

TEKTON 32

SUPER-COMPACT, MODULAR, CUSTOMIZABLE NETWORKABLE 5.1 SURROUND AUDIO CONSOLE



The Surface

Wheatstone's Tekton 32 audio console is a full-featured IP audio console that packs latest IP audio innovations into a super-compact frame that fits even the most stringent television applications and budgets.

Tekton 32 gives you 32 input channels (layered on 16 physical faders) and a ton of flexibility via the most advanced and reliable IP audio network in broadcast...all in a 39" x 17" x 3½" frame.

At home in any broadcast environment – news rooms, remote vans or sports venues, production houses – this sleek IP audio console has dedicated faders for eight subgroups and two masters along with 32 input channels, controllable by 16 physical faders.

All 32 channels can integrate seamlessly with major production automation systems.

Tekton 32 is based on WheatNet-IP, an audio services network that utilizes Internet Protocol (& AES67) to enable audio to be intelligently distributed to devices across scaleable networks.

With all I/O managed through the WheatNet-IP audio network, this console/control surface has no limitations with fixed connection points on the console chassis itself. Tekton 32 has access to all sources in the network and any channel can connect to any audio source or destination, using any preferred audio format at any time, whether it's HD/SDI, AES, MADI, AoIP, Analog or TDM. Unrestricted routing means being able to have all faders available to dial up whatever source you

need; the days of having to block out channels based on input type are a thing of the past, as is having to repurpose inputs because of physical chassis limitations.

Tekton 32 provides access to all resources in the network through a powerful touchscreen-enabled graphical user interface with intuitive menu for adjusting EQ, dynamics, setting talkback, configuring mix-minus feeds and bus matrices, muting mic groups, and managing sources and destinations. Monitors are user-supplied. Per-channel OLEDs display all relevant editing and operating functions at a glance.



- 16 Physical Input faders on 2 Control Layers, providing 32 mix channels
- 8 Subgroups (Mono, Stereo, or 5.1)
- VCA Groups
- 8 Dedicated faders to control Subs and VCAs
- 16 Aux Sends
- 16 Dedicated Mix Minus Busses (in addition to the individual channel mix minuses)
- Master 5.1 Output Buss
- Master Stereo Output Buss

- Control Room, Studio 1, and Studio 2 Monitor Outputs, each with 16 Source Presets
- Routable Mix Minus Output w/ TB Interrupt for each Input Channel
- Routable Track Output for each Input Channel
- Programmable (Wild) Switches – 2 per input, 3 Global (in Central Panel)
- Processing, applicable to all inputs and buss outs:
 - 4 Band Parametric EQ
 - Hi/Lo Pass Filters
 - Compressor/Limiter
 - Expander Gate
 - Programmable Delay (up to 20 Frames per channel)
 - Built-in direct and HDMI outputs to drive external touchscreen monitor

- Metering
 - Prefader Input Level Meter on each Channel OLED
 - Peak/Average Metering on Central TouchScreen for all Buss Outputs
 - BS1770-3 Loudness Meter on Central TouchScreen
 - Gain Reduction metering on Master Outputs
- Automixing – 16 Channel Automixer with 4 Group Assigns
- Automation Control – interfaces with all major newsroom automation systems
- Integrated Audio Clip Player
- IP Networking – complete integration with Wheatstone AoIP Network (WheatNet-IP)
- AES67 and SMPTE 2110 ready
- Compact Footprint - 39”w x 17”d x 3½”h (at rear)





Tekton 32 packs 32 channels and the latest IP audio innovations into a 39" frame.



The Details

everything you need to mix - right there at your fingertips

Input Module

ADJUST – Adjust knob provides both source select and gain trim functions for each input channel

SEL – this switch Selects the channel for editing / parameter changes

TB – this switch interrupts the channel mix-minus output with the designated talkback microphone

CUT – the channel ON/OFF switch

AUTO – assigns the channel to the onboard 16 channel Automixer

WILD 1 & 2 – two programmable switches that can invoke a number of different surface functions

