Vega
A new generation of routing and processing

sam

Vega range

Routing and processing for all applications

The Vega router series is a powerful suite of routers that delivers superior functionality at price points that suit broadcasters' budgets. The range is divided into the **Vega 10 Series** and the **Vega 100 Series** for a total of four models. They offer different physical interfaces that are all simple to configure and because all the models are easy to install, choosing the appropriate model for your routing needs is never difficult.

Vega is ideal for small to mid-size applications. It comes in a series of frame sizes, from simple fixed hardware for smaller budgets to flexible dynamic routing architecture for more complex productions. Even if you're a novice in the field, Vega's simple design makes the routers straightforward and easy to operate.

Key features of the Vega Series include:

• Video routing

• Video routing with clean quiet switching technology, for smooth fade program transitions

• Hybrid audio routing with de-embedding, embedding and discrete audio

• MADI audio inputs and outputs

• Unique Input Embedding capability

• Line synchronizers

Vega 10 Series
A a powerful fixed 3RU mainframe with a smaller footprint for projects where space is of concern.

• Vega 30

Vega 100 Series
For more complex video and audio routing needs, the Vega 100 Series is modular, flexible, and fully redundant and configurable with asymmetric routing for both coax and fiber I/O.

• Vega 200

• Vega 400

• Vega 700

Vega. It sounds simple, but sometimes the simplest solution requires the best insight from the most creative minds.

Contents

The full Vega series is available with varying features and specifications

The table below highlights each Vega models attributes.

	Vega 30	Vega 200	Vega 400	Vega 700
Mainframe	3RU	2RU	4RU	7RU
Size Video	34 x 34	1 x 95 to 95 x 1	1 x 191 to 191 x 1	144 x 288 to 288 x 144
Size Audio	736 x 928	960 x 912		
Audio Routing	3 x 6 MADI	6 x 6 MADI		
Audio Interfaces				
MADI	3 in, 6 out	6 in, 6 out, or dual 3 in with auto failover, dual 3 out		
AES	----------	Up to 96 ports	Up to 192 ports	Up to 288 ports
Embedded	34 outputs with 16 audio channels on each	Up to 36 inputs and 33 outputs with 16 audio channels on each		
Processing				
Input Line Sync	----------	√	√	√
De-Embedding	√	√	√	√
Output Embedding	√	√	√	√
Output Line Sync	√	√	√	√
Clean & Quiet Switching Outputs	√	√	√	√

Applications

Vega delivers unmatched versatility. The product line accommodates every application from smaller startup projects to larger, more demanding productions, as shown in the graphic below.

Each router in the suite offers advanced features when compared to many of the traditional routers on the market today.
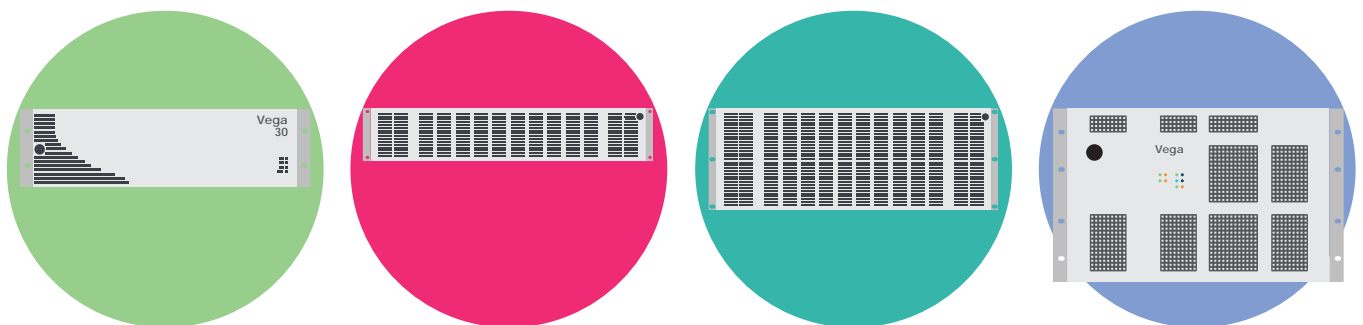
**Vega 30
Small Fixed**

