OXYGEN 4 DIGITAL
DIGITAL BROADCAST CONSOLE

COMPACT DIGITAL CONSOLE

- Internal digital bus routing system
- Less then 0,5 milliseconds global latency
- 24bit/96kHz maximum sample resolution
- EQ and Dynamics on all processing channels
- Real time info displayed on every module
- GPIO I/O automation - Fader, Switch, Cue start
- Sample rate converters on all digital inputs
- Built-in SD card reader

AXEL TECHNOLOGY

OXYGEN 4 DIGITAL CORE

The 19" rack is the heart of OXYGEN 4 DIGITAL.
All audio processing and routing takes place in this unit.
You can find 4 MIC's, 2 Mono analog and 5 Stereo analog Inputs, 7 Stereo Digital Inputs and Outputs all with sample rate converters.
You have dedicated analog outputs for PROG, SUB, AUX, CRM and PHONES.
The control surface and DSP engine can be separated by up to 5 metres using a 15 way D-sub ended cable.
Signal processing takes place in one DSP. Processing uses precise floating-point calculations at a wordlength of 32 bit.
All audio signals throughout the console preserve their 24 bit resolution from the input conversion.Even 16 bit data streams, like CD-players, have 24 bits reserved..

OXYGEN 4 DIGITAL

APPLICATIONS:

• **Digital Desktop mixer**
• **Reporter desk**
• **Production & editing studio**
• **Remote controllable audio work places**

OXYGEN 4 DIGITAL is a fully digital mixing console powered by the latest Texas Instruments DSP processors, with 18 digital and analogue inputs, a crosspoint router, 32 bit processing, sampling rates up to 96kHz, sample rate converters on all the digital inputs, and both EQ and dynamics on every channel.

All those tools can be accessed from the control surface, but they can also be controlled from a PC attached to the console via an IP network.

Like most other similar products, **OXYGEN 4 DIGITAL** follows the system architecture of a rack mounted digital 'engine' and a separate 'control surface' with 8 fader.

INPUT & OUTPUT CAPABILITIES

INPUTS	OUTPUTS
6x stereo digital inputs (AES3)	6x stereo digital outputs AES3
1x stereo digital input (s/p-dif optical or coax)	1x stereo digital output s/p-dif optical + coax
6x stereo balanced line inputs	1x stereo Program analog
1x stereo unbalanced line input	1x stereo SUB analog
4x balanced mic inputs + Inserts	1x stereo CUE analog
	1x stereo AUX analog
	1x stereo CRM analog
	2x stereo PHONES analog

INPUT ROUTER

The audio-paths within **OXYGEN 4 DIGITAL** are programmable due to the presence of an input router.
This eliminates the need for an external patch-bay. The input matrix is situated between the input modules and the DSP.
It allows a custom configuration of the various inputs into the 4 stereo processing channels.

CONTROL SURFACE: Channel Strip

OXYGEN 4 DIGITAL control surface is divided into two distinct areas on the conventional lines of input and master sections.
The input channels comprise eight identical strips.

Starting from the bottom we have a full size fader which obviously controls the level for whatever source is routed to that channel, but in software it can also be configured to perform fader start, red light switching and monitor muting.

Above and to the left of the fader, a group of eight LEDs show status information for that strip.
The two larger ones indicate which of the two main output busses the strip is routed to: Programme or Sub.
This signal is always post-fade and post the channel's On switch. The 'Sub' buss would usefully provide a stereo clean feed to (for example) external codecs.

The next group of three indicators is dedicated to the aux buss and the assignable EQ and dynamics. The aux buss is stereo and may be selected independently on each channel as a pre or post-fade send.

Each **OXYGEN 4 DIGITAL** channel may also be assigned a 'dynamics' control function a combined compressor-limiter with a single control.

The EQ provides 3 bands, each with a range of 2 octaves. The pre-set centre frequencies of 120Hz, 1.2kHz and 12kHz are sensible choices, but they maybe changed in software should other values be preferred.