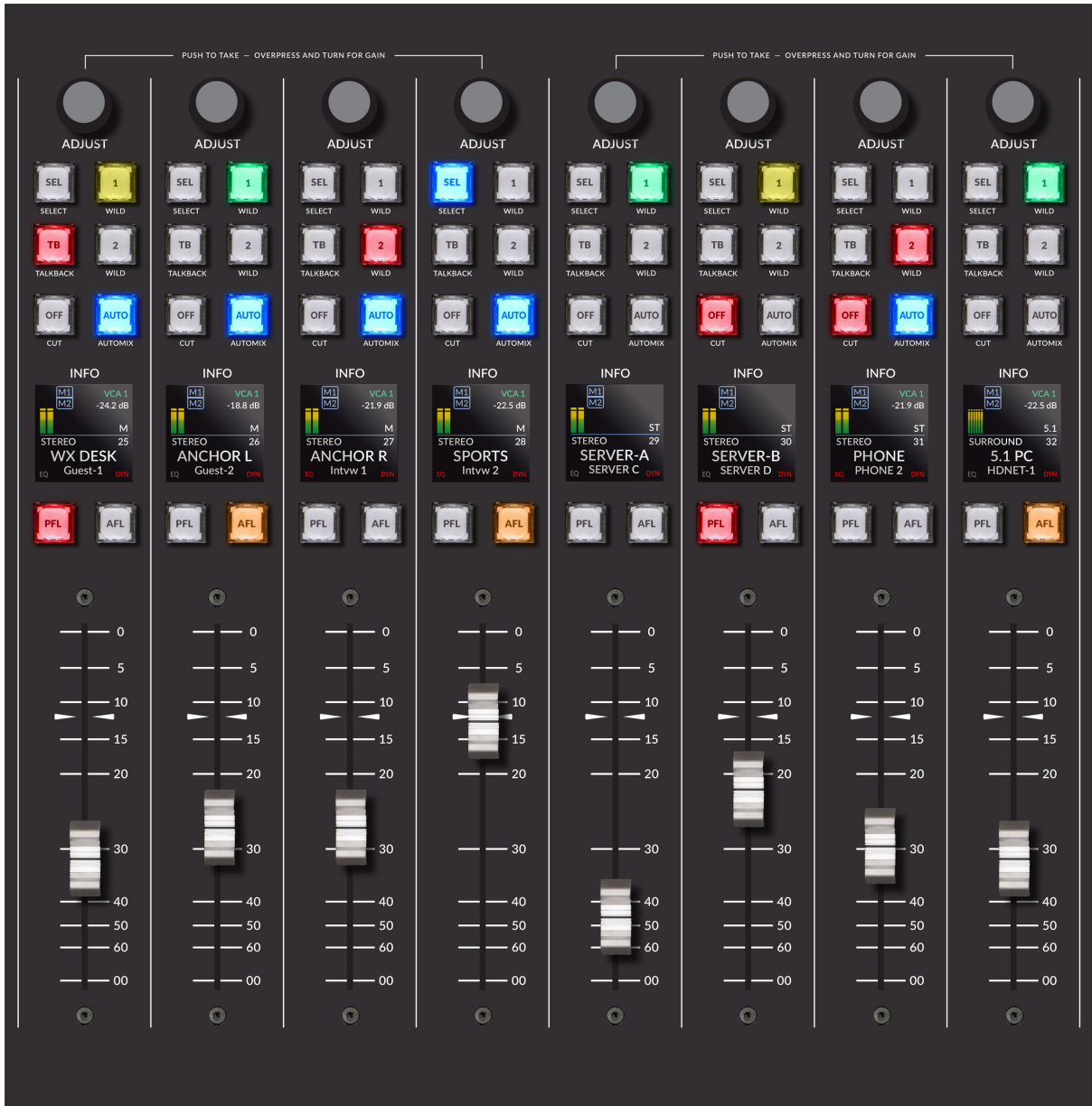
OLED display – provides channel specific information:

- Layer 1 Source
- Layer 2 Source
- Prefader Input level Meter
- VCA Group Assignments
- Gain Setting
- Channel Mode
- Channel Muting Status
- Master Buss Assignments
- EQ/Dynamics In/Out Status

PFL – the Pre-fader listen switch (AKA Cue)

AFL – the after fader listen switch

100mm Motorized Input Fader



The Details

everything you need to mix - right there at your fingertips

Master Module

SUBGROUP/VAC Faders:

ADJUST – provides Destination control for the Subgroup Output signal

SEL – Selects this subgroup for editing / parameter changes

TB – Interrupts the subgroup output with the designated talkback mic.