Small trucks & studios
Head ends
Bay monitoring
Hub & spoke architectures
Theatres, HoW
High end leisure / Entertainment systems

**Vega 200
Small Flexible**

Small ENG trucks
Playout pods
Local news studios
Hub & spoke architectures
Signal / bay monitoring
Theatres, HoW
Corporate/finance
Rental & flyaway

**Vega 400
Medium Flexible**

Small/medium OB trucks
Studios
Playout
Hub & spoke architectures
Theatres, HoW
Corporate / finance
Rental & flyaway

**Vega 700
Large Flexible**

Medium / large OBs
Main facility routing
Studio complexes
Switching centers
Playout Centers
Large theatres
Finance houses
Rental & flyaway

The workflow diagram shows an example of a routing solution that illustrates Vega's features. Here we see a mix of audio and video feeds routed with synchronizers to manage timings, as well as embedded audio available on inputs, which is unique to SAM. Integration with third party audio mix desks is also available.

Vega 100 Series - Synchronizing, Hybrid Routing & Clean Switching
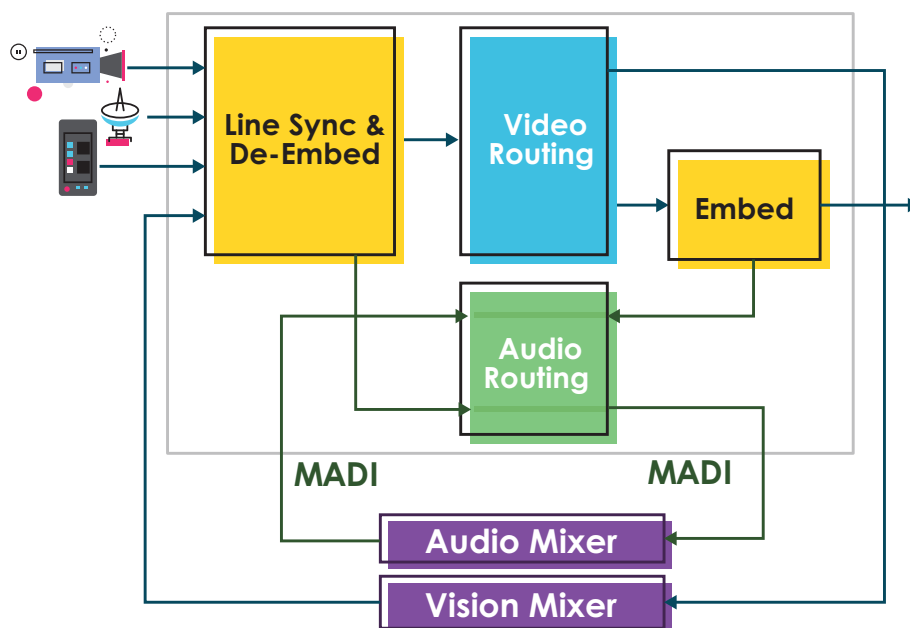

Routing flexibility

Matrix sizes from 6 x 6 to 144 x 288

Vega routes both video and audio simultaneously and intelligently. With the Vega 100 series, any port can be configured as input or output with a choice of coax, fiber or HDMI, which gives users the freedom to essentially customize their router to align with their specific needs. All inputs and outputs can be configured easily via the software 'Set Up' menu, which allows multi-format, multi-level routing in any combination for both video and audio. All routing in a single chassis simplifies system design and saves on space, power, and costs.

The Vega range has extensive redundancy options with dual redundant crosspoints, frame controllers, power supplies and fans. Future-proof and adaptable, the Vega suite is also equipped to handle 4K as standard to give broadcasters a simple transition when moving to 4K.

