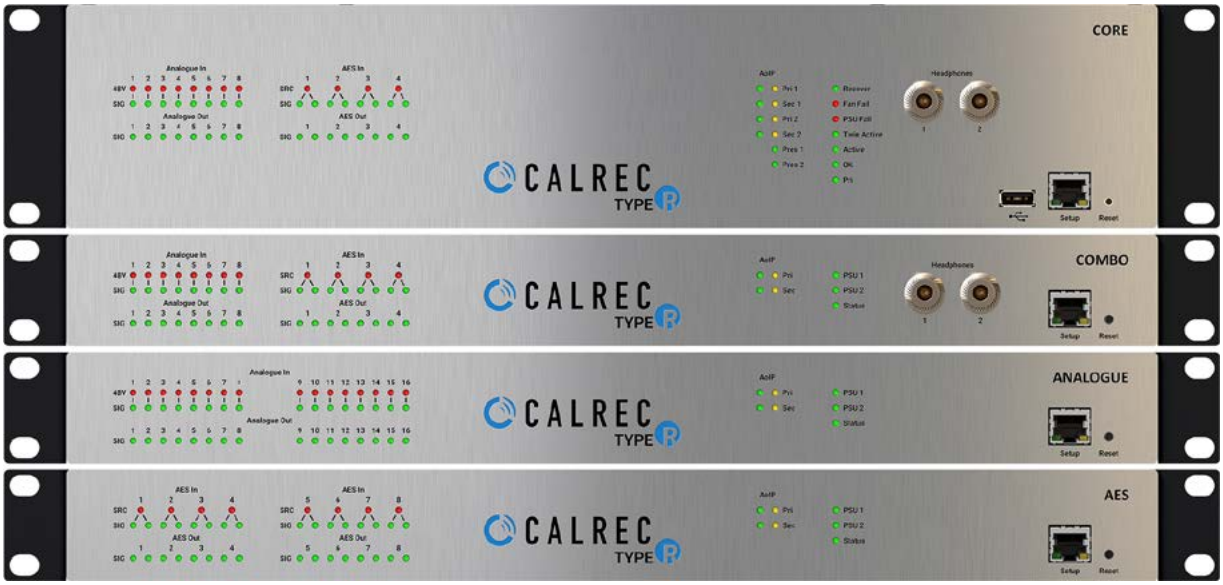
TYPE R START UP GUIDE

V2.1



Radio Production System

calrec.com

CALREC

Calrec Audio Ltd
Nutclough Mill
Hebden Bridge
West Yorkshire
England UK
HX7 8EZ

Tel: +44 (0)1422 842159
Fax: +44 (0)1422 845244
Email: enquiries@calrec.com

calrec.com

TYPE R
CONTENTS

TYPE R
START UP GUIDE

calrec.com

CALREC

GETTING STARTED

Thank you for choosing Calrec Type R.

This start up guide will provide you with all the steps you need to set up your Type R as a non-redundant, single studio system. For links to information about more advanced setups, as well as other manuals, please refer to the Further Reading section at the back of this start up guide, or contact Calrec Customer Support (support@calrec.com).

Before you begin, please make sure you have a PC with Google Chrome installed, running Windows 7 or higher, an ethernet adaptor plus an ethernet cable, and an internet connection to download any update packages you may require.

Note: If Google Chrome is not installed, go to https://www.google.com/chrome/ to download and install it.

Note: The minimum recommended Windows PC specifications are as follows:

- 7th Generation Intel® Core™ i5 7400 CPU Base Frequency 3.00GHz Processor or AMD equivalent
- 8GB RAM memory
- Windows 7 or 10 - 64bit
- Google Chrome Browser - Version 77 or higher
- 2 x PCIe Ethernet adaptors for remote connectivity/media network interfaces
- Minimum Display Resolution 1366px X 768px

* Type R is designed for use with a touch interface where possible. Calrec recommends the use of a 1920x1080 touch screen monitor.

Please also confirm that all the parts listed on your system's packing list are present, with the correct serial numbers. A print out of the packing list will have been provided alongside the shipping documentation. The packing list is a document named with your sales order number and appended with -11 (e.g. 51235-11).
If any parts are missing, or there is any sign of damage, please contact Calrec Customer Support.

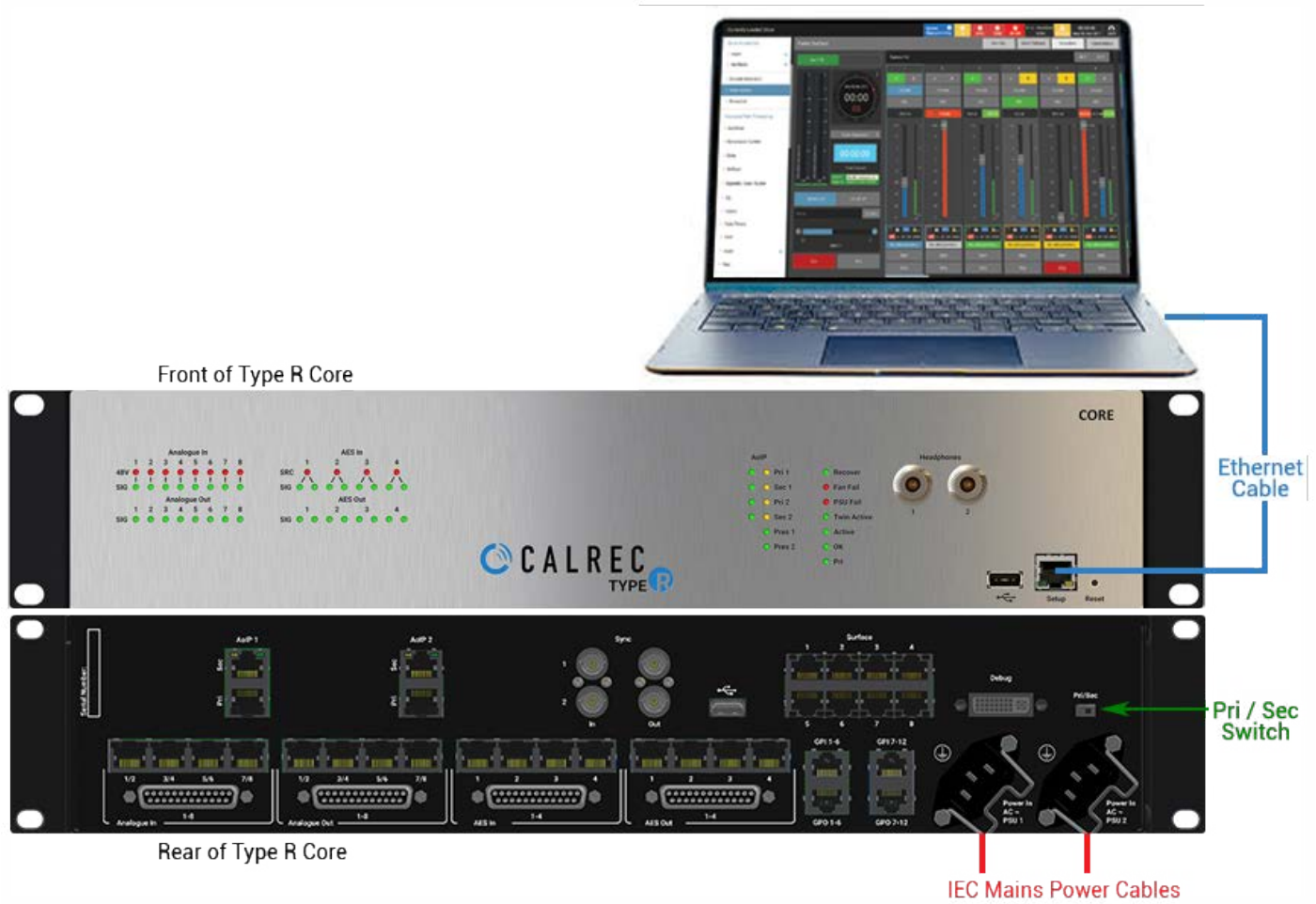
Important: Please follow this guide from start to finish to ensure that your system is configured correctly! Use the checklist if you wish to confirm each step.

CHECKLIST

- [ ] **1. Power up the Core and connect a PC**
- [ ] **2. Access the basic Core configuration**
- [ ] **3. Install a Software Upgrade Licence key (Optional, requires UID and Serial Number)**
- [ ] **4. Configure the Core for Surface Panels**
- [ ] **5. Configure Network Switches & Devices**
- [ ] **6. Configure Surface panels ID, IP addresses & Subnet masks**
- [ ] **7. Connect Surface Switch & Surface Panels to the Core**
- [ ] **8. Access Assist setup and create a new show**
- [ ] **9. Connect to Assist from the Studio or Management subnets**
- [ ] **10. Uploading control layouts to the soft panels**
- [ ] **11. Creating layouts with Type R Soft Panel Designer**
- [ ] **12 Update System Software & AoIP Devices Firmware**
- [ ] **13. Configure AoIP Port & Connect server IP addresses**
- [ ] **14. Connect Audio Switch & AoIP Ports to the Core**
- [ ] **Perform System Tests - Ready for use**

1. POWER UP THE CORE AND CONNECT A PC

POWER CONNECTION TO CORE AND PC CONNECTION TO CORE SETUP PORT



1. Carefully remove the core and cable from their packaging. If there are any signs of damage, please contact Calrec Customer Support and do not continue.

2. Confirm that the Pri / Sec switch on the rear of the core is set in the **Pri** position (switched to the left).

3. Connect the power cable to both PSU inlets on the rear of the core and power it on. The core will boot up with the PRI LED lit and after approximately 30 seconds the **OK** LED will light solid green to indicate a good status. The **Recover Led** should be lit Green or not lit, **Fan Fail** & **PSU Fail** LEDs should not be lit.

4. Configure the Ethernet adapter in your PC with IP address **172.16.255.99** and subnet mask **255.255.255.0**
   Note: Please refer to your PC's operating instructions, if you are unsure how to configure its ethernet adapter.

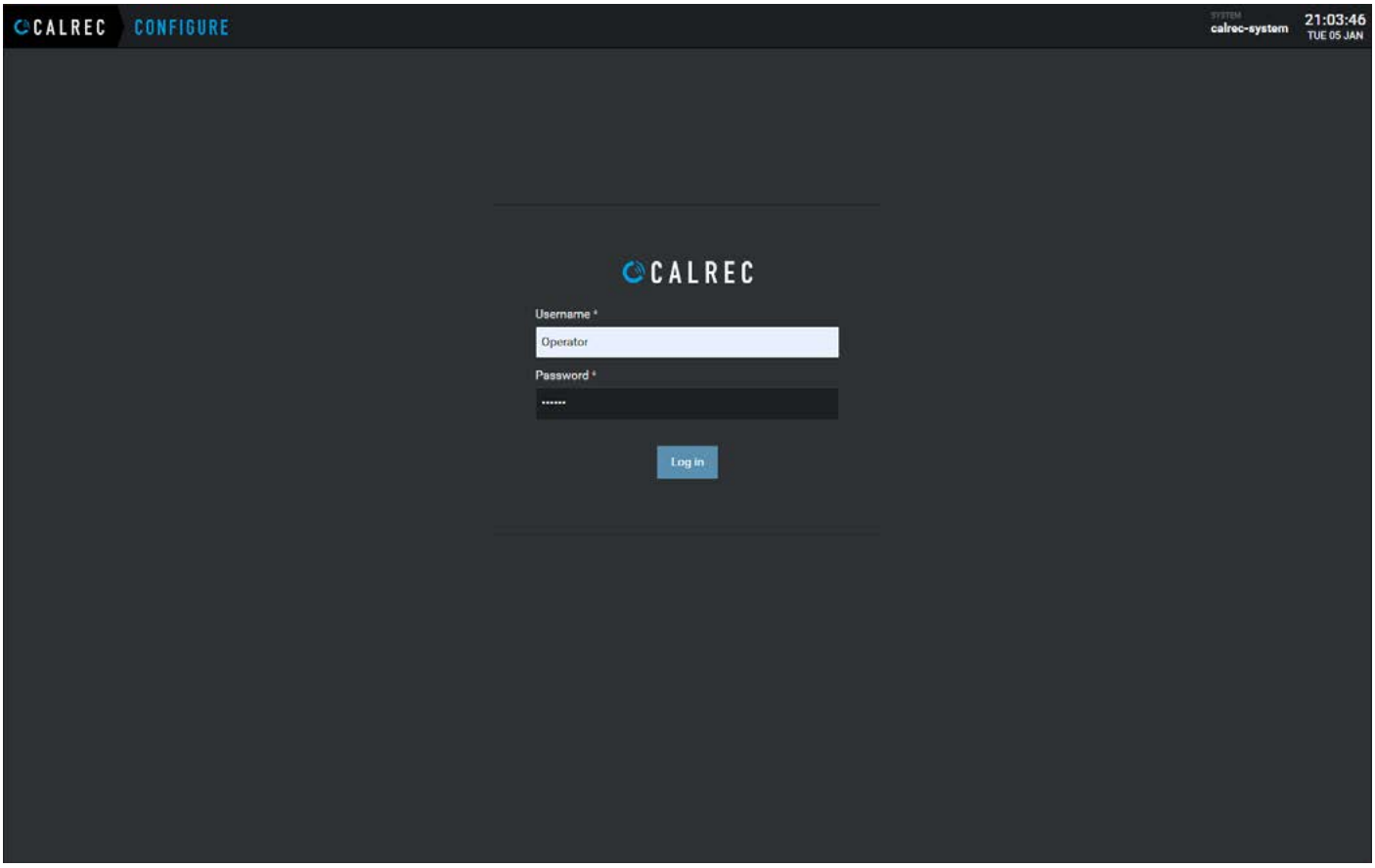
5. Connect the ethernet adapter to the **Setup** port on the front of your Type R core.

