SONY

nevion

Nevion MOXELA

Real-time software-native
media transport and processing

October 2026

Cloud-native

Media processing platform

Integrated orchestration

Live broadcast

MXL support

Flexible

What is MOXELA?

As live media production makes increasing use of COTS (commercial off the shelf) hardware and cloud, software plays an increasing role in the transport and processing of media signals. Such software brings unparalleled flexibility and scalability, with the ability to tap into resources on demand and from virtually anywhere, as well as pay for only what is used (OPEX models).

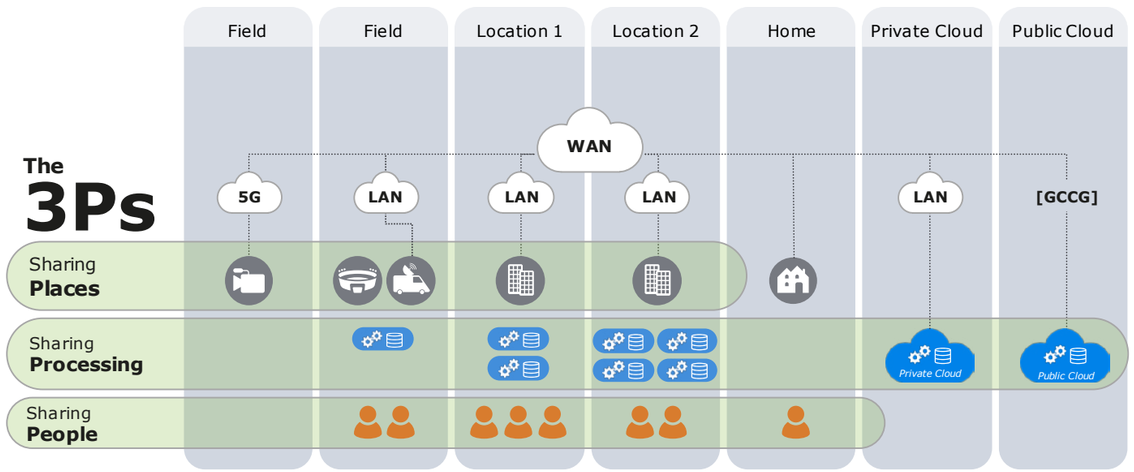
Based on emerging industry standards such as the EBU's DMF (Dynamic Media Facility), Nevion MOXELA is a software-native processing platform for COTS and cloud that is designed to perform a variety of real-time functions for a wide range of applications including contribution, GCCG (ground-to-cloud) transport, Software Defined Broadcast (SDB) and cloud production.

Live Production is changing

The future is distributed production

Content production is moving progressively towards a distributed model whereby workflows can tap into production resources almost anywhere on the ground and in the cloud. These production resources can be characterized by “the 3Ps”:

- **Places** such as studios, control rooms, OB production trucks, live venues.
- **Processing** in other words all the tools that can manipulate media signals, including mixers, record and playback, video and audio processing.
- **People** i.e. the production staff – the most important resource in a production.



Technology now allows all of these to contribute to a production regardless of their location.

This is transforming the logistics and economics of production, enabling multiple models for production, which can best suit medium/long term business needs and short-term production requirements.

NETWORKED LIVE

Networked Live is an ecosystem of integrated solutions, products, services and partners that simplifies the transition to more agile and cost-effective distributed (on-prem, cloud and hybrid) operations.

Networked Live is based on 3 main areas, supported by Sony’s and Nevion’s experience and expertise.

- **Distributed hybrid live production and operations**
- **Media Transport and Processing**
- **Orchestration and control**

The MOXELA platform is a key component of the media transport and processing area of Networked Live.

Where can MOXELA be used?

Nevion MOXELA can be used for a variety of solutions and applications, including contribution, GCCG (ground-to-cloud-cloud-to-ground) and Software Based Production.

Contribution

MOXELA can be used to reliably transport signals between locations over managed and unmanaged IP networks, offering a variety of media transport and video encoding options. MOXELA offers flexible video/audio/data interfacing options. In addition, the platform provides advanced protection and monitoring functionality to ensure reliable hand-off of signals both at ingress and egress.

GCCG (ground-to-cloud)

MOXELA provides the ability to transport signals fast, reliably and efficiently from the ground (e.g. facilities) to the cloud and vice-versa (GCCG), with the choice of codecs and with SRT transport protection. It can also be paired with on-prem media gateways, such as Nevion Virtuoso or Sony NXL-ME80, or other 3rd party industry compliant offerings. This is a key requirement for the integration of cloud processing into live production workflows.

Cloud-based MCR

MOXELA addresses the needs of a cloud-based Master Control Room by providing a containerized, cloud-native media processing platform that can be deployed on demand, providing secure SRT transport, real-time monitoring, transcoding and format normalization across AVC, HEVC, NDI and MXL workflows. Its integration with the VideoIPath media orchestration platform enables efficient connection management, content switching, service health monitoring and media adaptation across production, contribution and playout.