sam

Innovative next generation routing
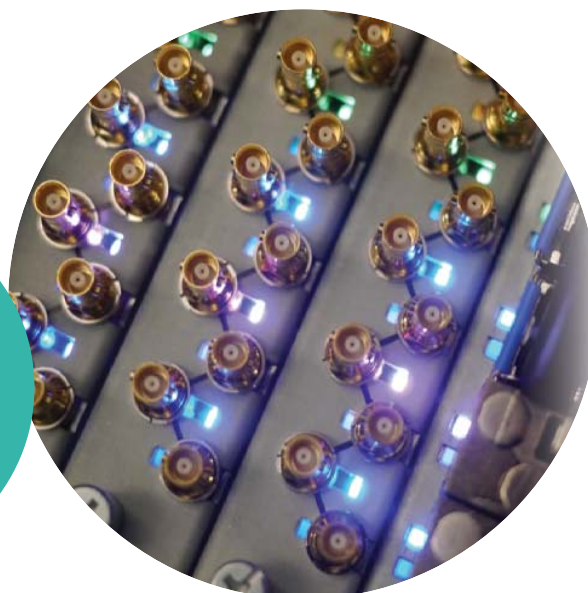
The Vega 10 Series

Vega 30

Features

- Simple video routing
- Video & audio routing
- Powerful processing
- Fast configuration
- Hardware, softpanel and remote control

Benefits

- Powerful processing capability at a very low cost
- Simple browser configuration
- Flexible control options
- User upgradable

The Vega 30 is available as a fixed non-modular 3RU frame with video and audio routing with clean and quiet switching. Its simple installation means its great for entry-level start-ups — whether they're in the House of Worship market, the conference and education space, or space-critical flyaway systems.

Vega 30 offers:

- Video and Audio routing

  - Clean and quiet switching for smooth transitions

  - De-embedding & embedding

  - MADI with full audio routing

- Mix any of these for ultimate flexibility

- Supports quad link co-timed switching as signal source or destination

The Vega 30 offers different options including:

- Audio routing (MADI and embedded)
- De-embedding and embedding for full hybrid routing
- Line synchronizing outputs
- Clean and quiet switching outputs for smooth program transitions
- Dual redundant PSU

Simplified Configuration and Control

The Vega 30 can be configured simply online via a web application.

When control is needed the Vega 30 offers;

- Browser control panel for routing and processing,
- Rollcall interface for Luna panel control,
- General Switcher (SW-P-02) and General Remote (SW-P-08) protocols on Ethernet,
- SNMP control (crosspoint setting) and monitoring (simple PSU/fan fail)

The Vega 100 Series

Vega 100 Series

Features

- Configurable inputs and outputs

- Mixture of SDI, HD, 3G, coax, fiber and HDMI

- MADI & AES audio – balanced and unbalanced

- Ultra-resilient – Redundant PSUs, controllers, crosspoints and fans

- A variety of control interfaces

- Fully modular with hot swappable cards, PSUs and fans

- SDI, ASI, 4K capable

Benefits

- Inherent flexibility in small & medium sized routing applications

- Zero compromise in resilience and redundancy

- Versatility and speed in system configuration

The Vega 100 series is suited to more complex productions that demand the flexibility to manage many different feeds quickly and to route instantly in the event of last-minute changes. It offers flexible frame designs with dynamic ports that can be configured as inputs or outputs.

Each router model offers the features below in any combination;

- Video routing

- Coax and fiber

- Audio routing (MADI and AES)

- De-embedding and embedding for full hybrid routing

- Synchronizing inputs and outputs

- Input embedding

- Clean and quiet switching for smooth program transitions on Input and output

With these functions, the Vega 100 series gives you a powerful option that enables your baseband infrastructure to include a mix of dynamic configurations of mixed video, audio, copper and fibre for both inputs and outputs.
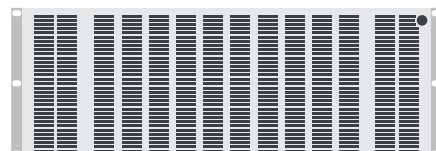
There are three rack sizes in the Vega 100 series, which means you can use the same modules throughout your application or you can standardize on one size throughout your facility.
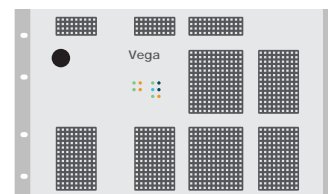
Vega 200

2RU
1 x 95 to 95 x 1 video
Square size: 48 x 48

Vega 400

4RU
1 x 191 to 191 x 1 video
Square size: 96 x 96

Vega 700

7RU
144 x 288 to 288 x 144 video
Square size: 216 x 216

The Vega 100 Series Input/Output Options:

1. Coax input / output – 12 channels

2. Fiber, coax or HDMI SFP I/O – 12 channels

3. AES balanced and unbalanced – 24 channels

4. Input processing – 9 channels

5. Output processing – 9 channels

6. MADI and audio routing – 6 x 6

Hybrid Video & Audio Routing

The Vega series is the ideal router solution for live production and OB facilities because it can interface with audio mixing desks, track swapping incoming feeds, route video and audio feeds all with clean and quiet switching.