2. ACCESS THE BASIC CORE CONFIGURATION

Calrec Configure Login Instructions

From version 1.4 of the Impulse applications and version 2.0 of the Type R applications, security passwords have been put in place, there are currently two fixed Roles/Accounts available, the normal Operator account and an Engineer account which provides technician access to extra configuration functionality. For the Operator account, the Username should be entered as **'Operator'** with the Password **'calrec'**. Note: both the Username and Password are case sensitive.

CORE CONFIGURE LOGIN PAGE



1. To Log in to Configure, open your Web browser e.g. Chrome and browse to the address of the LAN port you are connected to e.g the Setup port on the core of the unit which by default is **172.16.255.19** this will open up the Configure Login page shown above.

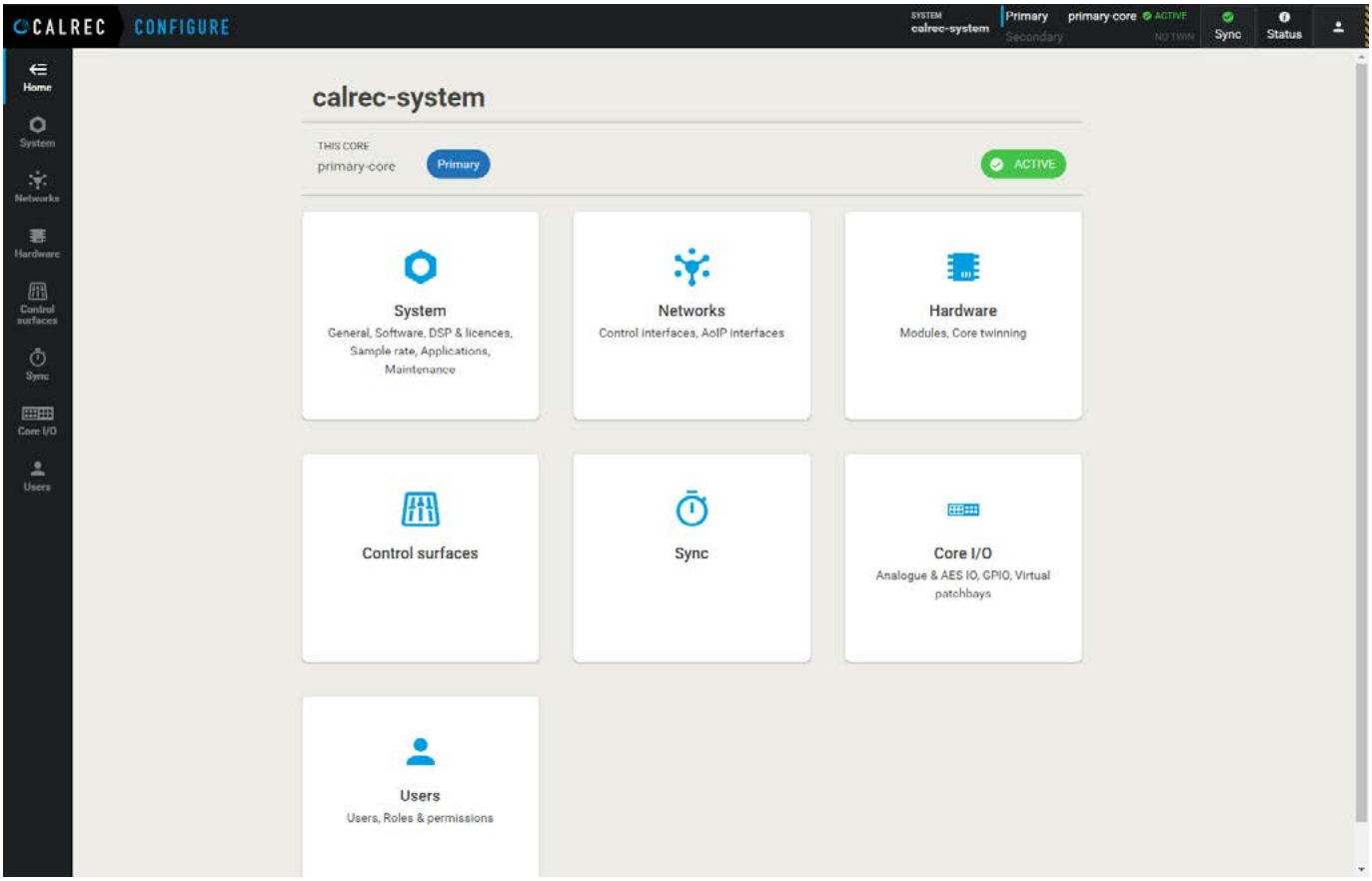
2. In order to access the Configure Application, the user will need to enter the Username and Password, the user then taps on the 'Log in' button and the Configure application then accesses the **Home** menu as shown at the top of the next page

3. Click on **System.** The System>General Configuration page will be displayed, as shown at the bottom of the next page.

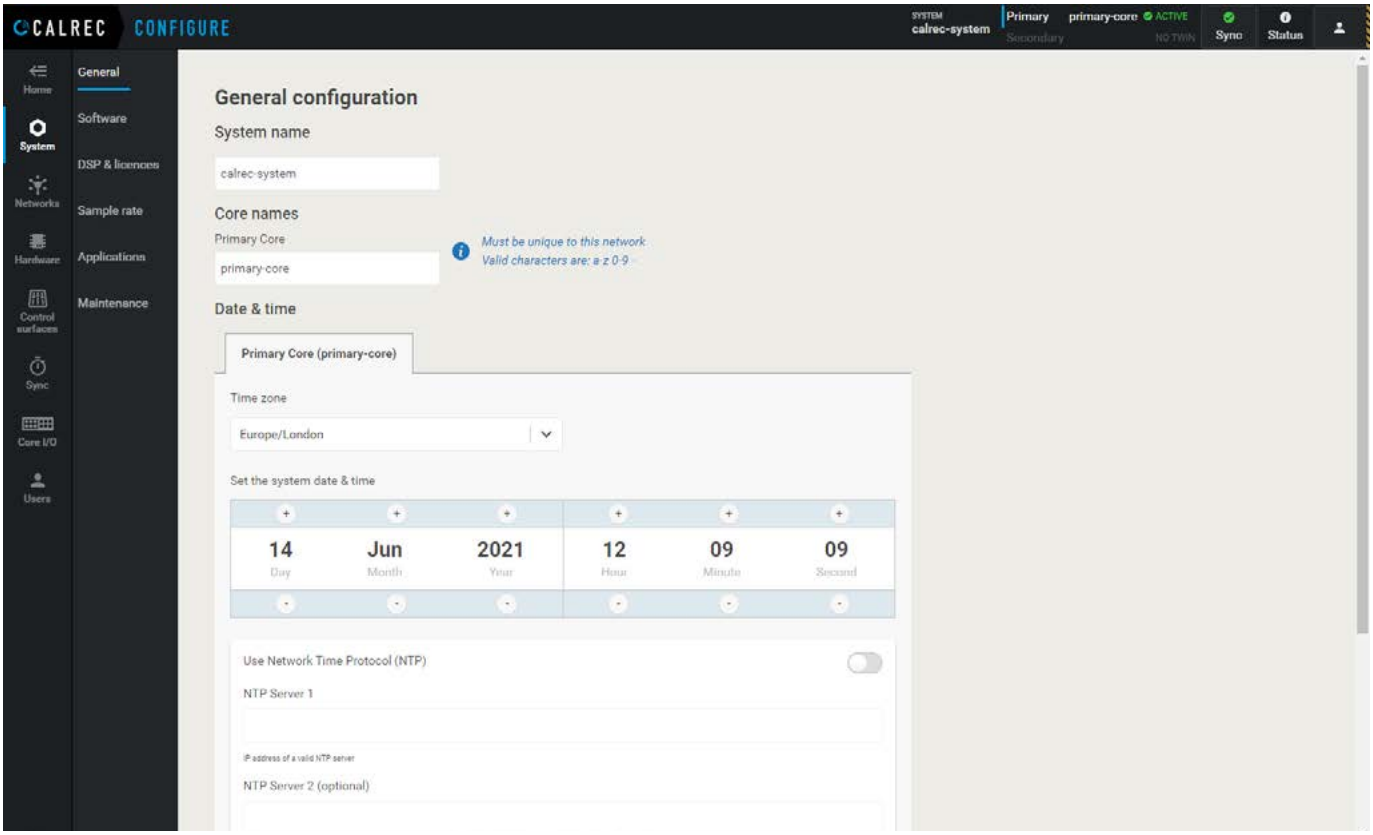
4. Set the system date & time.

5. You may also set new System and Core names here. These names will be used by the system to identify and announce cores, as well as in system status messages, so it is important for all the cores you own to be given unique names.

CORE CONFIGURE LANDING PAGE



CORE CONFIGURE GENERAL CONFIGURATION PAGE



3. INSTALL A SOFTWARE UPGRADE LICENCE KEY (OPTIONAL)

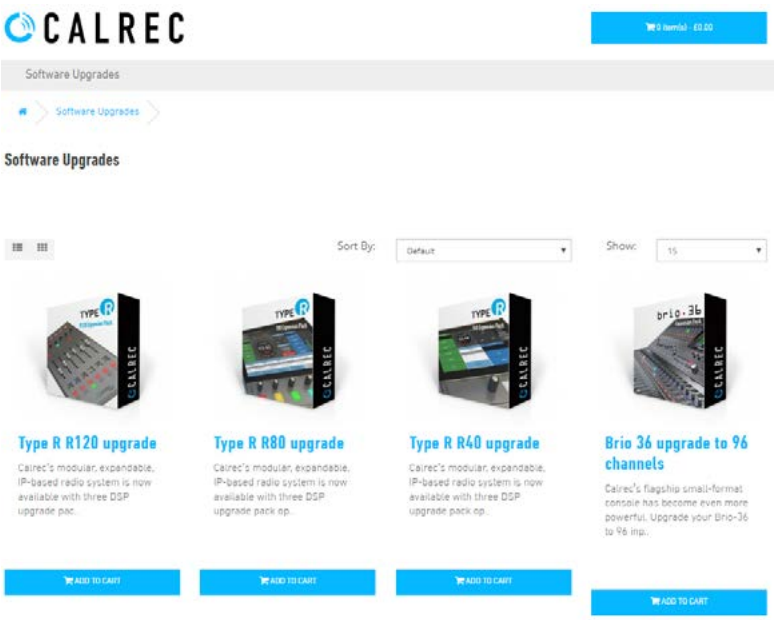
All Type R cores support a single 20 channel mixer as standard.

However, the quantity of DSP channels and mixers* available in a single Type R core can be upgraded with optional Software Upgrade Licences.

If you are interested in Software Upgrade Licences, go to https://shop.calrec.com/ to view the upgrade options and to download a licence key for your core.

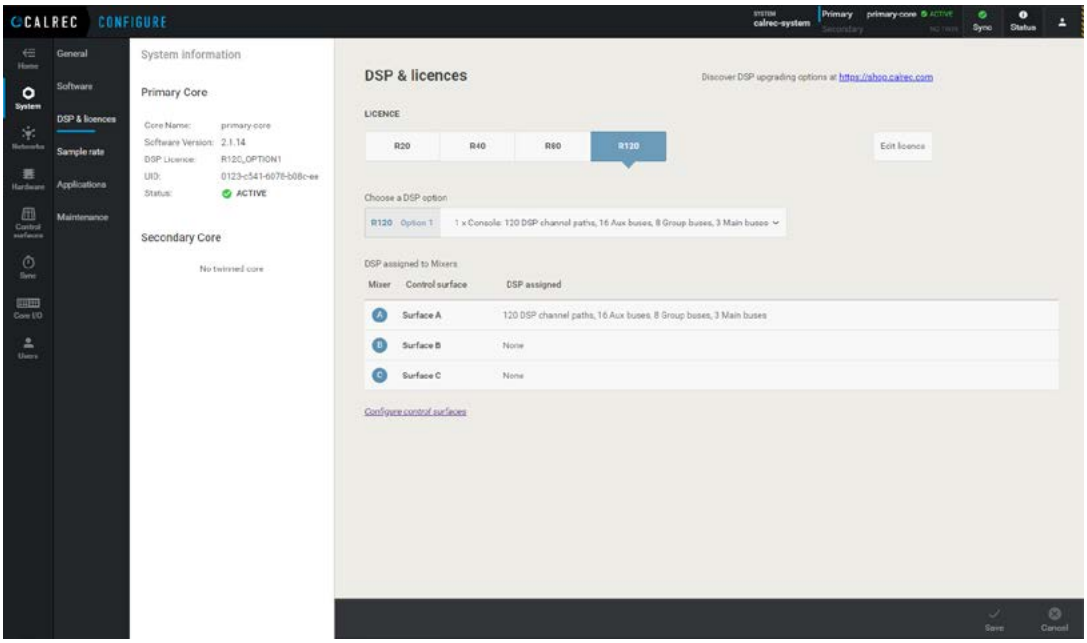
If a Software Upgrade Licence was purchased with the original order, details will have been sent to the primary customer contact(s).

CALREC ONLINE SHOP - SOFTWARE UPGRADE LICENCE PAGE



1. To install a licence key, open the **Core Configure** application and navigate to **System>DSP & Licences.**
2. Click **Edit Licence** to open the **Add new licence keys** dialogue.
3. For each core, click **Add key** and browse for the corresponding licence file on your system to open.
4. Once all the required licences have been added, click **Save** to dismiss the dialogue.
5. Click **Apply** in the footer and select **Restart Now** in the pop-up dialogue.
   Changes will take effect after the core reboots.

