP allows for:
  - 256, 384, 512, 768, 1122, 1536, 1792, 2048 input channels
  - Total DSP: 432, 672, 800, 1056 or 1458 paths
  - Upgradable to larger pack sizes in the field
  - Up to 6216 total Full DSP input channels
- Upgrade path for current Apollo & Artemis customers

CALREC

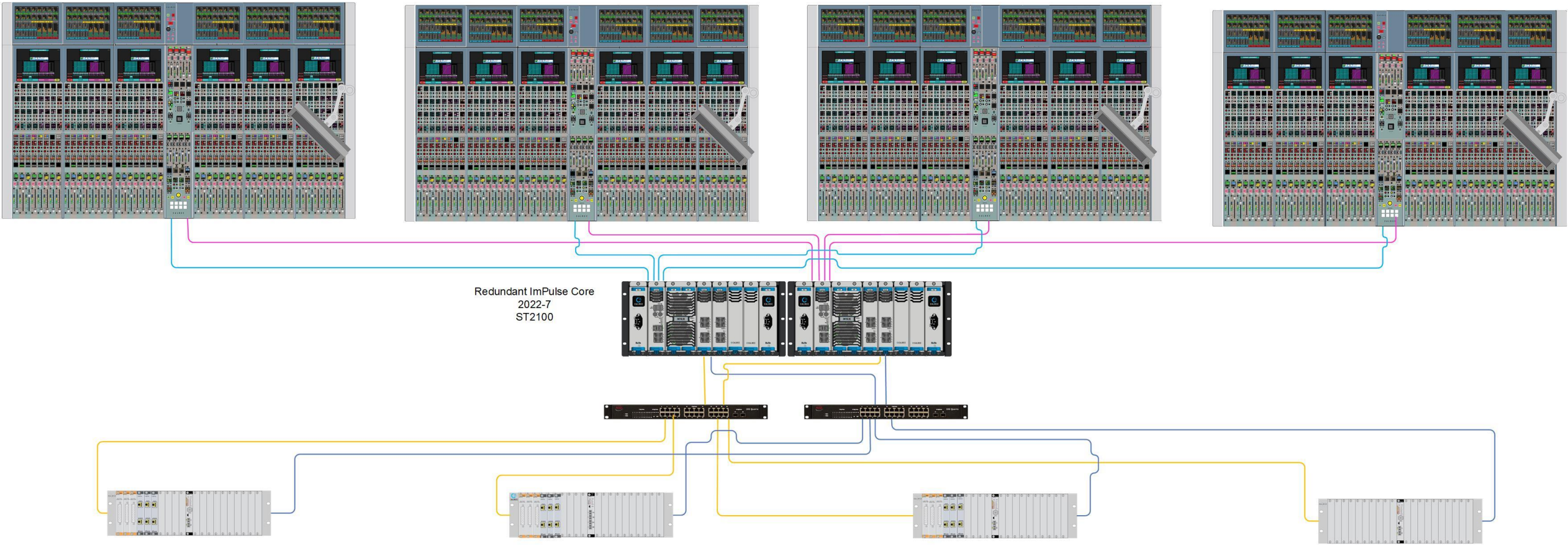
ImPulse Core – IP Headlines

- All audio I/O is AES67 & SMPTE ST-2110 compliant
  - Support for mDNS/Ravenna discovery
  - Support for NMOS discovery & connection management
  - Dante compatible

- Native AoIP Router
  - Up to 4 cards x *4096 x 4096* router cards
  - 4 x redundant pairs of SFPs per card
    - 1 x 10Gbps connection supports up to 512 AoIP streams in each direction
  - Each AoIP stream can pass 1 to 80 audio channels

CALREC

ImPulse Core – Effecient



4 x Existing consoles
ImPulse Core
Independent

ARGO

CALREC

ARGO

- Totally IP Native
- Modular design
- Completely new ground-up design
- Frequent new features
- Future proof
- 100% redundant
- Hot-swap hardware
- Surface sections completely independent
- Linux O/S – no PC
- Calrec platform for next 10 years
- AES 67/ ST2110 / Dante
- Waves Plugin support
- Remote Production
- Scaleable – small to very large

CALREC

ARGO

CALREC