CUT – the Subgroup ON/OFF Switch

PFL – Pre Fader Listen for this Subgroup

100mm Motorized Fader

Master Faders:

ADJUST – provides Destination control for the Master Output signal

SEL – Selects this Master for editing / parameter changes

CUT – ON/OFF switch for this Master

OLED Display – shows parameters related to this Master

PFL – Pre Fader Listen for this Master

100mm Motorized Fader

Monitor Section:

CR SEL – selects this monitor for parameter changes, invokes Monitor pop up screen

OLED – displays current monitor source, monitor mode, muting status

AFL/PFL Clear – clears all inputs to the PFL/AFL system

ADJUST – used for parameter changes on the Monitor pop up screen

PFL/AFL – level control for the PFL/AFL output

CR – the Control Room Volume control

DIM – Reduces the CR output by a programmable amount

USB ports – used for saving configurations and storing audio files for the Integrated Clip Player

SEL – selects the Studio Monitor (1 or 2) for parameter changes, invokes monitor pop up screen

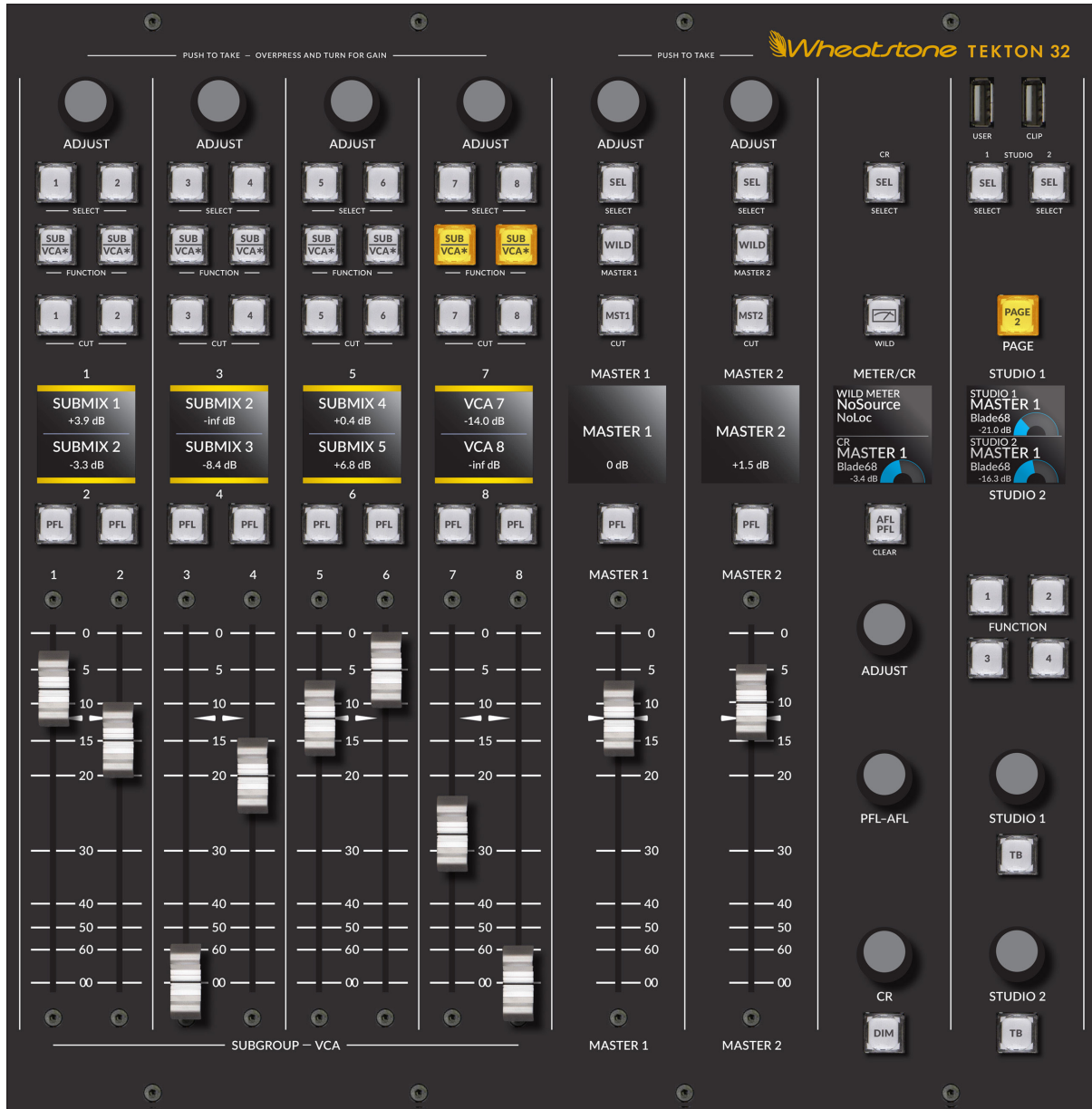
PAGE – selects between two banks (layers) of faders.