CORE CONFIGURE DSP & LICENCES PAGE



* Additional mixers available in a later version

4. CONFIGURE THE CORE FOR SURFACE PANELS

1. In **Core Configure**, navigate to the **Control Surfaces** page. See above right.

2. Select **Mixer A – Surface A**.
   The surface may now be renamed using the text entry field at the top of the screen.

3. To add a fader panel select **Add fader panel**. This will open the **Add fader panel** dialogue. See middle right.

4. Set the type to **Fader panel**.
   Note: If you do not have a fader panel, select **Virtual panel**.

5. Set the **Panel ID** to match the switches on the rear of the panel.
   Tip: Use the Panel ID switch tool in the UI to match the switches on the rear of the panel. Also see "**Surface Panels - Suggested Settings" on page 27** for recommended Panel ID's.

6. Set the fader range to **1 – 6** then click **Add.**

7. Continue to add fader panels in the same way, with unique panel IDs and fader range values, until all required fader panels are added to the surface layout.

8. To add a Soft Panel select **Add ancillary panel**. This will open the **Add ancillary panel** dialogue. See below right.
   Note: Where there are multiple fader panels, multiple **Add ancillary panel** buttons will be available. This is to allow you to position the panel in the surface layout in a way that roughly matches your intended surface setup and will also facilitate the creation of user sections later. The position chosen does not determine the functionality available to the soft panel.
   Up to 8 soft panels may be added per fader section, up to a maximum of 26 soft panels per core system.

9. Select the type of panel, **LSP** or **SSP.**

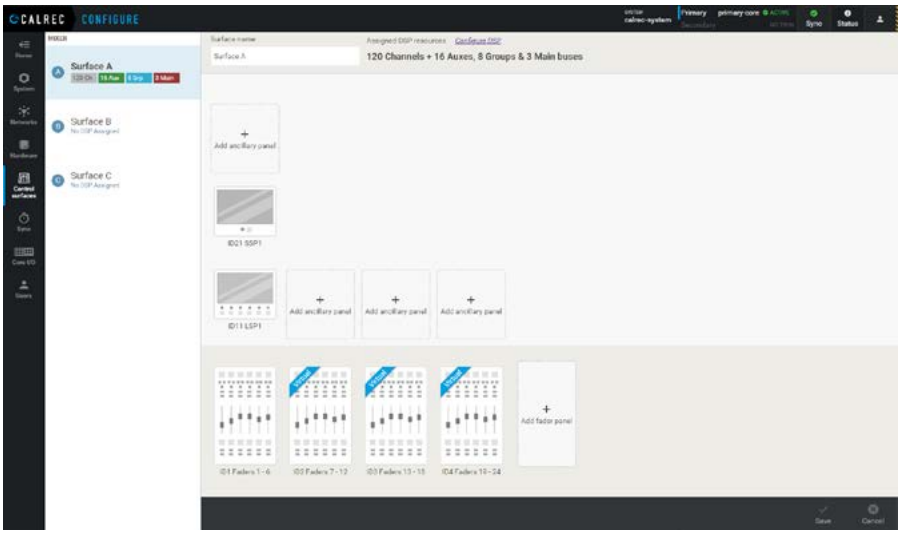
10. Set the **Panel ID** to match the switches on the rear of the panel.
    Tip: Use the Panel ID switch tool in the UI to match the switches on the rear of the panel.

11. Give the panel a label (e.g. LSP 1, SSP 1, Guest 1), then click **Add Panel**.

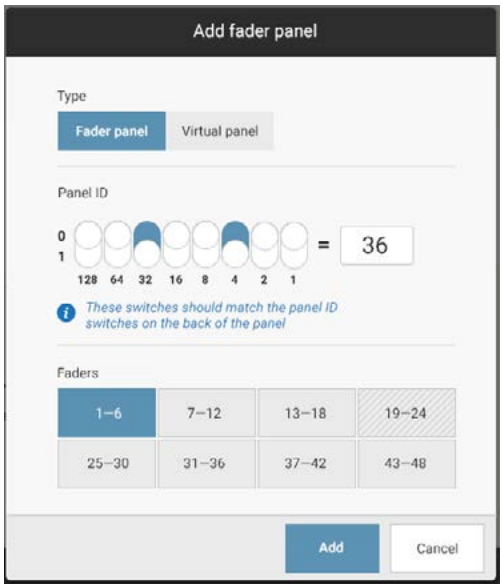
12. When all surface panels are added to the layout, click **Save** in the footer of the control surfaces page.

13. Restart the core from the reset button on the front of the core for the changes to take effect.

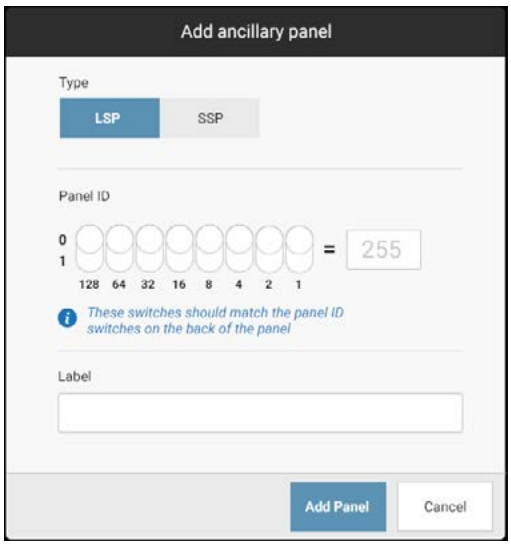
CORE CONFIGURE CONTROL SURFACES PAGE



ADD FADER PANEL DIALOGUE PAGE



ADD ANCILLARY PANEL DIALOGUE PAGE



5. CONFIGURE NETWORK SWITCHES & DEVICES

Calrec currently recommends and provides the following network switches & devices:

- 491-268: Sonifex AVN-GMCS Grand Master clock. (used for AoIP Synchronisation).
- 491-265: Cisco SG350-10MP 10 port PoE+ switch. (used for Control Panel Interfacing).
- 491-267: Cisco SG350-10 10 port Non PoE switch (used for multi-studio distribution).
- 491-270: Artel 1G Quarra PTP Switch. (used for AoIP interfacing with the Core).
- 491-269: Trendnet TPE-115GI - Gigabit PoE+ Injector.(used to add PoE to an ethernet connection).

If your system was provided with any of these devices, carefully remove each device from its packaging now. If there are any signs of damage, please contact Calrec Customer Support and do not continue to use the damaged parts.

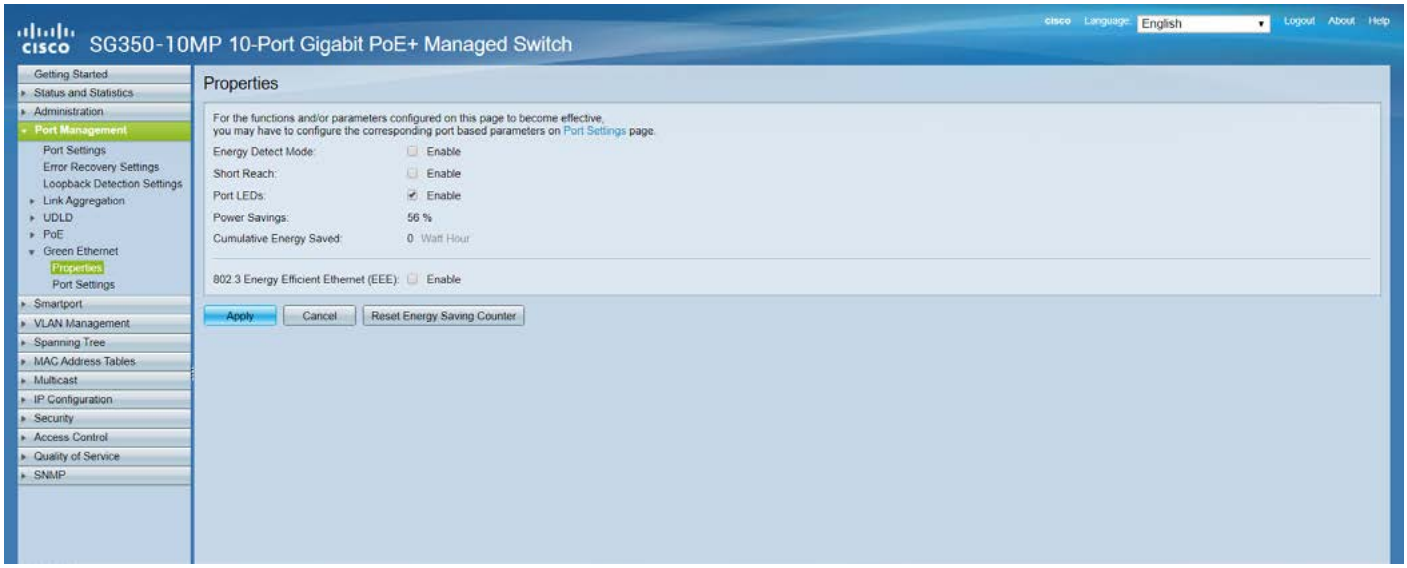
Important: Some of the above devices may require pre-configuration before installation. Please refer to the guidance for each switch device, you have purchased, which is available on the Calrec FTP site at http://ftp.calrec.com, access the information in the Type R area of the site using Account: **TypeR** & Password: **tYoarEdQ** before you continue.

Cisco Switch Management Settings for Physical Surface Panels

The Cisco SG350 switch used for Surface Panel Interfacing, needs to have its Energy Detect Mode, Short Reach and 802.3 Energy Efficient Ethernet Properties disabled, this is carried out in the **Port Management>Green Ethernet>Properties** page of the switch.

The Cisco switch's default IP address is **192.168.1.254** typing this into the address bar of the browser takes the user to the Log in screen. The default Username is "**cisco**" and the default password is "**cisco**" clicking on the 'Log in' button gives access to the switch's administration page as shown below:-

CISCO SWITCH GREEN ETHERNET PROPERTIES PAGE



Deselect the Energy Detect Mode, Short Reach and 802.3 Energy Efficient Ethernet tick boxes on the **Properties** page of the switch as shown, and apply the changes.

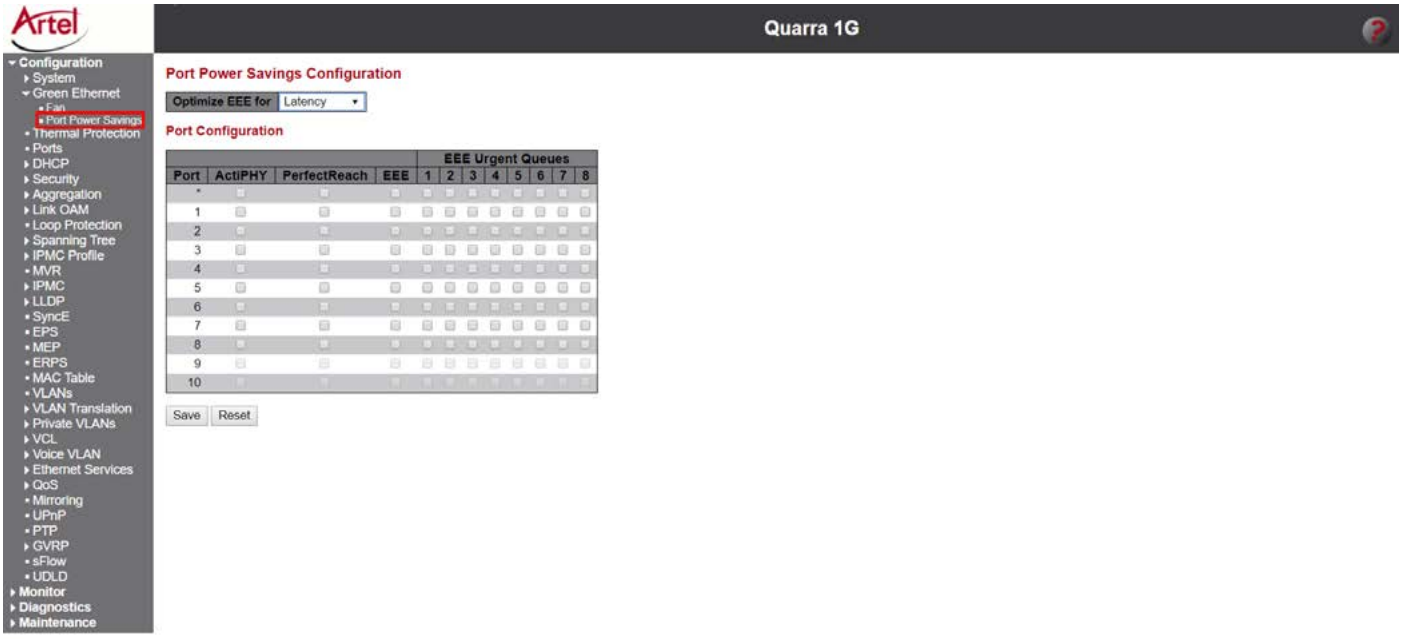
Cisco Port Discovery for Physical Surface Panels

The Cisco switch used for connection to the Surface Panels does not require explicit port configuration as it discovers the panels via ARP (Address resolution Protocol) and all the ports exist in the same Studio A address & subnet area i.e. 172.17/16.

Artel Switch Management Settings for AoIP / AES67 Networks
The Artel switch is used for AoIP/AES67 Interfacing and needs to have its Port Power Savings Configuration Properties disabled, this is carried out in the **Configuration>Green Ethernet>Port Power Savings** page of the switch.