A simple three LED meter is provided on each channel indicating audio levels at -20, 0 and +9dB.
Each strip supports two large illuminated buttons labelled 'On' and 'Cue'.
The On button functions pretty much as you would expect, and it may additionally be configured to provide a machine start command.
The Cue button enables a pre-fade listen, and this too may be configured in software for various other functions.
At the top of the channel are the two most obviously digital controls: a single rotary encoder and a 2 line LED alpha display.

The latter shows the currently assigned input on the top line, while various options are displayed on the lower line.
The encoder maybe turned or pushed, depending on what function is currently selected.
For example, switching to an output buss is achieved by pushing the knob to switch the selected buss routing on or off, whereas setting an input level is a rotary function.

CONTROL SURFACE: Master Section

The right hand master section is topped by a pair of LED level meters, scaled from -36 to +9dB.
Below this, two banks of switches cover the function assignment to the channel encoders, and source selection for the monitors.
There are also level controls for the monitor speakers and headphones - the latter with a socket on the rear of the control sur face.

A memory card slot on the control surface can be used to save desk configurations for instant recall, and individual users may be granted different levels of access to the various desk functions - an excellent solution to situations where 'finger trouble' is a problem.

Axel Technology also supplies a couple of programs to help new users get around the desk.

The first of these is a simple utility to adjust the channel equalisation.

The second is an Active-X applet that generates a virtual console on your computer screen, showing all of the desk's settings and enabling real time adjustments too.
With this utility, it is possibile to control the digital engine from any PC connected to the same network as the console.

CHANNEL STRIP

MASTER SECTION

OXYGEN 4 DIGITAL 4 + 4 CHANNELS

■ NETWORK OPERATION

OXYGEN 4 DIGITAL is a stand-alone mixer.

That means that there is no need for a PC during operation.
But to make all the settings you can connect your console directly to your PC by a cross-link cable or connect your **OXYGEN 4 DIGITAL** to your local network (Straight CAT5 UTP cable) and use its PC interface to communicate with the console.

By using the Ethernet connection you have the possibility to control **OXYGEN 4 DIGITAL** from every workplace in your network.
OXYGEN 4 DIGITAL can receive an IP address via a DHCP server, or you can give a Fixed IP ! When this IP is known, you are able to manage the console features by software (HTTP web server or ActiveX object).

■ OXYGEN 4 DIGITAL TECHNICAL SPECIFICATIONS

GENERAL SYSTEM PARAMETERS

Level specs in dB Full Scale for digital and dBu for analog data.	
0dBu=0.775Vrms	
Sampling rate:	32kHz, 44.1kHz, 48kHz, 50ppm (when internally synchronized).
Headroom:	20 dB

A/D and D/A CONVERTERS

A/D Burr Brown/Texas Instruments 24 bit Delta Sigma	
Dynamic range:	typically 112 dB
THD+Noise:	<-102 dB
D/A Burr Brown/Texas Instruments 24 bit Advanced Segment	
Dynamic range:	typically 113 dB
THD+Noise:	<-100 dB (0.001%)

INPUT & OUTPUT

LINE INPUTS

Input sensitivity:	-20dB to.+20dB
Line inp. bal 10kOhm	
CMRR:	Line input max.. gain: 50Hz 50dB

LINE OUTPUTS

+4dBu / -10dBV electronically balanced or optional transformers.	

DIGITAL INPUTS

AES/EBU (AES3), S/P-DIF, Optical (Toslink)	
16/20/24 bit 32kHz to 96kHz (built in sample rate converter)	
THD+N:	-105dBfs @1kHz, 0dBfs
Frequency response:	20-20kHz, 0.1 dB
Input impedance:	110 Ohm (XLR) 75Ohm (cinch)

DIGITAL OUTPUTS

AES/EBU/AES3, S/P-DIF, Optical (Toslink) active at the same time	
16/20/24 bit, 32kHz to 48kHz (System clock)	
Output level:	2 to 5 volts
Output impedance:	110 Ohm
Clock output:	75 Ohm TTL