Vega 10

The Vega 10 series offers a simpler solution for video and audio routing with its fixed inputs and outputs on a 3RU mainframe. Each audio input (embedded or MADI) can be both routed simultaneously with video feeds. Audio can be embedded on the outputs without the need of external equipment. This makes for a cost effective smaller router with a power level that most routers in its class can't match.

### Vega 10 Series - Video & Audio Routing
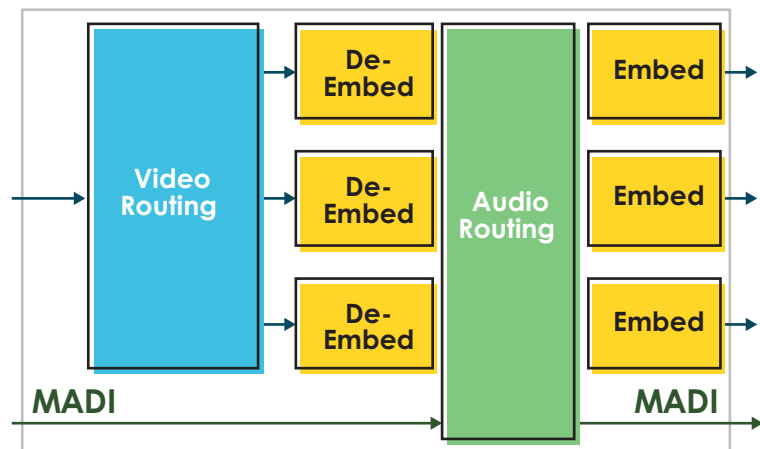
Vega 10 series has the ability to mix both video and audio feeds and embed audio on the outputs when required avoiding using external devices and increased expenditure.

Vega 100

The Vega 100 series can be equipped with any combination of video and audio modules. It will route any format of video and AES, MADI or embedded or compressed audio in any combination in a single frame, allowing multi-format, multi-level routing. For broadcasters, this means a uniquely flexible architecture for varying applications, such as if they're working in an OB environment, for example:

- De-embed audio on processing inputs

- MADI inputs (mixing desk interface)

- AES inputs and outputs

- Stereo routing with mono breakaway

- Input embedding

Vega 100 Series - Input Embedding & Audio Routing
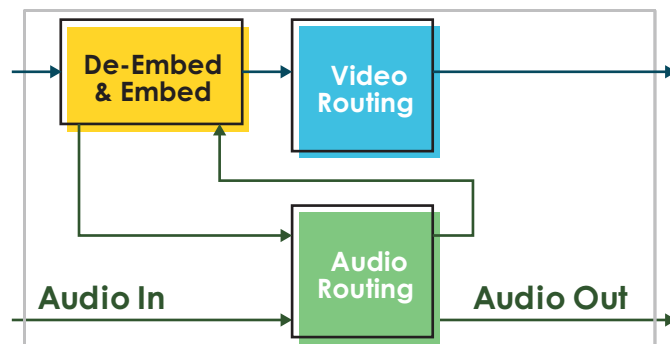
The Vega 100 series can embed audio on both inputs and outputs, allowing for multiple feeds to be configured accordingly. Input embedding is a unique feature of both Vega and Sirius 800. Programs with combinations of video and audio tracks can be created on a router input, rather than the output and wrapping external cables back around to an input. This saves space, power and cost.