The Artel switch's default IP address is **192.168.100.100** typing this into the address bar of the browser accesses the Log in screen. The default Username is "**admin**" and there is no default Password, clicking on the 'Sign in' button gives access to the switch's configuration pages. A new Artel switch has its power saving feature disabled by default but it's worth checking, to ensure this is the case, if it isn't then proceed as shown below:-

ARTEL QUARRA SWITCH GREEN ETHERNET PROPERTIES PAGE



Deselect all the tick boxes as shown above on the **Port Power Savings** page of the switch and click on 'Save' to apply the changes. Then go to **Maintenance > Configuration > Save start-up-config** and click **Save Configuration**. This will save the currently running settings that you have just configured as the switch's startup configuration so that it loads whenever it is turned on or rebooted.

Cisco and Artel Switch and Network Configuration for AoIP / AES67 Networks
Below are shown some useful links for AoIP / AES67 network configuration, if using a Cisco SG350 switch for AoIP (which are only recommended for very small systems) then please refer to the Cisco Auto Configuration guides or Cisco Manual Configuration guides./

For larger PTP based audio networking using Artel Quarra switches please refer to the Artel links below:

Artel Quarra PTP switch range
https://www.artel.com/media-transport-products/?swoof=1&product_cat=quarra

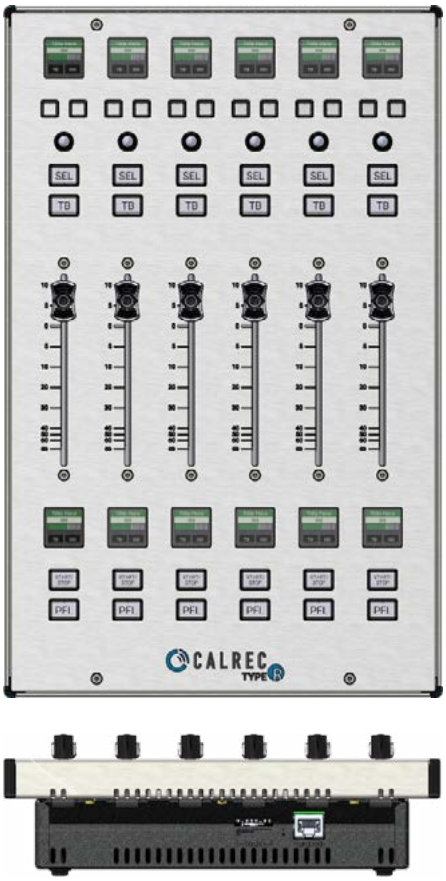
Artel Quarra Configuration Guide for AES67
https://www.artel.com/wp-content/uploads/2019/01/Quarra-Configuration-Guide-for-AES67-TC-and-BC-v20-6-24.pdf

* In order to simplify configuration, a text based example configuration file can be uploaded for both the Cisco and Artel Quarra Switches for use with AoIP/AES67 Network devices. These can be found on the Calrec FTP site at http://ftp.calrec.com as described earlier and access the information in the Type R area of the site using Account: **TypeR** & Password: **tYoarEdQ**

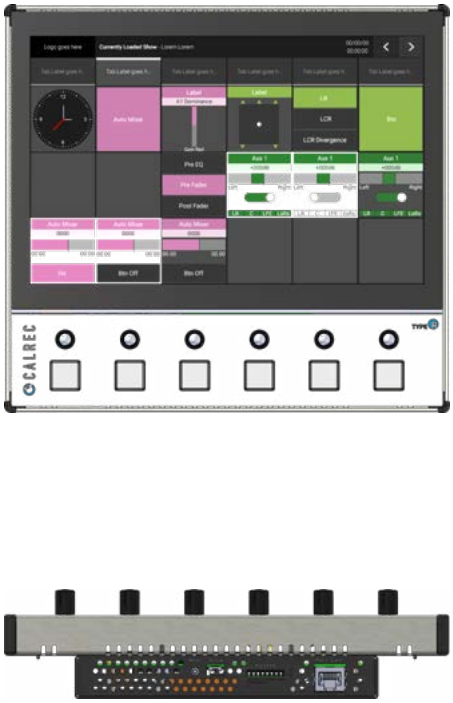
The configuration files both allow the switch to operate in the 192.168.30/24 for Primary AoIP port and 192.168.31/24 Secondary AoIP port address ranges and can be adapted as required.

6. CONFIGURE SURFACE PANELS ID, IP ADDRESSES & SUBNET MASKS

IM6413 TYPE R - 6 WIDE FADER PANEL TOP & REAR VIEWS



MU6411 TYPE R - LARGE SOFT PANEL TOP & REAR VIEWS



MU6410 TYPE R - SMALL SOFT PANEL TOP & REAR VIEWS

1. Carefully remove the surface panels and cables from their packaging. If there are any signs of damage, please contact Calrec Customer Support and do not continue to use the damaged parts.

2. If panel stands or brackets were purchased, you may want to fit these to your panels now.
   - Please refer to the Type R Installation manual for more information on stand and bracket assembly.

3. Set each panel ID using the switches on the rear of the panel.
   - The 8-way DIP switch is set as an 8-bit binary representation of the ID value. Each switch is labelled with a value on the panel metalwork. Positioning a switch in the on (1) position enables this value. The values of all enabled switches are summed to create an ID between 1 and 255.
   - Each panel requires a unique ID. Please refer to **"Surface Panels - Suggested Settings" on page 27**

4. Using the cables supplied, connect each panel to a POE+ switch or POE injector to power it on.

5. Panels set with factory default settings should boot into config mode automatically. To enter config mode manually, follow the instructions below:
   - *Fader panels:* hold down the first 3 buttons on the bottom button row before powering during panel boot up.
   - *LSP:* hold down the first 3 buttons once the Calrec logo appears during panel boot up
   - *SSP:* hold down the large button and encoder once the Calrec logo appears during panel boot up.

6. When the panels have entered config mode, set each panel's IP address and subnet mask following the instructions below:
   - Fader panels: Press option **8** "Set IP Addr" and use the rotary controls to enter each value, then press any **Save** button.
   - Soft panels: Press **Edit** next to the IP address then enter a new value using the on-screen keyboard. Note that the subnet mask on soft panels is not currently editable and is defaulted to the suggested setting (255.255.0.0, or /16 in CIDR notation).

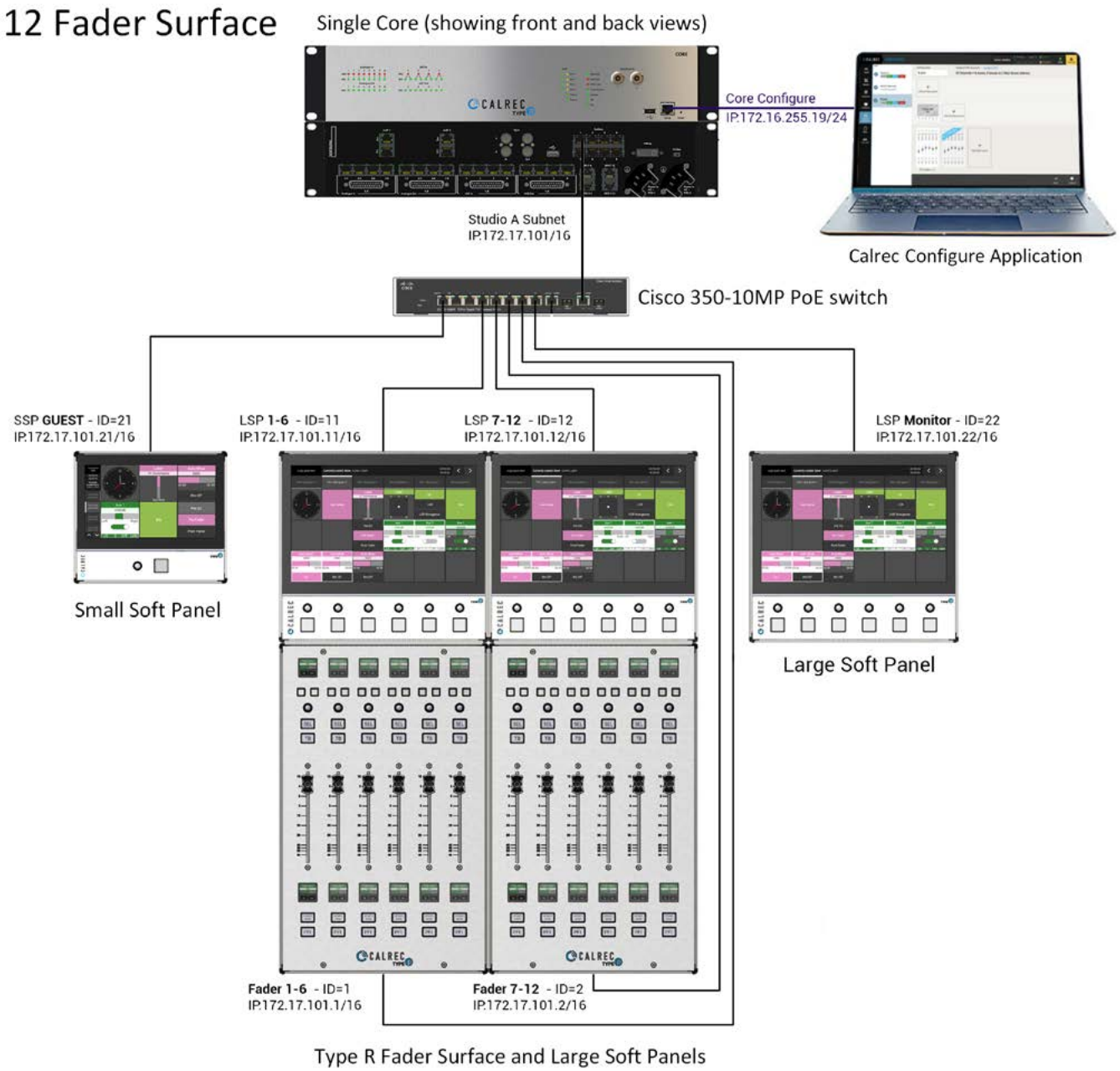
7. Press Reboot to accept changes and on completion disconnect each panel.

7. CONNECT SURFACE SWITCH & SURFACE PANELS TO THE CORE

1. To establish communication between the surface panels and the core, connect the network switch to network interface connections **1** and / or **2** on the rear of the core (marked "Surface"), then connect the surface panels / POE injectors to the network switches one by one to power them up into "Configuration Mode". *Note:* If two switches are in use, you may connect the first to interface #1 and the second to interface #2. Once setup the Core should be rebooted via the Reset button on the front of the core.

2. If the Core has been configured with a surface layout that matches the connected panels, the panels will be discovered by the core. If the panels are running a different software version to the core they will automatically update. Once all updates are completed the panels will boot into"Normal Operating Mode".
   Soft panels will display the message "**This panel has no layout associated with this show**" and
   Fader panels will show blank controls with "**No Path**" on each of the lower displays. If any of the panels are displaying connection errors or "Looking for core" double check the ID matches the surface layout and the IP address is unique.

SURFACE PANEL CONFIGURATION EXAMPLE

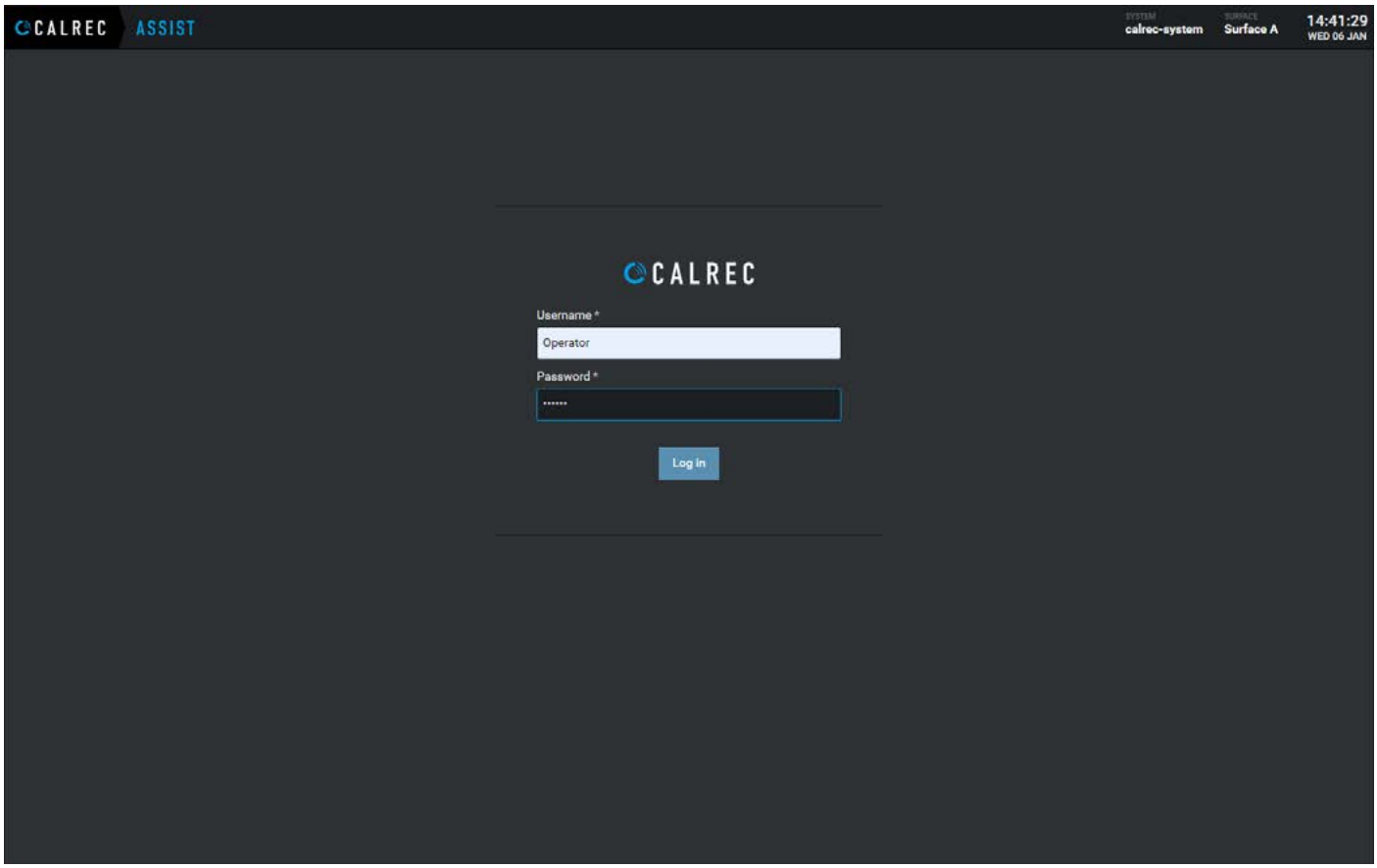


8. ACCESS ASSIST SETUP AND CREATE A NEW SHOW

Calrec Assist Login Instructions

1. Open your Web browser e.g. Chrome and browse to the address of the LAN port you are connected to e.g the Setup port on the core of the unit which by default is **172.16.255.25** this will launch Assist, which opens the Assist Login page shown below.