MICROPHONE INPUTS

Mic INP. Bal. 2kOhm - 128dBr (60dB gain range)	
CMRR:	Mic input max. Gain: 50Hz 75dB
Phantom is switchable +48volt	

EQUALIZER

LF:	+/- 18 dB @ 120Hz Peaking
MF:	+/- 18 dB @ 1200Hz Peaking
HF:	+/- 18 dB @12000Hz Peaking

SYSTEM CLOCK

System clock internally	32kHz, 44.1kHz, 48kHz, 50ppm.
Frame clock out:	BNC 75 Ohm TTL
Frame clock in:	BNC 75 Ohm terminator switch, TTL 32kHz to 48kHz

REMOTES

All channel remotes are isolated on relays and interfaced on 9 pin Sub-D connectors.	
More info: isolated PhotoMOS Relays, Ron-max 12ohm, Imax=200mA, 24Vmax	

DIMENSIONS AND WEIGHT

Desktop layout:	Width=260mm	Height=85mm	Depth=370mm
19"rack in/output unit:	Width= 485mm	Height=88.5mm	Depth=300mm
Notes:	0dBu=775 mV.	All measurements were made on an Audio Precision system Two.	

OXYGEN 5 DIGITAL
BROADCAST DIGITAL MIXER

FULLY BROADCAST DIGITAL MIXING CONSOLE

- Customizable modular structure
- 12/8 Fader control surface
- Internal digital bus routing system
- Less then 0,5 milliseconds global latency
- 24bit/96kHz maximum sample resolution
- EQ and Dynamics on all processing channels
- Real time info displayed on every module
- TCP/IP Ethernet / CobraNet Network operation
- Sample rate converters on all digital inputs

AXEL TECHNOLOGY

OXYGEN 5 DIGITAL

Oxygen 5 Digital is the ultimate solution for the broadcast studio's today and future demands.
Designed to become the "backbone" of your operation, this innovative mixing console is acomplete platform easily adaptable to forthcoming technical developments.

Its modular DSP based architecture can be expanded to suit the most demanding technical requirements, providing crystal clear sound processing and advanced routing and communication features.

OXYGEN 5 DIGITAL

MODULAR STRUCTURE

Oxygen 5 Digital modular structure makes it possible to start with a simple and dedicated solution, and as soon as your studio needs more flexibility and/or functionality, you can easily add new interfaces and manage them through the TCP/IP network.
This will allow your digital console to "grow up" together with your company, and to meet the more demanding applications of the future.

OXYGEN 5 DIGITAL CONFIGURATION

The **OXYGEN 5 DIGITAL** system is made up of several components, divided in two groups: **CONTROL SURFACES** and **I/O RACKS**

CONTROL SURFACES

As **Oxygen 5 Digital** is completely modular, you can operate every functionality through various control surfaces.

As technology moves forward, new control surfaces will be designed in the future to give you the most up-to date mixing and monitoring facilities.

Any Control surface switch can do anything you want it to do, but… to not confuse you we have programmed a factory default assignment that represents the working procedures of the average Radio Studio to start with.

Switches have long life dual color LED's. So every active function is clearly shown.
The basic desktop frames are built to use as a drop through frame in a furniture surface.
They can accept 2, 3, 4, 5 or 6 pcs of 4 faders sections, or 2,3,4,5 pcs of 4 fader sections and 1 CRM/STUDIO section plus master blind.
With two frames (script space in the middle) you can have a maximum of 48 faders with CRM/STUDIO section.

If more faders are needed larger frame sizes are available upon request to achieve the maximum of 128 by fader controllable stereo channels this design can handle.

CONTROL SURFACE PARTICULAR

I/O RACKS

An I/O rack is built using a 19" rack frame with a controller card (the engine), DSP card(s), I/O card(s) and power supply card(s).