### Vega 100 Series - Hybrid Video & Audio Routing
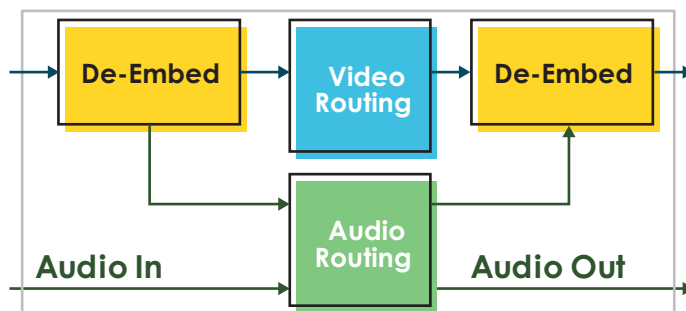
The Vega 100 series allows audio to be embedded on both inputs and outputs and it can simultaneously route video and audio. Totally flexible routing of video and audio, together with input embedding, means any signal workflow can be accommodated within the Vega.

Synchronizer and Clean Switching

The Vega range can be equipped with line synchronizer re-timing capability for inputs and outputs. On Vega 10 series, this is on outputs; on Vega 100 series, both inputs and outputs can be synchronized. This automatically manages any timing differences present on incoming signals, and allows timed signal switching in the router.

Clean and quiet switching (CQS) is available throughout the entire Vega range to give you smooth non-visible transitions, as well as to get rid of any noticeable audio clicks and pop interference that may occur on a router switch transition. It also ensures there is no disruption to the video data stream, therefore downstream equipment cannot be disturbed by the transition.

Vega 10 Series - Synchronizing & Clean Switching
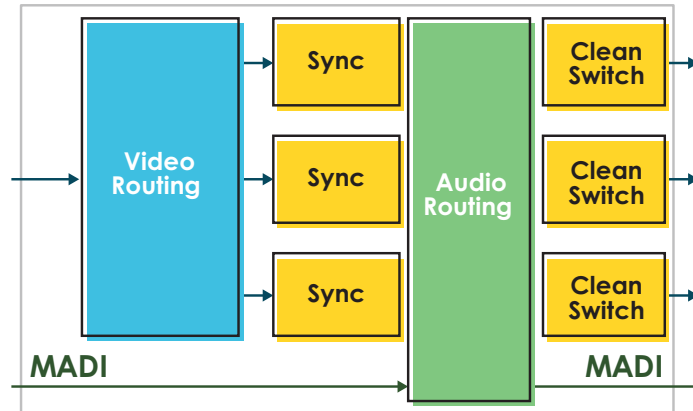
The Vega 10 offers full clean and quiet switching on the outputs, eliminating any doubt that there may be disturbance on downstream signals.

Vega 100 Series - Synchronizing, Hybrid Routing & Clean Switching
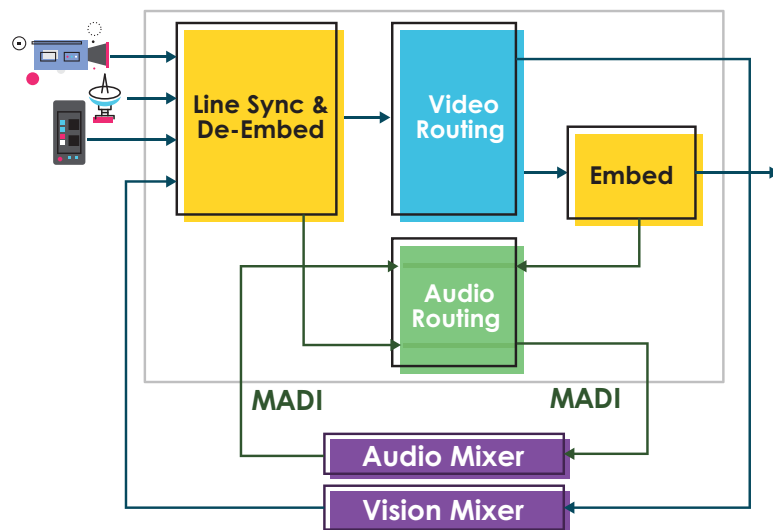
The Vega 100 offers synchronizers on both inputs and outputs for precise timing and offers full confidence with clean and quiet switching.

Control

The Vega series uses web-based control, softpanels and hardware panels to control each router function. A browser launched 'plug-and-play' GUI provides intuitive configuration and control via a PC. In addition,1RU and 2RU control panels are available for connection over fast Ethernet either directly or via standard hub and/or IP routing devices. Vega uses SAM's external control protocols which means third party control is easy.

Web-based configuration and software control panels

Hard panels

External & 3rd party controller

www.s-a-m.com