Cloud-based Production

MOXELA acts as the cloud-native media gateway for a virtual Production Control Room, ingesting contribution feeds, protecting transport across distributed networks, adapting formats, preparing signals and monitoring service quality before handing media to production applications. Integrated with Sony's M2L-X software switcher and the VideoIPath media orchestration platform, it helps create a software-defined production workflow that can be deployed on demand, scaled to each production and centrally managed across cloud and on-premises infrastructure.

Software defined broadcast

MOXELA is designed to provide a variety of functions for processing video and audio signals fast, both on COTS in a datacenter or in the cloud. In addition to MXL for in-memory transfer, MOXELA is designed to be able to interface to other products via SMPTE ST 2110 (planned for future release).

MOXELA
is built on the
very latest software
technology and
best development
practices

Why MOXELA?

Today's live production calls for extremely versatile systems that can evolve with needs, be it new media transport technologies or media processing capabilities.

Benefits

As a software-native processing platform MOXELA brings obvious benefits to production, including the following:

Fast, on-demand scaling

Media processing resources can be spun up quickly for live events and changing workflows, and scale to meet needs.

Flexible deployment

MOXELA can run on-premises, at the edge, in datacenters, or in the cloud, wherever capacity is needed and compute resources are available.

Cost efficiency

MOXELA lowers upfront costs, replaces CAPEX with a flexible OPEX system, and keeps spending predictable with transparent token-based licensing.

Designed to evolve

The functionality built onto the platform continues to grow over time, evolving with industry development and customer needs.

Unique proposition

What makes MOXELA special includes:

Guided by decades of experience

Nevion has been developing real-time media transport and processing products for over 30 years. The company's software-defined media node, Virtuoso, has been widely deployed for mission-critical applications in the decade since it was first launched. This exceptional experience and expertise has guided the development of MOXELA.

Built on latest technology

MOXELA is built from the ground up on the very latest software technology and best development practices, which bring the very lowest latency, best resilience and minimal CPU/GPU usage.

Open and standards-compliant

The MOXELA platform is designed to prevent vendor lock-in by supporting existing and emerging standards at every level of the software stack – from support for multiple hardware and operating systems, through containerization and onto the industry-specific Dynamic Media Facility (DMF) architecture, including support for MXL (Media eXchange Layer).

Security

The MOXELA platform puts a strong emphasis on security, with features such as SRT encryption for end-to-end content protection.

Crucially, its development follows security best-practices, including OWASP secure coding guidelines and EBU R143 recommendations. Software and third-party libraries are continuously scanned for vulnerabilities, with patches issued in a timely manner.

Integration with VideoIPath

As the use of software-based processing expands in production workflows, both in the cloud and on-prem, managing and connecting the instances becomes increasingly challenging. MOXELA's close integration with the Nevion VideoIPath media orchestration platform solves that problem, delivering a unified user experience across multiple MOXELA instances, as well as other parts of the production workflow.

Features and functionality

Media functions and capabilities

MOXELA can provide a variety of audio/video transport and processing media functions.

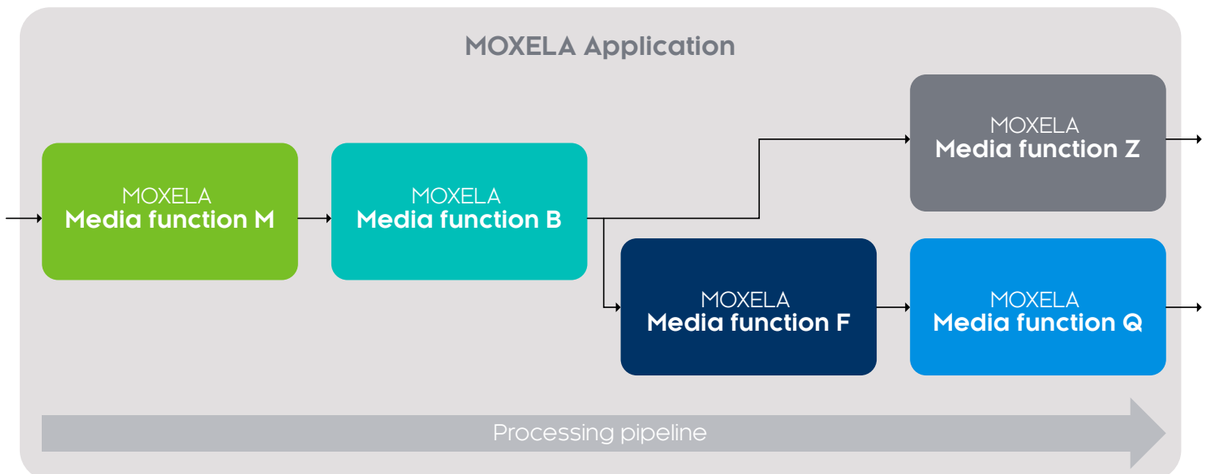
These media functions are grouped into capabilities that are commonly needed in on-prem and cloud deployments, e.g. converting between standards, transporting media including video and audio compression and processing, and providing protection.

Applications

The media functions in the various capabilities can be connected to form a processing pipeline to suit the required processing workflows for a specific application, for example perform the format conversion and fan-out in the cloud of a video signal received from the ground.