An example of a starter system could be one I/O rack and one control surface. If you require more control over your I/O's you simply add a control surface component to your networked platform.
With the same ease you can add a new I/O rackto your networked platform to have a new mixing console for a different broadcast studio.

I/O RACKS

DEFINING YOUR I/O MODULES

With the Axel's **OXYGEN 5 DIGITAL** modular concept, each I/O card is shared in the network and can be controlled from the network.
The I/O cards, together with the rack, will behave as a large Matrix in the network. If one or more DSP cards are inserted, your matrix will have mixing capabilities.

Available I/O Cards are:

• Microphone inputs
• Line inputs
• Digital inputs/outputs
• Line outputs
• CRM/Phones outputs
• CobraNet in/outputs
• ADAT in/outputs
• more to come!

BREAKOUT PANELS

Like most users of e-mail and browsing the Internet, you likely didn't care the objective standard for connecting audio components to I/O racks is the use of RJ45 connectors with STP (Shielded Twisted Pair) cable.
Oxygen 5 Digital rack-mounted interface units features balanced ¼" Jacks, XLR or D-type connectors on the front panel, and shielded RJ45 connectors on the back panel, which are used to connect to the I/O rack.

BREAKOUT PANELS PARTICULAR

TCP/IP NETWORK PLATFORM

Like most users of e-mail and browsing the Internet, you likely didn't care about the virtual world behind the screen known as the TCP/IP protocol.

As new innovations come along, making connections to new work surfaces, processing or other equipment as easy as connecting a computer to your data-network is vital.

Axel Technology R&D staff empowered TCP/IP network communication protocol as part of the engine in the **Oxygen 5 Digital** console, allowing use of the IT skills and equipment standards already available in your company.

This means you can make and automatically explore, recognize the connected devices and their functionality from remote, for improved system management.
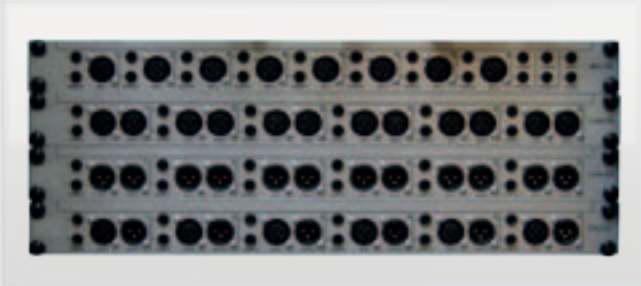
RELIABILITY VS. REDUNDANCY

History has proven that redundancy is a beneficial way to solve reliability problems by duplicating critical parts like power supplies, but when building a system using many different components from different manufacturers, redundancy becomes virtually impossible and system reliability becomes very important.

The systems of today depend on the connections to other components as well as the system components.

Running in the background of the **Oxygen 5 Digital** platform, the TCP/IP protocol is implemented on standard Ethernet and is compatible with all safety/security technologies available in the Worldwide accepted Ethernet network (e.g. spanning tree protocol, trunking).

OXYGEN 5 DIGITAL ON AIR GUI

MAINTENANCE, SUPPORT AND UPDATES

OXYGEN 5 DIGITAL allows the Broadcast facility personnel to plan and implement their requirements from a large group of currently available components as well as future developed components.

The latest software updates, hardware, and information will be available on Axel technology's website at http://www.axeltechnology.com, or by contacting our main office sales department in Italy.

Although the **Oxygen 5 Digital** hardware and software network is easy to install and understand, one of the Axel's system engineers can log on to your network and check your system from the Axel Technology main office by remote TCP/IP connection if needed.