CALREC ASSIST LOGIN PAGE



2. In order to access the Assist Application, the user will need to enter the Username & Password, the user then taps on the '**Log in**' button and the Assist application then accesses the **Fader Surface** page with the menu selector, as shown at the top of page 17.

To create a new Show from here follow these steps:

3. From the menu down the left side of the page go to **Shows & Snapshots** then click on the **Shows** submenu.

4. In the footer menu select **New**, the **Create new Show** dialogue box will be displayed.

5. Select the **Default_Show** template show and click **Next**.

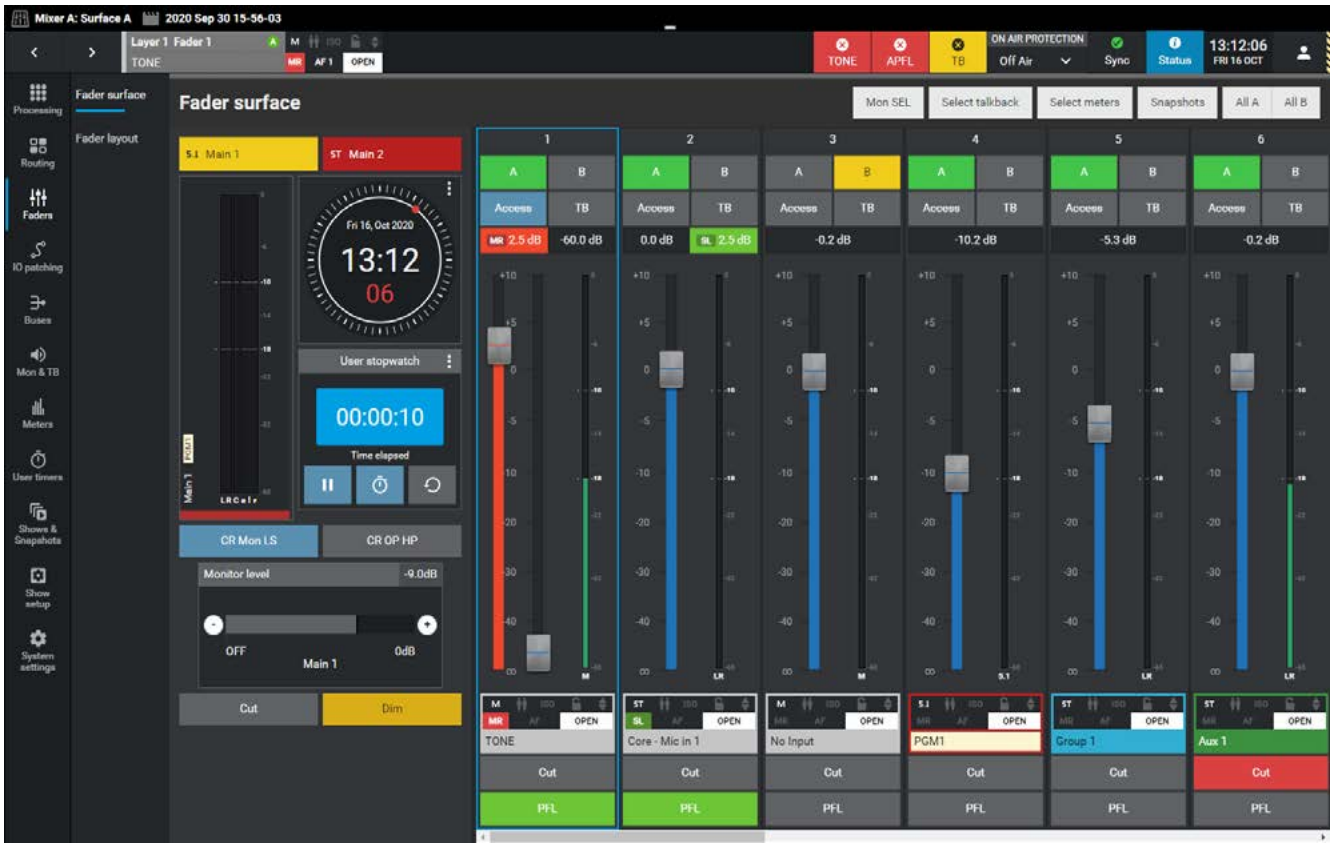
6. Fill in the form to label and describe your Show, then click on **Create** to create a new show as shown at the bottom of page 17.

You will be automatically redirected to the **Fader layout** screen as shown at the top of page 18.

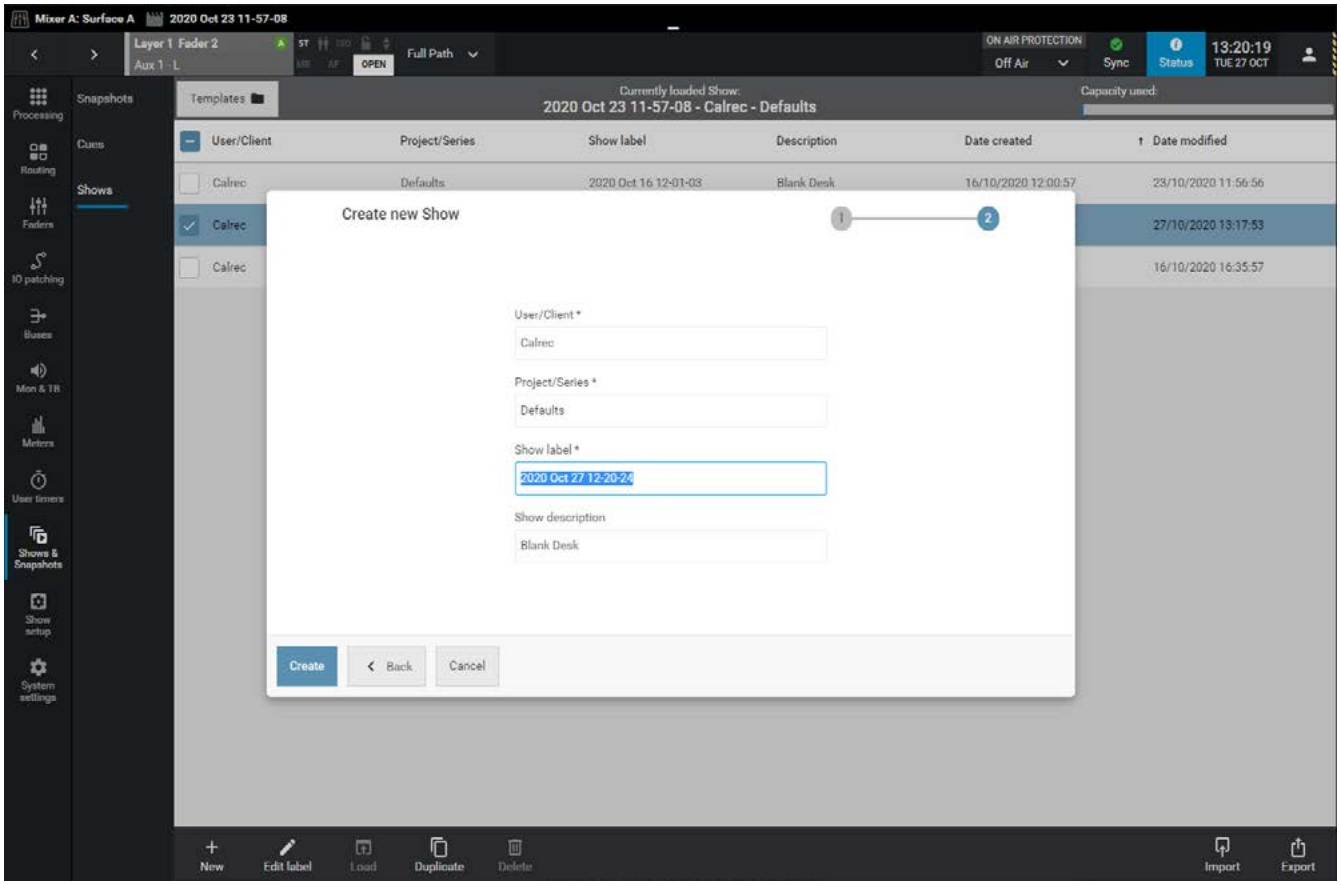
7. From here you may begin to configure your mixer with DSP paths, routing etc.

However we would recommend that you continue to complete the setup before doing this.

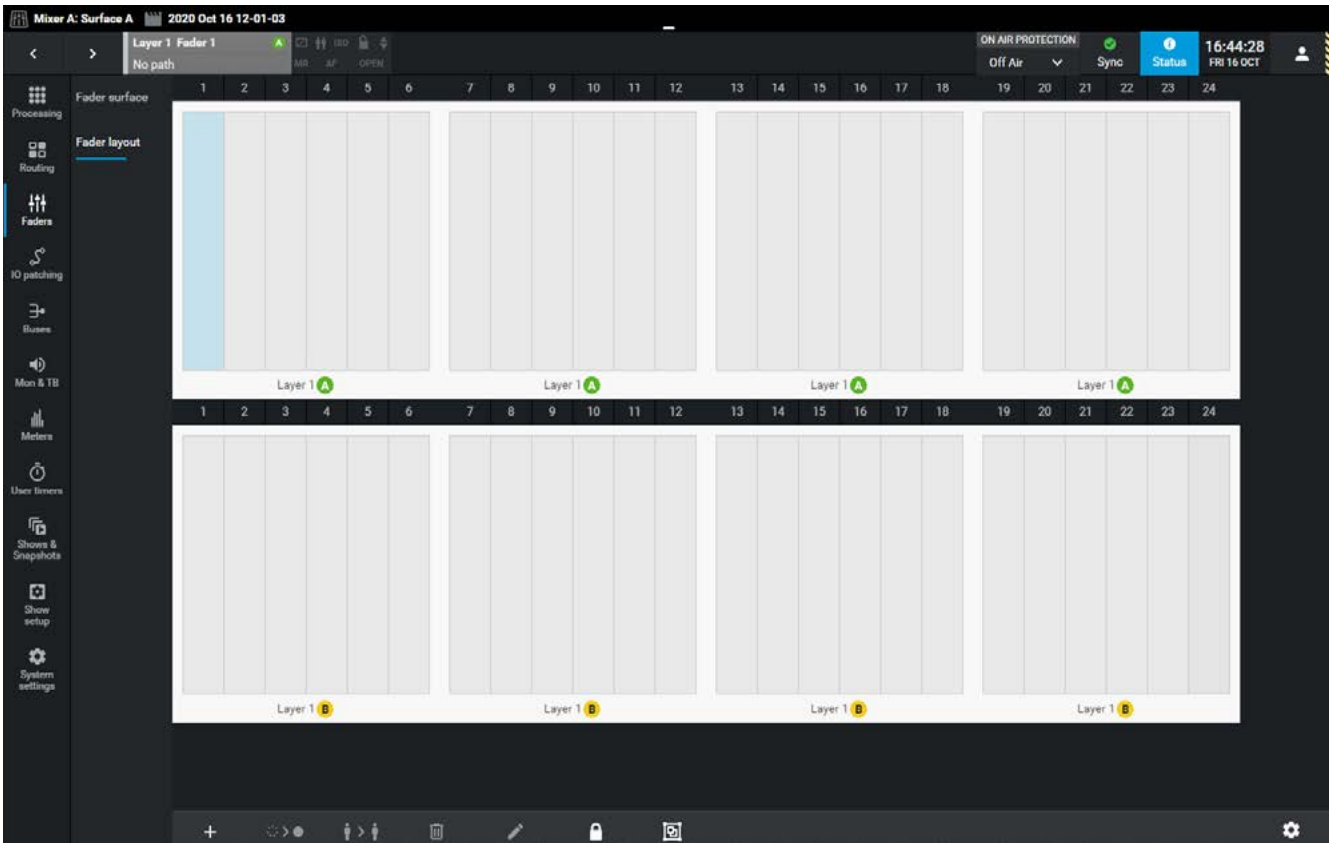
CALREC ASSIST FADER SURFACE PAGE



CALREC ASSIST LABEL, DESCRIBE & CREATE NEW SHOW



CALREC ASSIST FADER LAYOUT ACCESSED FROM CREATE NEW SHOW



9. CONNECT TO ASSIST FROM THE STUDIO OR MANAGEMENT SUBNETS

Assist may be accessed via the front-facing **Setup** port by navigating to **172.16.255.25** in Google Chrome, however the Setup port may not be connected to a local area network (LAN) and in a studio install scenario may not therefore be readily accessible to an operator or engineer's PC. It is therefore recommended that the PC accessing Assist is now connected to the network switch that serves the surface panels instead. By default, all user interfaces may be accessed via the rear network interfaces, using either a "**Management**" or a "**Studio A**" subnet. The "**Management**" subnet resides in the **172.29/16** address space and provides access to all applications and services running on the core. The "**Studio A**" subnet resides in the **172.17/16** address space and provides access to the **Assist**, **Core Configure** & **Calrec Connect** applications, as well as the console control service.
Note: Type R is designed to support a Touch Interface if the PC provides this.

