OMIX

OMIX is SAMIM's brand-new product line, offering FPGA-accelerated hardware in a novel 2RU blade-based form factor. It provides a wide range of functionalities applicable in SDI-based environments as well as hybrid or full-IP installations.

In the design of the OMIX product line, our guiding principles revolve around the following: First and foremost, we believe in creating a product that is both powerful and minimalistic. This balance ensures it wields the necessary capabilities without overwhelming the user experience. Secondly, the product is inherently software-defined, offering flexibility and adaptability to cater to diverse user requirements. It is also built upon the bedrock of the latest open protocols, ensuring interoperability and transparency. Moreover, we are dedicated to making OMIX cost-efficient and low-maintenance, recognizing the importance of practicality and sustainability. Lastly, it is imperative that our OMIX solution not only addresses today's needs but also remains future-proof, ready to embrace emerging challenges and technologies.

At a Glance

The OMIX platform fulfills a significant portion of the processing requirements, as well as the conversion or distribution of signals, within a live production chain. In this blade-based platform, up to three blades can be installed in each 2RU frame. The available blades include:

- The PSU blade is responsible for supplying power to up to five other blades.
- The signal converter blade can convert or distribute the signals very densely with five slots. Users can choose the required modules independently from available options, such as SDI-to-fiber, fiber-to-SDI, GPIO gateway, SDI distribution amplifier, etc.
- The SDI/IP processing blade.

The latter offers a wide range of functionalities, including IP gateway, format conversion, multiviewer, etc., by utilizing a diverse group of I/Os combined with loaded app images.

SDI/IP Processing Blade   Signal Converter Blade   Power Supply Blade
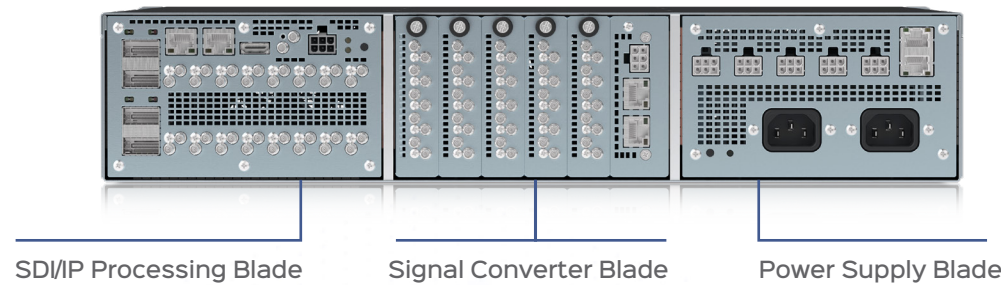
Flexibility.
Scalability.
Performance.
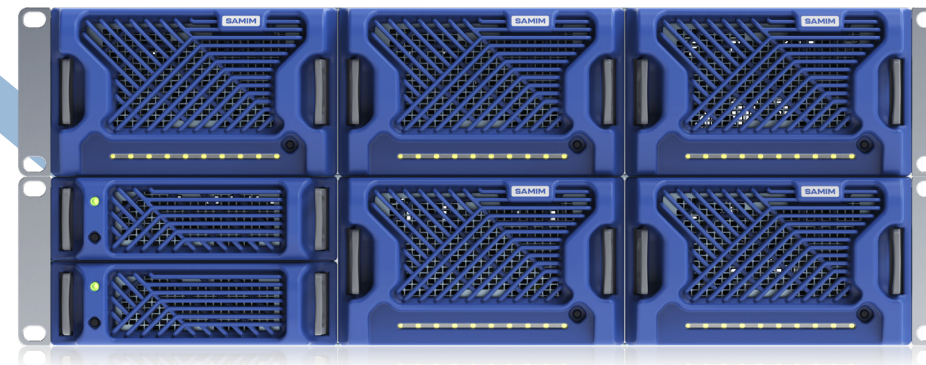
Replacable Fan Module

Hot-Swap Power Module

SAMIM
Media & Communication Technologies

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| 12G-SDI | Software-Defined | Over-IP |

- **Omnifunctional Device for The Next Generation of The Broadcast Live Production**

SAMIM

With over two decades of extensive experience in broadcast and media industry, Samim Group has emerged as manufacturer and developer of professional-grade hardware and software solutions that cater to Broadcast Production Infrastructure, Intercom Systems, and Media Business Automation. We remain attuned to the latest technological advancements, ensuring to deliver high-standard solutions and world-class products.

sales@samimgroup.com

2RU Passive Frame

- The DRM-2 frame is 2RU high, suitable for 19-inch racks. This passive frame can hold three different types of blades from Samim.

Components

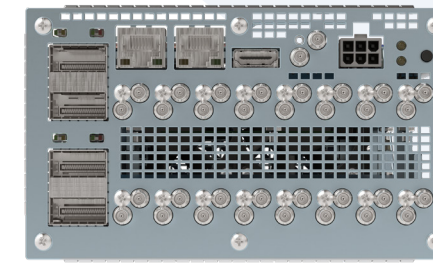### Arrange Blades as You Want

OMIX

Power Supply Blade

- The PSB-50 blade is designed for seamless installation within the DRM-2 frame, delivering essential power to other installed blades. This blade houses two hot-swappable AC to DC power supply modules, ensuring redundancy in operation.