OXYGEN 5 DIGITAL TECHNICAL SPECIFICATIONS

DIMENSIONS – ADD NEW 4FBP AND CRMP FARMES

FRAME - 10	FRAME - 14	FRAME - 18	FRAME - 22	FRAME - 26
Outside: 492x410x60/90mm	Outside: 684x410x60/90mm	Outside: 876x410x60/90mm	Outside: 1062x410x60/90mm	Outside: 1260x410x60/90mm
Drop through: 486 x 430mm	Drop through: 678 x 430mm	Drop through: 870 x 430mm	Drop through: 1056x430mm	Drop through: 1254x430mm
Weight: 10kg	Weight: 15kg	Weight: 20kg	Weight : 25kg	Weight: 30kg

RACK -ONE		RACK - TWO	
Outside:	483 x 133 x 260mm	Outside:	483 x 266 x 260mm

GENERAL

Matrix up to 1280x1280.
Word clock input or internal generator.
Synchronization
Word clock input or internal generator.
32 kHz, 44.1 kHz, 48 kHz.
Word clock out 75R.
Selectable 75 Ohm termination on word clock input.

CARDS SPECIFICATIONS

MIC INPUT CARD

4 Balanced line inputs on RJ45 connectors
Level: +6dBU nominal input (software level trim (-20dBu up to +26dBu))
Phase reverse
Routing: Left to left, Right to Right, Mono to left, Mono to right, Right to left, Left to Right.
8x GPIO on MOS switch/+5v TTL. These can be Communication	Channel ON| Start/Stop| Red Light.

LINE INPUT CARD

4 Balanced line inputs on RJ45 connectors to be connected to an AES 3 input, output and 2 GPIO's.	
Software control over digital inputs is:	Level
	Phase reverse
	Routing: Left to left, Right to Right, Mono to left, Mono to right, Right to left, Left to Right.

LINE INPUT CARD

4 Balanced line inputs on RJ45 connectors to be connected to an AES 3 input, output and 2 GPIO's.	
Software control over digital inputs is:	Level
	Phase reverse
	Routing: Left to left, Right to Right, Mono to left, Mono to right, Right to left, Left to Right.

DIGITAL I/O CARD

4 Balanced line inputs on RJ45 connectors to be connected to an AES 3 input, output and 2 GPIO's	
Software control over digital inputs is:	Level
	Phase reverse
	Routing: Left to left, Right to Right, Monoto left, Mono to right, Right to left, Left to Right.
Software control over digital outputs is:	Routing: Left to left, Right to Right, Mono to left, Mono to right, Right to left, Left to Right.
	Level
	Dimming
	Phase reverse
	Talkback to the output
	Total Mute
The GPIO's can be GPI or GPO. Possible functionality:	Communication (GPI function), Channel on (GPI function)
	Start/Stop (GPO function), Red-light (GPO function)

ANALOG LINE OUTPUT CARD

Every RJ45 connector on the line output card holds a stereo balanced analog output and 2 GPIOs.

For each signal of a stereo digital output you have digital software control over:

	Routing: Left to Left, Right to Right, Mono to Left, Mono to Right, Right to Left, Left to Right
	Level
	Dimming
	Phase inverse
	Talkback to the output
	Total mute

The GPIOs can be GPI or GPO. Functionalities of the GPIO are under software control, for example: Communication (GPI function), Channel on (GPI function)
Start/Stop (GPO function), Red-light (GPO function)

CRM / PHONE OUTPUT CARD

The RJ45 connector A and B are line level stereo balanced outputs.

Connector C and D are headphone outputs.

Each RJ45 connector has 2 GPIOs.

For each signal of a stereo analog output you have digital software control over:

	Routing: Left to Left, Right to Right, Mono to Left, Mono to Right, Right to Left, Left to Right
	Dimming
	Phase inverse
	Talkback to the output
	Total level
	Total mute

The GPIOs can be GPI or GPO. Functionalities of the GPIO are under software control, for example: Communication (GPI function), Channel on (GPI function)
Start/Stop (GPO function), Red-light (GPO function)

COBRANET INPUT/OUTPUT CARD

The CobraNetTM card holds two RJ45 connectors that carry CobraNet data over Ethernet (level 2).

CN A should be connected to your audio-network.

CN B may be used for a redundant connection.

Over the CobraNet connection you can send and receive multiple audio channels, the number of channels (8, 16 or 32 send and receive) dependson the selected CobraNetTM card, see other specifications in the brochure.