To use either subnet configure your PC's ethernet adaptor as follows:

- **Management - IP address 172.29.0.1, subnet mask 255.255.0.0**
- **Studio A - IP address 172.17.0.1, subnet mask 255.255.0.0**

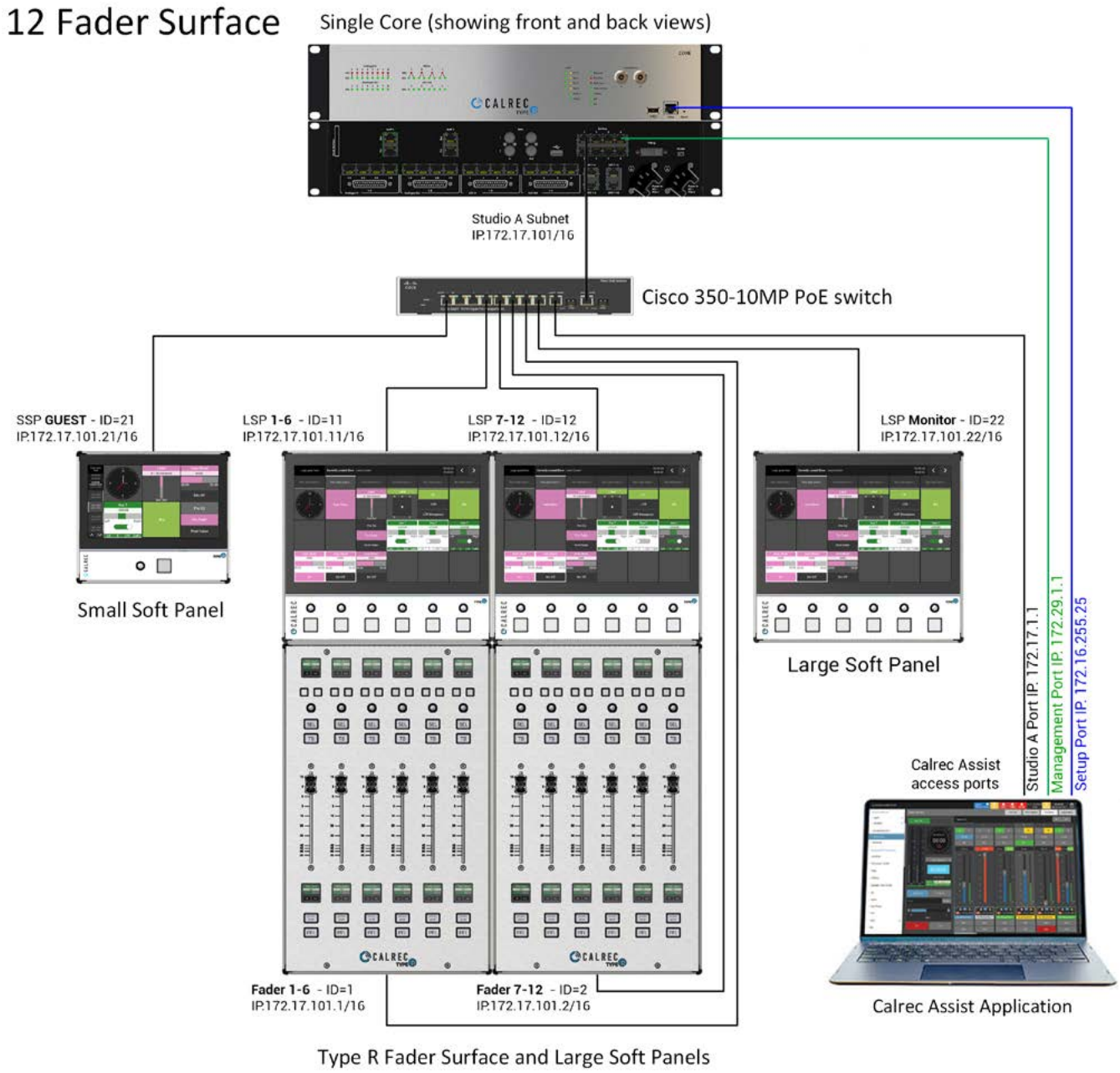
Note: Default "Studio B" and "Studio C" subnets will be added in a later version

To access the **Assist**, **Core Configure** & **Calrec Connect** applications, from the various connection points in the system type the corresponding IP address shown in the table below into the Google Chrome address bar address bar.

IP ADDRESSES FOR ACCESS TO ASSIST, CONNECT, SOFTWARE UPDATER & CONFIGURE USER INTERFACES

Application	Setup Port (front of core)	Management subnet (back of core)	Studio A subnet (surface panels)
Assist	172.16.255.25	172.29.1.1	172.17.1.1
Calrec Connect	172.16.255.60	172.29.1.21	172.17.1.21
Software Updater	172.16.255.40	172.29.1.22	172.17.1.22
Configure	172.16.255.19	172.29.1.23	172.17.1.23

SURFACE PANEL CONFIGURATION WITH ASSIST PC CONNECT OPTIONS TO SETUP, MANAGEMENT & STUDIO A



10. UPLOAD CONTROL LAYOUTS TO THE SOFT PANELS

Type R systems come with a selection of Soft Panel layout files already available.

1. To upload a layout file to a Soft Panel, navigate to **Show setup** then **Soft panel layout** in **Assist.**

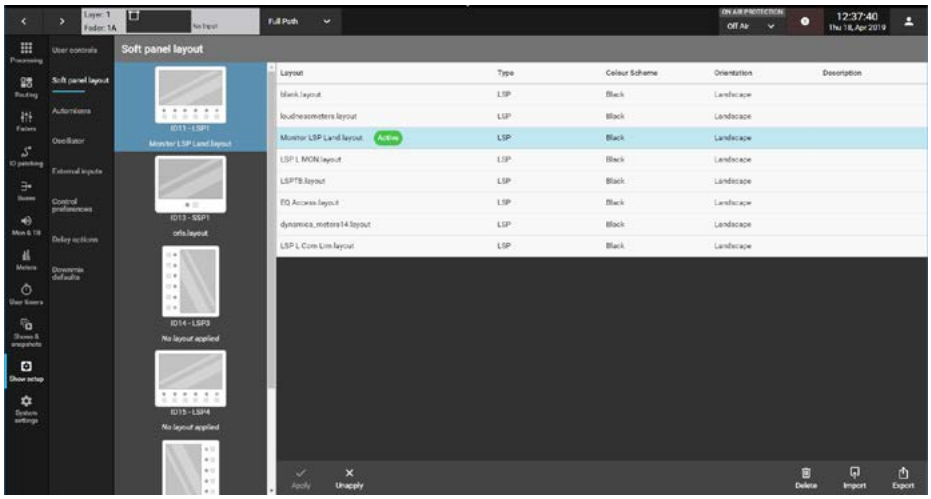
2. Select the panel in the list on the left side, then select a layout file in the table on the right side.

3. Click **Apply**. The layout will be immediately applied to the panel

4. Repeat this process for each Soft Panel in your surface

Please refer to the **Type R Assist and Console Panel Operation Manual (926-283).pdf** for more information on Type R Soft Panel Layouts.

TYPE R SOFT PANEL SOFT PANEL LAYOUT ASSIST PAGE



11. CREATE LAYOUTS WITH TYPE R SOFT PANEL DESIGNER

To create your own Soft Panel Layouts, the **Type R Soft Panel Designer** application is required. This can be downloaded from http://ftp.calrec.com

Please login using the case-sensitive credentials below:

Account: **TypeR**
Password: **tYoarEdQ**

Please refer to the **Type R Soft Panel Designer** manual for more information on the Type R Soft Panel Designer application.

TYPE R SOFT PANEL DESIGNER INTERFACE

12 UPDATE SYSTEM SOFTWARE & AOIP DEVICES FIRMWARE

In order to interface the Type R System with Type R AoIP devices, the system software needs to be updated.
The Type R Core software should be running **version 1.2** and the AoIP Devices firmware running **v.3.2.1-j429_7** for the two AoIP devices in the core and **v.3.2.1-j501_7** for each AoIP I/O box in the AoIP network. If your system has already been updated please skip this section, if not go to the **Software Updater section in the Type R Installation Manual (926-228)** before proceeding.

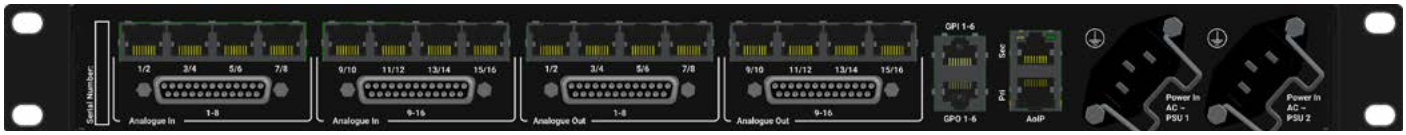
13. CONFIGURE AOIP PORT & CONNECT SERVER IP ADDRESSES

There are three optional Audio interface boxes types available for the Type R which are show in outline below:-
The AD6501 is a 4 AES In with SRC & 4 AES Out, 8 Mic/Line In with 48v & 8 Line out Combo I/O box with 2 x 6.35mm (1/4") headphone sockets for monitoring usage and 6 GPI and 6 GPO interfaces.
The AD6502 is a 16 Mic/Line In with 48v and 16 Line out Analogue I/O box with 6 GPI and 6 GPO interfaces.
The JD6503 is an 8 AES In with SRC and 8 AES Out AES I/O Box with 6 GPI and 6 GPO interfaces.
In addition to the 2 x IEC power connectors on the rear of each unit, there is an AoIP interface via RJ45 connectors (with redundant Primary and Secondary connections) which is connected to a US6525 AoIP device, which allows the I/O to be connected to the core via an IP switch network.

AD6501 Type R - Combo I/O Interface box **Front**

Rear

AD6502 Type R - Analogue I/O Interface box **Front**



Rear

JD6503 Type R - AES I/O Interface box **Front**

Rear

The default IO box and core AoIP network interface settings are shown in the table above right:

All IO box, core AoIP network interfaces and Connect server AoIP interfaces must have unique IP addresses, so if multiple AoIP devices in the same IO box type or multiple cores need to be connected, it is essential that all IP addresses are reconfigured accordingly first.

Important: All AoIP devices which are to be discovered and controlled by Connect must reside in the 192.168.30/24 (Primary) and 192.168.31/24 (Secondary) subnets.

IO BOX & CORE AOIP NETWORK INTERFACE SETTINGS

Box type /Core	AoIP port	IP address & Subnet mask**
Primary core Connect Server	Pri (I/F 5)	192.168.30.100/24
	Sec (I/F 6)	192.168.31.100/24
Combo	AoIP - Pri	192.168.30.1/24
	AoIP - Sec	192.168.31.1/24
Analogue	AoIP - Pri	192.168.30.2/24
	AoIP - Sec	192.168.31.2/24
AES	AoIP - Pri	192.168.30.3/24
	AoIP - Sec	192.168.31.3/24
Primary Core AoIP1	AoIP 1 - Pri	192.168.30.4/24
	AoIP 1 - Sec	192.168.31.4/24
Secondary Core AoIP2	AoIP 2 - Pri	192.168.30.64/24
	AoIP 2 - Sec	192.168.31.64/24