- The AC to DC modules can be effortlessly inserted from the front, while on the rear panel, you'll find two AC inputs, five DC output connectors, and two network ports for monitoring purposes. The web interface provides comprehensive access to voltage and current data for inputs and outputs, along with the operational status of modules and fans.

- Furthermore, the PSB-50 boasts attributes such as high efficiency and robust protection mechanisms against short-circuits, over-voltage, overloads, and over-temperature scenarios. It also complies with electromagnetic compatibility standards.

## Omnifunctional Device for The Next Generation of The Broadcast Live Production

X42 SDI / IP Processing Blade

- The OMIX X42 SDI / IP processing blade is built upon advanced FPGAs and a software-defined architecture. This versatile blade is designed to cater to a wide array of live production applications in accordance with the latest open standards. This architecture, combined with the IP infrastructure, delivers the much-needed flexibility, scalability, resilience, and agility required for modern installations.

- On the rear of the device, you'll find a diverse array of ports, including four 100G Ethernet ports, 32 bi-directional mini-BNC ports supporting 12G-SDI, DC power input, two redundant network ports for out-of-band control, Bi-/Tri-level reference input. This blade, compatible with the DRM-2 frame, also features a front-accessible replaceable fan module, status LEDs on both the front and rear panels, and call buttons for device identification in the monitoring software.

- Each "App Image" loaded onto this blade can

customize the configuration of the mini-BNCs, depending on the app-specific requirements. In general, inputs and outputs support single-link 12G, 3G, HD, and SD formats. Synchronization can be achieved through reference input or the PTP protocol.

- Users have the option to monitor and configure the device through the web interface, REST-API, or AMWA NMOS, allowing seamless integration into the SAMIM Broadcast Controller System or other third-party applications.

- This blade offers the flexibility to function as an SDI processor (for tasks such as multi-channel format conversion, frame synchronization, delay adjustment, and multiviewer), a hybrid processor (serving as a gateway with frame synchronization, distributed frame-accurate routing), or an ST2110 stream processor (without traditional SDI inputs and outputs, for tasks like synchronization, format conversion, color space conversion, multiviewer).

5-Slot Signal Converter Blade

- The SCB-50 product is designed to fit into DRM-2 frames, accommodating up to five modules of various types. It allows for easy monitoring and configuration of the installed modules through a web-based interface or API.

- Within this product, you have the flexibility to install various digital signal distribution amplifiers, fiber converters, and GPIO gateways. Importantly, the installation or replacement of modules can be performed without any disruption to the functionality of other modules already in place. Additionally, this blade offers easy front fan replacement.

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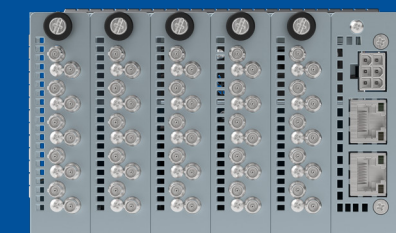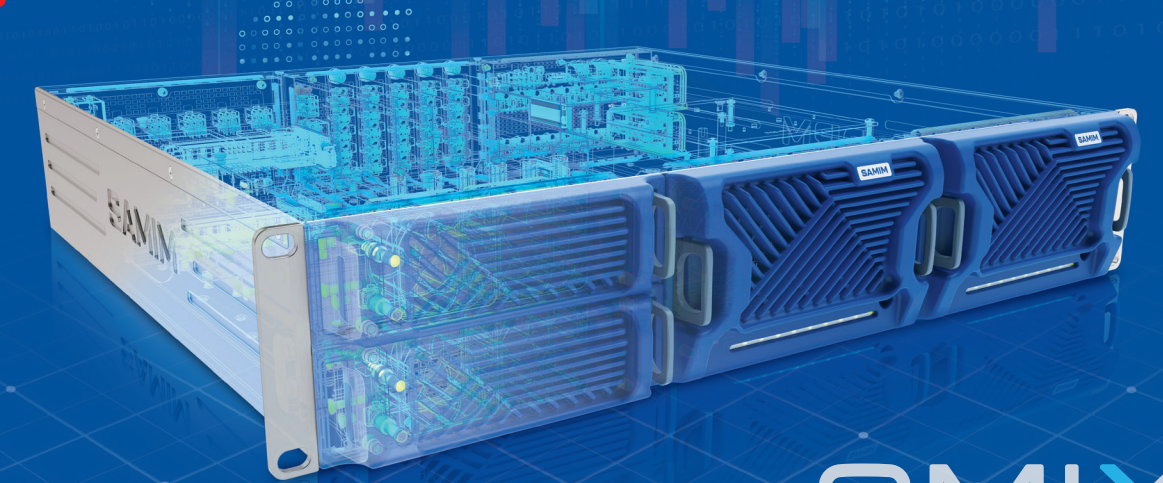
Highlights

12G-SDI
Support for 12G /3G/HD/SD-SDI formats

100 Gbps
Line-rate 100GE packet processing

Open Standards
Compliant to ST2110, JT-NM, NMOS

PTP
Synchronization through ST2059 as well as legacy BB / TLS

Software-Defined
Same hardware but different app images

All-Encompassing
Form factor to cover processing as well as signal conversions and distribution

IP, Hybrid, SDI
Apps for every stage of your transition to IP era

API
Integrate OMIX to your existing business

Redundancy
Seamless switching based on ST2022-7