OLED – displays both ST1 and ST2 Sources and Mode settings

FUNCTION – programmable buttons

Studio 1 and 2 level controls

Studio 1 and 2 TB – interrupts the normal Studio output with the designated talkback mic signal



Tekton 32's Interface is Dynamic and Touchscreen Enabled

The optional display on Tekton 32 is a touch-enabled LED that gives you dynamic information about any and all functions. This reflects whatever actions you are applying to the console and updates in real time with lightning fast refresh rates. This touchscreen allow you to use standard pinch and zoom gestures you are familiar with.



-7.4 dB

INPUT 2 COMP THRESH

DYNAMICS

GATE IN	OPEN: 3.50 mS	CLOSE: 100 mS	THRESH: -34.9 dB	HANG: 100 mS	DEPTH: +5.9 dB
COMP IN	ATTACK: 30.0 mS	RELEASE: 150 mS	THRESH: -7.4 dB	RATIO: 3.0:1	MAKEUP: +3.4 dB

BS.1770-3 LOUDNESS MONITOR

-27.3 LKFS

SOFT REF LOUD

LOUDNESS RANGE (LU)

00:00 PROGRAM DURATION

-24 dB LKFS A/85 MASTER 1

LUREF MODE SOURCE

MASTER 1

DYNAMICS

EQUALIZATION

PAN

AUX SENDS

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

BL01UMXA

MASTER 2

CLIP PLAYER
AUTO MIX
INPUT
EQ
DYN
5.1 PAN
AUX
REVERSE ROUTE
BUS MINUS
X/Y ROUTER
MXM MASTERS
AUX MASTERS
BUS ASSIGN
EVENTS
SELECT
HOME
?

STEREO 28

SPILLED

DELAY: OFF GAIN: 0 dB

MASTER ASSIGN

MSTR 1 MSTR 2

EQ

DYNAMICS

AUX SENDS

SPORTS

V+ L R

PHANTOM

STEREO

LEFT

RIGHT

MONO

BLEND

MODE 2

OFF

GAIN 0.0 dB

DELAY 0 mS

PAN/BLEND

BUS MINUS 28

NoDest DESTINATION

Default BASE MIX

-10.3 dB

BUS +

DIR OUT

PRE FADER

PRE ON

dBfs

OUT AFL TALKBACK

TRACK 28

NoDest DESTINATION

+1.3 dB

PRE FADER

PRE ON

MONO SUM

dBfs

ON AFL TALKBACK

MASTER 1

MASTER 2

CLIP PLAYER
AUTO MIX
INPUT
EQ
DYN
5.1 PAN
AUX
REVERSE ROUTE
BUS MINUS
X/Y ROUTER
MXM MASTERS
AUX MASTERS
BUS ASSIGN
EVENTS
SELECT
HOME
?

Gibraltar IP Mix Engine with WheatNet-IP

The processing power behind Tekton 32 – brains, brawn and futurability

Designing from the ground up meant considering not only how things function but where they live. Given the technology we have today, and considering what's on the horizon, it only made sense to take a completely modular approach. This provides us with the ability to create incredibly powerful devices with unimaginably small footprints. Since all function is in soft/firmware, it also gives us the capability to ensure that your investment in our technology today will last well into the future. In other words: Wheatstone = incredible ROI.



Meet Gibraltar

The Gibraltar® IP Mix Engine is the powerhouse of Wheatstone's AoIP consoles. Its modular design uses multiple Gibraltar DSP cards to provide the mixing, bussing, I/O, and processing power which the control surface presents to the operator. The amount of DSP processing available can be scaled to the size and complexity of the intended installation and to allow for future expansion.

The Gibraltar IP Mix Engine has an internal, modular power supply and has room for a second one for full power redundancy. A "hot standby" Gibraltar DSP card can also be installed and will seamlessly take over the functions of any failed DSP card.

More than enough DSP to do the job

There are 1,024 channels of processing available. Sound like a lot? It is! For a modern studio, consider that for every input you'll need a minimum of 6 channels of processing for 5.1 surround as well as 2 channels for stereo processing. Add to that processing for all major output and monitor busses (stereo and surround mains, submixes, aux sends, mix-minus, tracks, control room, studios and headphone feeds) and you'll see that it adds up to a lot.