For each signal received from CobraNetTM you have digital control over:	Level
	Phase inverse
	Routing: Left to Left, Right to Right, Mono to Left, Mono to Right, Right to Left, Left to Right
For each signal sent to CobraNetTM you have digital control over:	Routing: Left to Left, Right to Right, Mono to Left, Mono to Right, Right to Left, Left to Right
	Level
	Dimming
	Phase inverse
	Talkback to the output
	Total mute

With D&Rs CobraNetTM Manager Software you can visualize and control/plan/schedule the CobraNetTM audio network.

With this card we always deliver a light version of thissoftware. (4 devices max.)

ENGINE CARD

The engine is the main controller of the rack system. On this card all information for the rack is processed.

The RJ45 Connector is your gateway to the Ethernet switch that is connected to all MambaNetTM compatible devices.

For service only the following interface connectors are available: RS232 - VGA - Keyboard - Mouse - USB

On the BNC connection you can connect a word clock output signal or a word clock input signal.

The input signal can be terminated with 75 Ohm using the latching switch. By plugging a DSP card in the I/O rack you add mixing capabilities to your matrix.

In combination with the engine card you create an advanced mixing console.

The DSP card processes 64 mono input channels to 32 busses and 8 monitoring busses.

On an input channel the following processing is available:	Low cut
	Gain
	EQ
	Dynamics
	Level meter
	pre/post switching

You can insert a maximum of 4 DSP boards. This gives you a fascinating mixing console of 256 mono input channels to 32 busses (and 8 monitoring busses).

ADAT INPUT/OUTPUT CARD

The ADAT input/output card hold two optical connectors receiving multi channel digital audio and two optical connectors for transmission of multi channel digital audio.

For each signal of a ADAT input you have digital control over:	Level
	Phase inverse
	Routing: Left to Left, Right to Right, Mono to Left, Mono to Right, Right to Left, Left to Right
For each signal of a ADAT output you have digital control over:	Routing: Left to Left, Right to Right, Mono to Left, Mono to Right, Right to Left, Left to Right
	Level
	Dimming
	Phase inverse
	Talkback to the output
	Total mute

AUDIO SYSTEM SPECIFICATIONS

Input/Output cards

MIC inputs
Electronically balanced

Input impedance 2k Ohm

Input sensitivity -70dBu up to +20dBu (PAD) (PGA2500)

Dynamic Range 118dB (AD converter PCM4202)

Total Harmonic Distortion plus Noise -108dB (30dB gain)

CMRR MIC inputs: 85dB @ 1kHz, maximum gain

Frequency response 20Hz - 20kHz ± 0.1dBr (sample rate 48kHz)

Crosstalk 1kHz < -118dBr

Phantom is switchable +48 Volts

Transformer balancing is optional on the break-out panel

4xGPI, 4xGPO each card

Line inputs
Electronically balance

Input impedance 10k Ohm

Input sensitivity +6dBu, maximum input +26dBu (+/- 20dB gain range).

Dynamic Range 118dB (AD converter PCM4202)

Total Harmonic Distortion plus Noise -105dB (≈0.0005%)

CMRR Line inputs: 30dB @ 1 kHz

Frequency response 20Hz - 20kHz ± 0.1dBr (sample rate 48kHz)

Crosstalk 1kHz < -123dBr

Transformer balancing is optional on the brake-out-box

4xGPI, 4xGPO each card

Digital Inputs
AES/EBU (AES3) or S/P-DIF Transformer balanced

Input Impedance: 110R Ohm / 75R Ohm (jumper setting)

Differential input sensitivity 200mV

Dynamic Range (sample rate converter) 144dB

Total Harmonic Distortion plus Noise (sample rate converter) -140dB(0.00001%)

Frequency response 20Hz - 20kHz ± 0.1dBr (sample rate 48kHz)

16/20/24 bit, 32 kHz to 96 kHz (optional built in sample rate converter)

4xGPI, 4xGPO each card

Phones Output
Stereo unbalanced

Output impedance 5R Ohm.