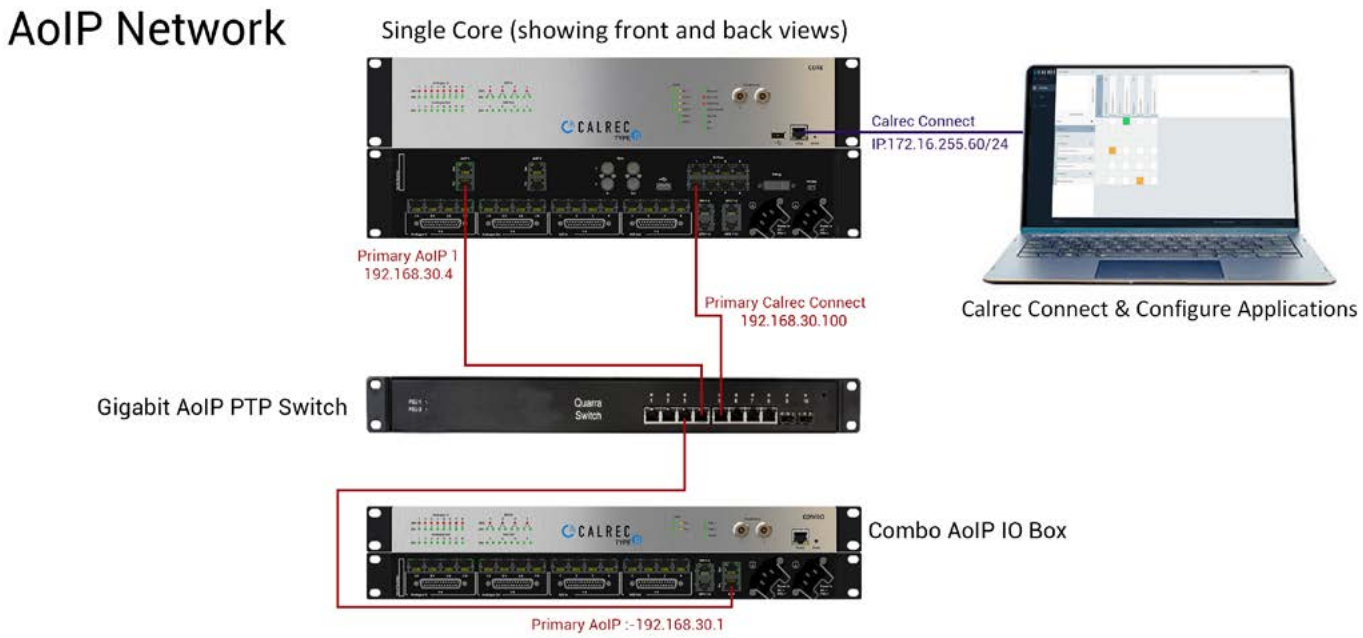
14. CONNECT AUDIO SWITCH AND AOIP PORTS TO THE CORE

1. Connect the audio network switch(es) to interfaces **5** (& **6)** on the rear of the core (marked "Surface") ,

Then follow the steps given below to configure each AoIP interface in an IO box or core:

2. Connect the **Pri** & **Sec** AoIP interfaces on the rear of the IO box or core, to your network switch or switches.
   Note: Follow the suggested switch port connections given for your network switch(es) in the corresponding Network Device document if unsure (see section 6).
   Note: PTP aware switches are recommended, but are not necessary for small AoIP networks
   Note: Connect one IO box / device or core at a time to avoid IP address conflicts.

EXAMPLE OF CONNECTING A COMBO AOIP BOX TO THE CORE VIA AN AOIP SWITCH



3. Enter **172.16.255.60** in the Google Chrome address bar and press enter to navigate to **Calrec Connect**.

4. Select **Devices** in the menu on the left and select the corresponding entry for the connected IO box / device or core.

5. In the settings area to the right, select the **Interfaces** tab.

6. Edit the IP address and subnet mask settings of **eth1** and **eth2** to your preferred values.

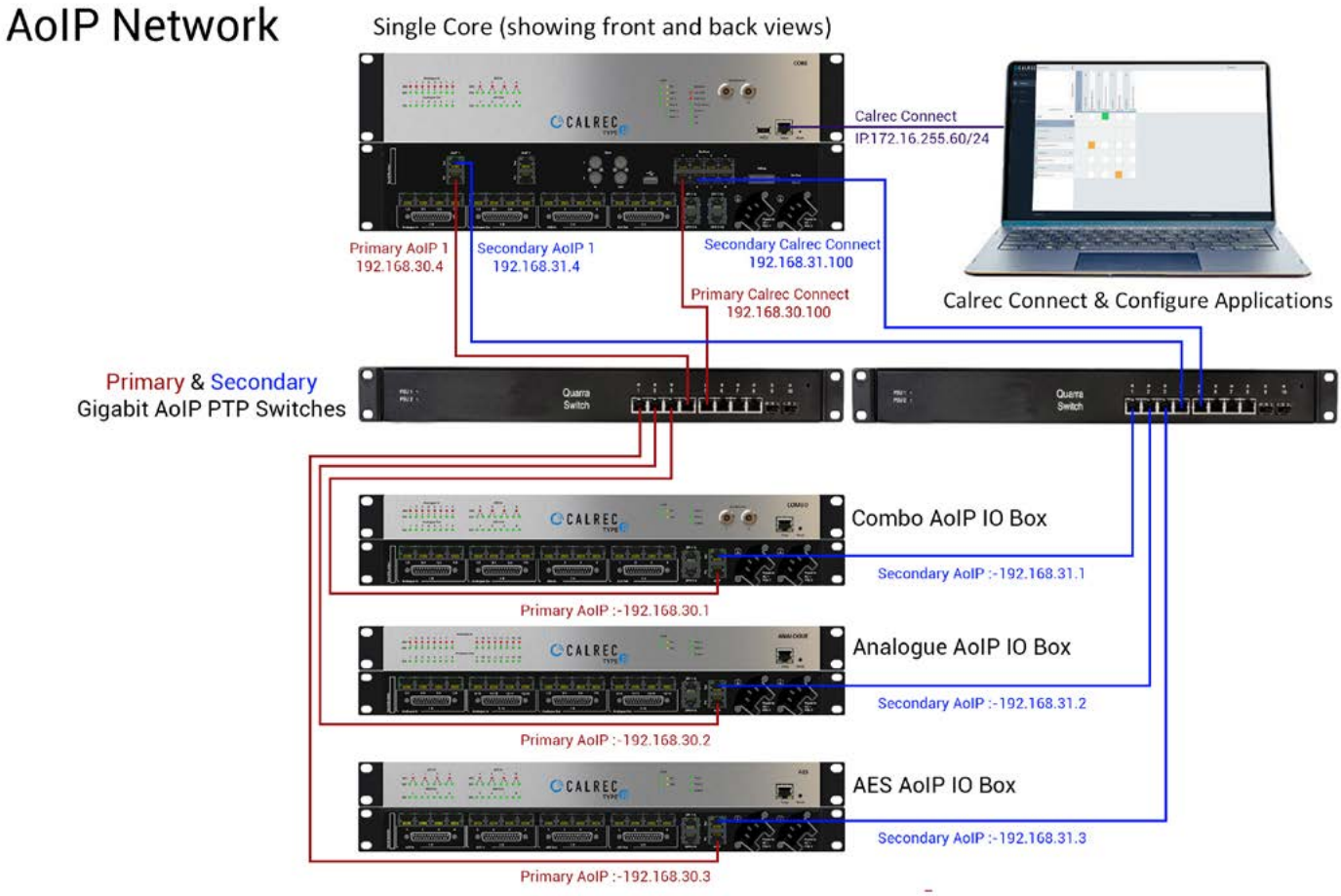
   Note: Please refer to **"AoIP Network Interfaces - Suggested Settings" on page 29** of this document for suggested settings and reference tables.

7. Connect the next IO device and repeat steps 3, 4 & 5.

Once all IO box & core AoIP device network interfaces are known to be set with unique IP addresses, they may all be connected to the same network. All IO boxes in the same subnet should be discovered and displayed in **Calrec Connect** as shown on the next page for the Type R Core which has two AoIP device interfaces and a Combo AoIP device which has one AoIP device. Transmitter and receiver streams may now be configured have Audio Inputs and Outputs patched to those streams and routed between devices.

Please refer to the Further Reading section at the back of this guide for links to additional guidance about using Calrec Connect.

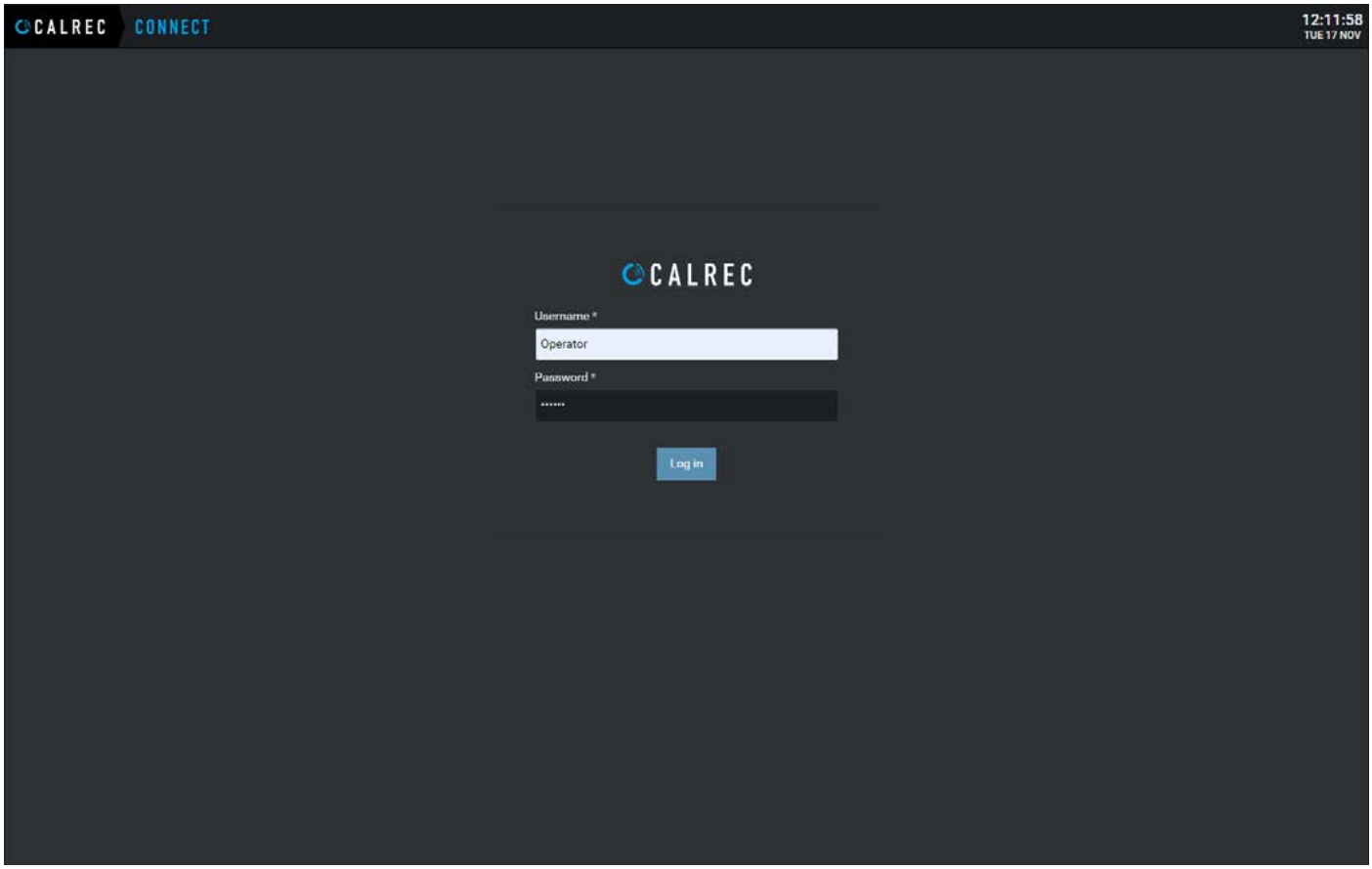
EXAMPLE OF CONNECTING MULTIPLE IO BOXES TO THE CORE VIA REDUNDANT AOIP SWITCHES



Calrec Connect Login Instructions

1. Open your Web browser e.g. Chrome and browse to the address of the LAN port you are connected to e.g the Setup port on the core of the unit which by default is 172.16.255.60. This will launch Connect, which opens the Connect Login page shown below.

CALREC CONNECT LOGIN PAGE

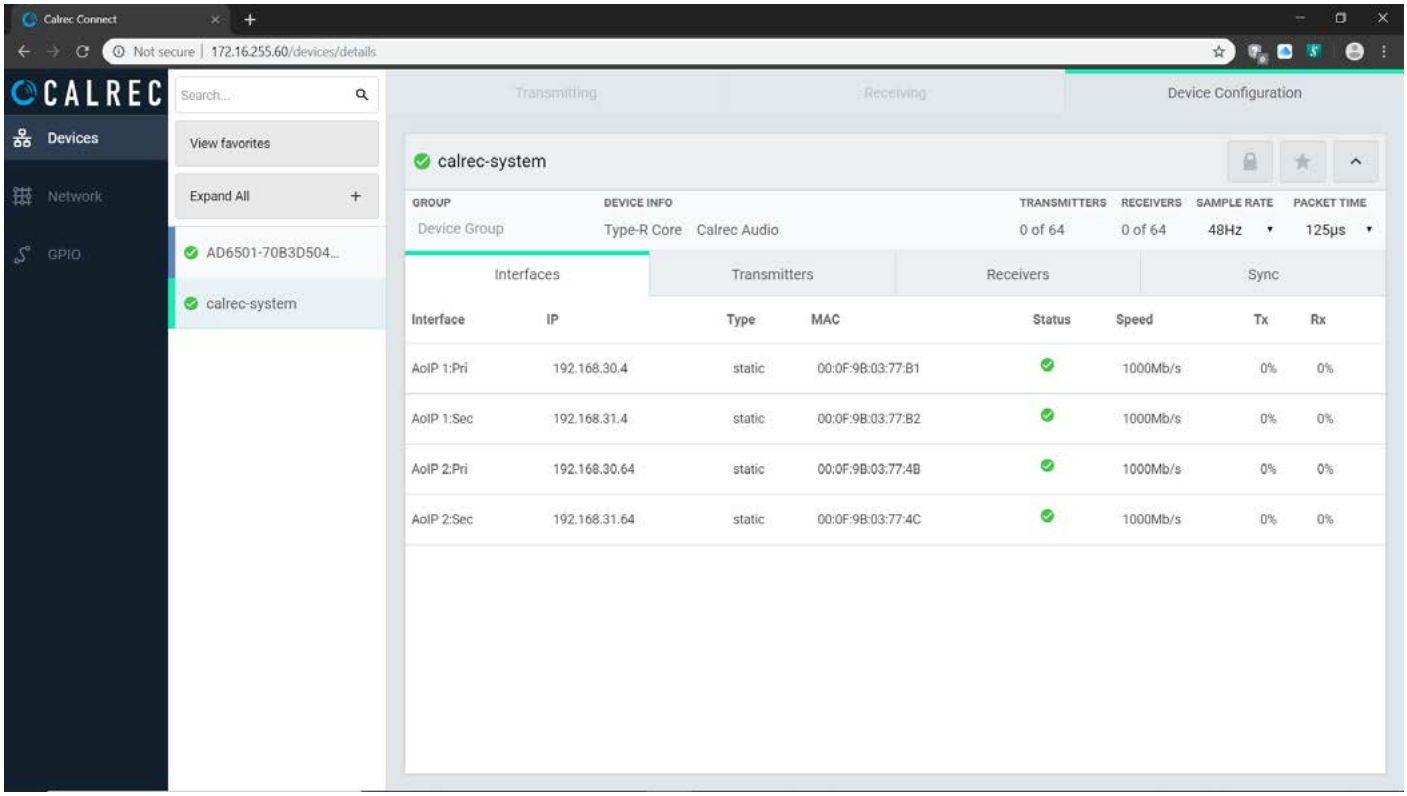


2. In order to access the Connect Application, the user will need to enter the Username and Password, the user then taps on the 'Log in' button and the Connect application then accesses the **Devices** menu as shown at the top of the next page.