Extreme flexibility

With over 10,000 audio input sources simultaneously available on the network, you'll never have to repurpose your inputs again. This kind of unrestricted access means your throughput is greatly streamlined AND your flexibility options are SIGNIFICANTLY increased.

No blockouts

Of course having a ton of simultaneous inputs for a single production is not an every day occurrence, but since you have completely unrestricted integrated router flexibility, having all faders available to dial up whatever mix you need means the days of having to block out channels based on input type are a thing of the past.

The Gibraltar IP Mix Engine provides Wheatstone's line of audio consoles with direct connectivity into WheatNet-IP, an AES67 compatible IP audio network with all the necessary broadcast audio tools and controls integrated into one robust, distributed network. Among the benefits of WheatNet-IP networked audio consoles are:

- With all I/O managed through the IP network, the IP console has no limitations with fixed connection points on the console chassis itself. Any channel can connect to any audio source, using any preferred audio format at any time, whether it's HD/SDI, AES, MADI, AoIP, Analog or TDM.
- No soundcards needed. Listen to any crosspoint in the network and move audio around the studio, without a single soundcard.
- Share VTRs, mics and mixing consoles across one common IP platform, whether for live broadcast or post-production.
- Based on native IP, for directly transferring multiple stereo channels from the audio workstation to the console with no A/D/A conversion required.
- Direct connectivity to automation. Talks IP to all of the commonly used production automation systems. No serial data conversions needed.
- 24/7/365 reliability. Each amazing I/O BLADE in the WheatNet-IP network is self-aware, and can reconfigure itself in an emergency. In fact, each BLADE in the network can recover settings for your entire studio operation!
- Changes are a lot easier. Reuse studios for multiple purposes. Instantly change mic feeds, IFB connections and processing settings, either on the fly or using presets.
- Finally, a way to control audio. Logic controls follow audio on the same cable. Pick up a mic feed and the processing settings for that mic in Studio A same as in Studio B.
- AES67 compatible.
- All sources in the network are accessible, and every destination visible from the console.

Gibraltar IP Mix Engine features:

- IP network interface and mix engine for Wheatstone's IP networked consoles
- Up to 1024 DSP processing signal paths (any combination of 5.1, stereo, and mono channels)
- Can apply processing functions to 768 input paths and 256 mix output paths simultaneously
- Flexible mixing architecture allows over 500 mix busses
- 4 band fully parametric EQ with HF/LF peaking or shelving
- 3 parametric filters
- Parametric compression, limiting, and gating
- 16 control channels for keying/ducking/sidechain applications
- Panning and surround imaging control
- Talks native IP to standard production automation systems. No serial data conversions required.
- Individual input and output delay capability; up to 660mS per path
- AES67 compatible

Why WheatNet-IP Audio Networking?

WheatNet-IP is more than just an IP network that routes audio within a TV facility. It is a full system that combines a complete audio tool kit, an integrated control layer, and a distributed intelligent network that takes full advantage of IP audio.

By combining these three components seamlessly into one system, we can deliver the following:

- A distributed network of intelligent I/O devices to gather and process audio throughout your facility
- Control, via both hardware GPI and software logic ports, that can be extended throughout the plant as well
- Rapid route changes via both salvos and presets to instantly change audio, mic control, and tallies between sets
- A suite of software apps and third party devices that all communicate via the common gigabit IP interface
- True plug-and-play scalability – devices are easily added to the IP network
- Triggered crosspoints to create routable IFB throughout the facility

Extending Your IP audio network

There's a world of Wheatstone BLADE-3s for you to put to work.



I/O BLADE-3s

I/O BLADEs are access points on the WheatNet-IP Intelligent Network, converting each hardware physical input – audio or logic – to a data stream on the network, and converting data streams to hardware digital outputs. They provide the means of interfacing and controlling all of the audio equipment on your network.

The IP88A (analog), IP88D (digital), IP88AD (analog/digital) and IP88M (mic level) BLADEs handle your standard audio I/O requirements. Each has 8 stereo channels, 16 mono channels, or any combination totaling 16 discrete channels. The A/D versions are half analog, half digital. And the mic BLADE has 8 XLR inputs with high-quality mic preamps.