Nominal output level +6dBu, maximum output +26dBu

Max. Output power, 1W into 32R Ohm, 80mW into 600R Ohm

Dynamic Range 114dB (AD converter CS4385)

Frequency response 20Hz - 20kHz ± 0.1dBr (sample rate 48kHz)

Line Outputs
Electronically balanced

Output impedance 56R Ohm.

Nominal output level +6dBu, maximum output +26dBu

Dynamic Range 118dB (AD converter PCM4104)

Total Harmonic Distortion plus Noise -100dB (0.001%)

Frequency response 20Hz - 20kHz ± 0.1dBr (sample rate 48kHz)

Crosstalk 1kHz < -118dBr

Transformer balancing is optional on the brake-out-box

4xGPI, 4xGPO each card

Digital outputs
AES/EBU (AES3) or S/P-DIF Transformer balanced

Output Impedance: 110R Ohm/75R Ohm

Output level: AES3 5 Vpp, S/P-DIF 1Vpp

16/20/24 bit, 32kHz, 44.1kHz ore 48kHz

Total Harmonic Distortion plus Noise -140dB(0.00001%)

Frequency response 20Hz - 20kHz ± 0.1dBr (sample rate 48kHz)

4xGPI, 4xGPO each card

GPIOs
All GPO's are by opto isolated relays able to handle a maximum of 50V at 200mA or 5V TTL 560R (8mA) out

All GPI's have a 5V TTL 100kOhm circuitry. GPIO-MIC has a 5V/56Ohm LED driver circuit

DSP Processing

EQ is 6 band, any band can perform one of the following functions/specifications:

Off :	no function
High Pass Filter :	+/- 18 dB (10Hz up to 20 kHz shelving/bell/notch), Q: 0.1 to 10 variable.
Low Shelve :	+/- 18 dB (10Hz up to 20 kHz shelving/bell/notch), Q: 0.1 to 10 variable.
Peaking :	+/- 18 dB (10Hz up to 20 kHz shelving/bell/notch), Q: 0.1 to 10 variable
High Shelving :	+/- 18 dB (10Hz up to 20 kHz shelving/bell/notch), Q: 0.1 to 10 variable
Low Pass Filter :	+/- 18 dB (10Hz up to 20 kHz shelving/bell/notch), Q: 0.1 to 10 variable
Band Pass Filter :	+/- 18 dB (10Hz up to 20 kHz shelving/bell/notch), Q: 0.1 to 10 variable
Notch Filter :	+/- 18 dB (10Hz up to 20 kHz shelving/bell/notch), Q: 0.1 to 10 variable
DYNAMICS :	Interactive one knob control of threshold, compression ratio, expander ratio as well as attack and release times.
Processing :	32 bit floating point
Channels :	32 stereo channels per DSP card.
Busses :	16 stereo mixing busses, free assignable Prog/CUE/Aux etc. etc.
Monitor busses :	4 stereo monitor busses per DSP card.

Additional information:

• By configuration its possible to create more separate mixers, for example two consoles of 16 stereo channels to 8 stereo mixing busses, 2 stereo monitor busses.

• A maximum of 4 DSP cards may be inserted giving you a mixing console of 128 stereo channels, 16 stereo mixing busses and 16 stereo monitor busses.

Module processing:	Gain
	Low cut
	Insert
	6 bands full parametric EO
	D&R designed one knob dynamics
	16 buss sends pre or post fader

OVERALL

Level: 0dBu=0.775Vrms	Clock: Sample rate: 32kHz, 44.1kHz, 48kHz, +/- 20ppm(internally synchronized)	Power supply: NeutrikTM PowerConTM
0dB internal = -20 dBFs	External sync: 32kHz, 44.1kHz, 48kHz +/- 50ppm	(delivered in the package).
	Jitter max 150pSec	100-240 Volt, 50/60Hz (1.7A Max)