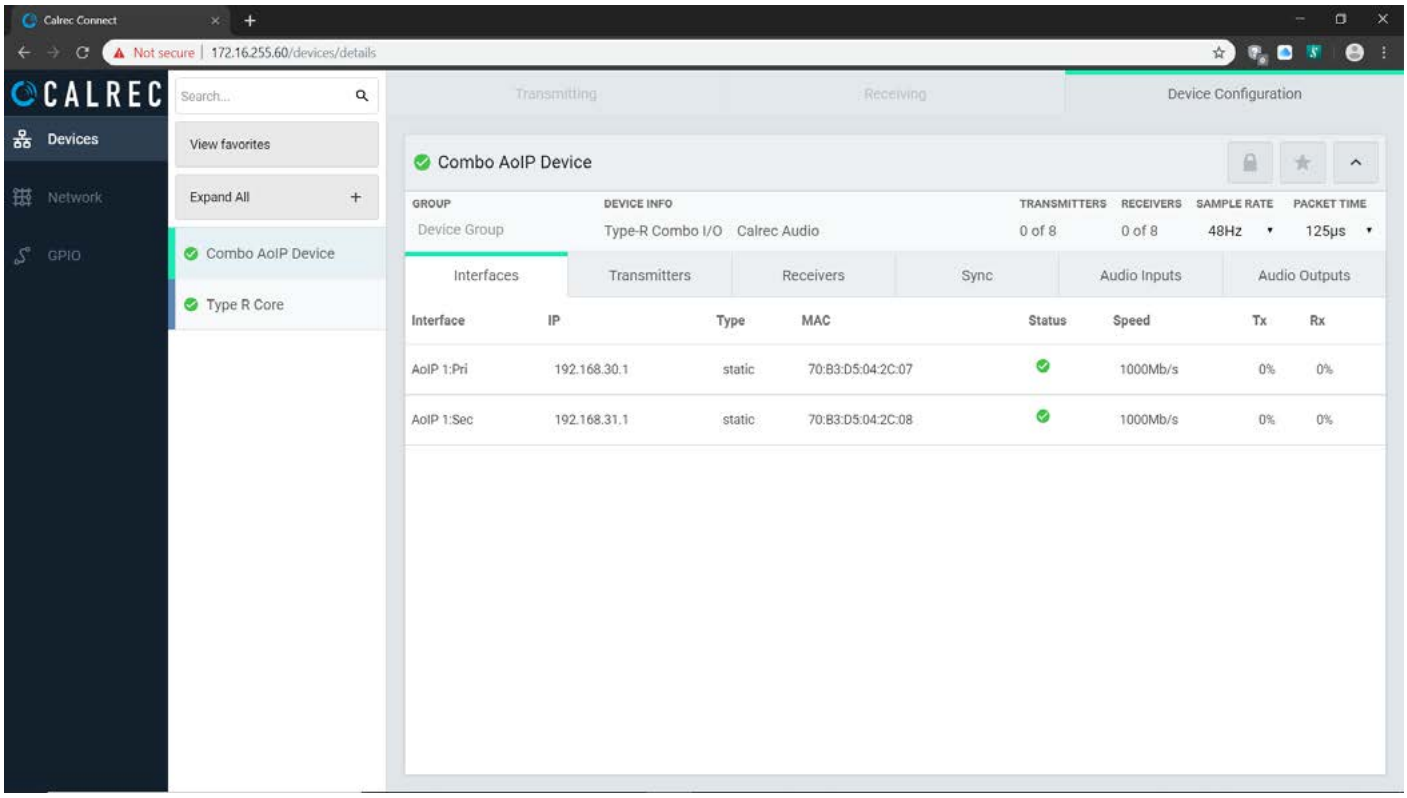
3. Clicking on **calrec-system** shows the 2 Type R core AoIP port pairs ready for creating Transmit and Receive streams to/from the core as shown at the top of the next page.

4. Clicking on each of the AoIP Devices such as the **Combo AoIP Device** shows the Type R IO Box AoIP port pair ready for creating Transmit and Receive streams to/from each AoIP device as shown at the bottom of the next page.

CALREC CONNECT SHOWING THE TYPE R CORE AOIP PORTS READY FOR CREATING TRANSMIT AND RECEIVE STREAMS



CALREC CONNECT SHOWING THE COMBO AOIP DEVICE PORTS READY FOR CREATING TRANSMIT AND RECEIVE STREAMS



Your Type R is now set up and ready to be tested for use

SURFACE PANELS – SUGGESTED SETTINGS

The suggested settings for each surface panel connected to the first mixer in a Type R system are shown below. Use the tables below to configure your surface panels and to record the serial number, fader range and label details of each panel for later reference. After configuring the surface panels, you may want to attach labels to them. A blank label sheet is provided with the Type R core for this purpose. A printer template for this Label sheet is available to distributors on the Calrec Website.

Fader Panel	Fader Range (e.g. 1-6)	Serial Number	Panel ID [switch setting]	IP Address	Subnet mask**
1st			1 [00000001]	172.17.101.1	/16
2nd			2 [00000010]	172.17.101.2	/16
3rd			3 [00000011]	172.17.101.3	/16
4th			4 [00000100]	172.17.101.4	/16
5th			5 [00000101]	172.17.101.5	/16
6th			6 [00000110]	172.17.101.6	/16
7th			7 [00000111]	172.17.101.7	/16
8th			8 [00001000]	172.17.101.8	/16

Soft Panel	Type (LSP/SSP)	Panel Label (e.g. Guest 1)	Serial Number	Panel ID [switch setting]	IP Address	Subnet mask**
1st				11 [00001011]	172.17.101.11	/16
2nd				12 [00001100]	172.17.101.12	/16
3rd				13 [00001101]	172.17.101.13	/16
4th				14 [00001110]	172.17.101.14	/16
5th				15 [00001111]	172.17.101.15	/16
6th				16 [00010000]	172.17.101.16	/16
7th				17 [00010001]	172.17.101.17	/16
8th				18 [00010010]	172.17.101.18	/16

**Subnet masks are displayed in CIDR notation

Soft Panel suggested settings table continued:-

Soft Panel	Type (LSP/SSP)	Panel Label (e.g. Guest 1)	Serial Number	Panel ID [switch setting]	IP Address	Subnet mask**
9th				19 [00010011]	172.17.101.19	/16
10th				20 [00010100]	172.17.101.20	/16
11th				21 [00010101]	172.17.101.21	/16
12th				22 [00010110]	172.17.101.22	/16
13th				23 [00010111]	172.17.101.23	/16
14th				24 [00011000]	172.17.101.24	/16
15th				25 [00011001]	172.17.101.25	/16
16th				26 [00011010]	172.17.101.26	/16
17th				27 [00011011]	172.17.101.27	/16
18th				28 [00011100]	172.17.101.28	/16
19th				29 [00011101]	172.17.101.29	/16
20th				30 [00011110]	172.17.101.30	/16
21st				31 [00011111]	172.17.101.31	/16
22nd				32 [00100000]	172.17.101.32	/16
23rd				33 [00100001]	172.17.101.33	/16
24th				34 [00100010]	172.17.101.34	/16
25th				35 [00100011]	172.17.101.35	/16
26th				36 [00100100]	172.17.101.36	/16

**Subnet masks are displayed in CIDR notation

AOIP NETWORK INTERFACES – SUGGESTED SETTINGS

The suggested settings for the first 20 IO box & core AoIP network interfaces in a given Type R system are shown below. Use the tables below to configure your IO box and core network interfaces, and to record the serial number and label details of each device for later reference. After configuring the AoIP network interfaces, you may want to attach labels to them. A blank label sheet is provided with the Type R core for this purpose. A printer template for this Label sheet is available to distributors on the Calrec Website.

Box No	IO box/core label	Serial number	Primary interface IP Address	Subnet mask*	Secondary interface IP Address	Subnet mask**
1			192.168.30.1	/24	192.168.31.1	/24
2			192.168.30.2	/24	192.168.31.2	/24
3			192.168.30.3	/24	192.168.31.3	/24
4			192.168.30.4	/24	192.168.31.4	/24
5			192.168.30.5	/24	192.168.31.5	/24
6			192.168.30.6	/24	192.168.31.6	/24
7			192.168.30.7	/24	192.168.31.7	/24
8			192.168.30.8	/24	192.168.31.8	/24
9			192.168.30.9	/24	192.168.31.9	/24
10			192.168.30.10	/24	192.168.31.10	/24
11			192.168.30.11	/24	192.168.31.11	/24
12			192.168.30.12	/24	192.168.31.12	/24
13			192.168.30.13	/24	192.168.31.13	/24
14			192.168.30.14	/24	192.168.31.14	/24
15			192.168.30.15	/24	192.168.31.15	/24
16			192.168.30.16	/24	192.168.31.16	/24
17			192.168.30.17	/24	192.168.31.17	/24
18			192.168.30.18	/24	192.168.31.18	/24
19			192.168.30.19	/24	192.168.31.19	/24
20			192.168.30.20	/24	192.168.31.20	/24

**Subnet masks are displayed in CIDR notation

ABOUT TYPE R MANUALS

Type R has a number of Manuals associated with it. This is the Type R Start Up Guide:-

1. Type R Product Info Sheet (926-272)
This information sheet shows how to collect information on Type R.

2. Type R Start Up Guide (926-282)
This guide shows how to Unpack, Power Up and access/configure the system core, Install a licence key, Configure the Core for the Surface panel layouts, Access Assist and create a New Show, Configure the network devices, Configure Panel ID's, Connect up a PC to the Surface switch, Upload control layouts to the Soft Panels, Create layouts using the Type R Soft Panel Designer, Configure and Connect an Audio Switch and AoIP Devices to the Core.

3. Type R Installation Manual (926-228)
This contains a number of chapters including: Control surface measurements, Mounting and Assembly instructions, Defining the system elements of a Type R system and describes the Core, Panels and IO Box layouts, Synchronisation, Audio & GPIO Connections, Core DSP packs, Surface panel layout examples, AoIP network examples, Software Updating and Technical specifications.

4. Type R Assist Manual (926-229)
This defines how a pre-configured Type R system is setup and controlled via Calrec Assist, which is Calrec's web-based configuration tool. It includes creating/managing shows, setting up shows in terms of configuring paths, displaying and controlling the fader surface, saving and loading snapshots and patching inputs and outputs to the channels and buses. There are then various sections about parameter access including:- processing, routing, configuring and controlling the buses & outputs and setting up the monitoring & metering. The show setup and system settings sections provide configuration tools for both show and system configuration.

5. Type R Assist and Console Panel Operation (926-283) Incorporating Type R Assist Manual
This covers how the pre-configured Type R Physical Console is operated via a combination of Fader Panels, Large & Small 'Soft' surface panels and also incorporates the Assist manual.

6. Type R Soft Panel Designer (926-284)
This defines how different controls can be configured to appear on the Console Panels using the Panel Designer Application which allows the user to design their own custom layouts for the Large and Small 'Soft' surface panels.

7. Type R Configure Guide (926-285)
This defines how the Type R Core(s) can be configured and partitioned into different mixing consoles with varying amounts of DSP processing channels available in different 'Pack' sizes under licence. It also is used to configure Control Surfaces from the available panels, setup synchronisation sources, configure Network AoIP interface, configure the Core I/O including Virtual Patchbays and provide User management permissions for Operators.

8. Connect (926-286)
This defines how the Impulse/Type R Core IP Input and Output streams are connected to AoIP based interfaces and how the AoIP streams are managed including GPIO devices. These can be connections to and from either Calrec AoIP Devices or other 3rd party AoIP streams.

9. AoIP I/O Manual (926-293)
This contains information about AoIP devices available for use with Impulse/Type R in terms of Control, Audio & GPIO Connections.

USER NOTES

Calrec Audio Ltd
Nutclough Mill
Hebden Bridge
West Yorkshire
England UK
HX7 8EZ

Tel +44 (0)1422 842159
Fax +44 (0)1422 845244
Email Enquiries@calrec.com

calrec.com

(926-282 Iss.12)