Audio Processing BLADE-3s

Placing a processor everywhere you'd like one has been costly and impractical. Until now. One Aura8-IP gives you up to eight processors to use as you wish. Use it as a standalone processor with analog and digital inputs or make it a part of your WheatNet-IP network. Either way, the Aura8-IP is a powerhouse.

The M4-IP Microphone Processor BLADE combines four high-quality microphone preamps, four channels of Vorsis embedded microphone processing, and a WheatNet-IP BLADE interface, allowing you to place four microphone inputs anywhere in your WheatNet-IP Intelligent Network. The preamps and processors are accessed and controlled from any point on the network via its Windows-based GUI.

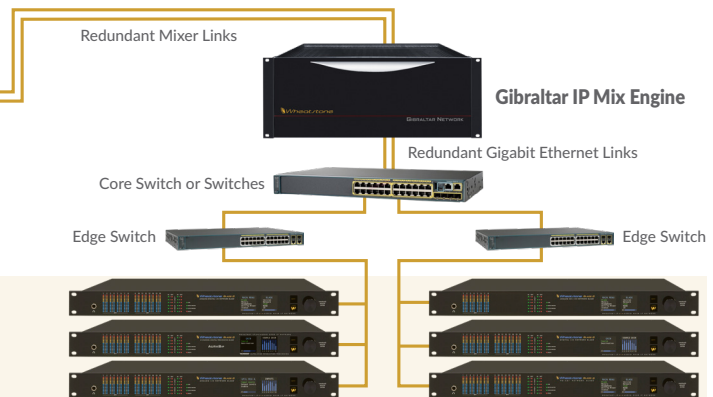
Special Purpose BLADE-3s

Another I/O BLADE is the MADI BLADE, which converts a 64-channel MADI input to data streams on the network, and converts data streams to 64-channel MADI outputs.

The LIO-48 Logic BLADE provides 48 universal logic I/O ports, each individually configurable, for turning devices on or off by time or event, for automatically adjusting the audio processing settings when a certain mic turns on, and for any other logic control you need in your studio operation.

Our HD-SDI BLADE de-embeds multiple audio channels from HD-SDI streams so you can mix, process or simply route audio to your console for final broadcast. It is capable of de-embedding up to four HD-SDI streams, and up to 8 AES/EBU pairs (16 audio channels) per stream.

Wheatstone Television Audio Console(s)



Distributed BLADE Network:

- Analog I/O BLADE
- Mic Level Input BLADE
- Combo Analog Digital BLADE
- WNIP Software Driver BLADE
- AES I/O BLADE
- HDI/SDI De-embedder BLADE
- Aura-8IP-3 Audio Processing BLADE
- MADI BLADE

Failsafe Redundancy

It's all about staying on the air - every second of every day - without fail

Wheatstone's experience in designing audio consoles for all broadcast realms as well as pioneering networking comes together in the Tekton 32. More power to handle modern needs with a user interface that is pure joy to get your hands on. And with Wheatstone's built-in safeguards, you can rest assured that you'll always be on the air...with or without fail.

Failsafes: Keeping You Live

Redundant Sources



With Pages, you can easily assign redundant sources to each fader so, if the primary feed goes silent, an operator need simply press the second page to recover audio. Because the system supports such a vast number of inputs, there's room to provide these redundancies without the need for patching or external switching.

Redundant Components



If a DSP chip fails in a traditional console, it tends to take the entire card with it, leaving the board dead. Thus, having a backup DSP chip on the same card is not really a solution. With Wheatstone, a hot-spare DSP card can be utilized with automatic failover in the event of a problem with the primary engine. Because any source can be assigned to any fader, even catastrophic damage to a fader module on the console (as from a drink spill or falling object) only means that the damaged faders are out of action. The sources can be rerouted to other faders, and the show goes on.

Redundant Power



Gibraltar Network cage utilizes internal modular power supplies and can accommodate up to two units for redundancy.

Plenty of I/O Wherever You Need It

The optional 4RU StageBox One is for extending console I/O, providing 32 mic/line inputs, 16 analog line outputs, and 8 AES3 inputs and 8 AES3 outputs as well as 12 logic ports and dual Ethernet ports. StageBox One works with all WheatNet-IP audio networked consoles.







Designed and built by
Wheatstone Corporation
600 Industrial Drive | New Bern NC 28562-5440 USA
phone 1.252.638-7000 | fax 1.252.635-4857
wheatstone.com | sales@wheatstone.com

 **Wheatstone**
BROADCAST AUDIO PERFECTIONISTS®