MOXELA can also combine its media functions with those from other systems. This is possible as MOXELA is built on EBU DMF principles and exchanges content using standardized MXL.

MOXELA can also interface to applications that do not support MXL, through a variety of protocol support such as NDI, TS, SMPTE ST 2110.



COTS and cloud

These media functions can run on a variety of COTS servers for on-prem or datacenter use, or as cloud services from various providers. Further details about this are provided in the architecture section of this brochure.

Integrated with Networked Live

As mentioned earlier, MOXELA comes with a tight integration with other Networked Live products from Sony and Nevion, including the NXL-ME80 Media Edge Processor, the Virtuoso software-defined media node, the M2L-X live production switcher and of course the VideoIPath Media Orchestration Platform. This reduces the cost of integration and time taken to deploy solutions.

At the same time, MOXELA is based on industry standards and can therefore interact with products from other vendors, giving our customers complete freedom of choice.

Media functions

MOXELA is designed to support a growing library of media functions that can be combined to deliver applications required by various production workflows.

These media functions cover the full spectrum of live media production needs – from protocol adaptation and transport protection, through content encoding and decoding, to video and audio processing and content security. They can be freely connected to form pipelines tailored to the requirements of a specific deployment, whether on-premises, in the cloud or across a hybrid environment.

On the transport side, MOXELA is designed to support widely adopted industry protocols including SRT, RTP, UDP and NDI, with SMPTE ST 2110 planned in a future release. For compression, the platform currently supports HEVC, AVC and NDI video codecs, alongside PCM and AAC audio – covering the range of formats typically required across contribution, GCCG, and cloud production workflows.

The platform also supports the new MXL - Media eXchange Layer for DMA and RDMA transfer of media between software functions.

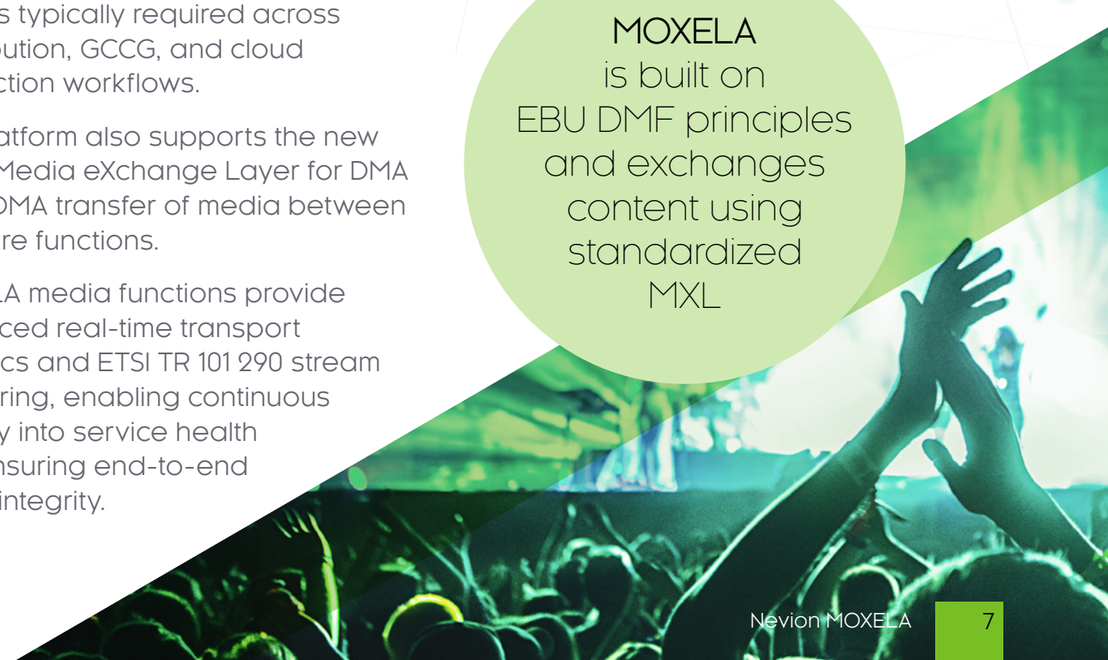
MOXELA media functions provide advanced real-time transport analytics and ETSI TR 101 290 stream monitoring, enabling continuous visibility into service health and ensuring end-to-end signal integrity.

For visual confidence monitoring, the platform can generate low-bandwidth WebRTC thumbnail previews, allowing operators to verify live feeds without the need for full-resolution monitoring.

The platform is built to evolve though. New media functions are added with each release, growing in line with industry standards and customer needs. This means that investment in MOXELA today continues to deliver value as production workflows develop over time.

MOXELA media functions can run on a variety of COTS servers for on-premises or datacenter use, or as cloud services from a range of providers. They integrate natively with other Networked Live products from Sony and Nevion, while remaining fully standards-compliant for interoperability with third-party systems.

MOXELA
is built on
EBU DMF principles
and exchanges
content using
standardized
MXL



Architecture

MOXELA's architecture is consistent with the Dynamic Media Facility (DMF) reference architecture, proposed by the EBU and endorsed by many organizations and vendors.

Infrastructure

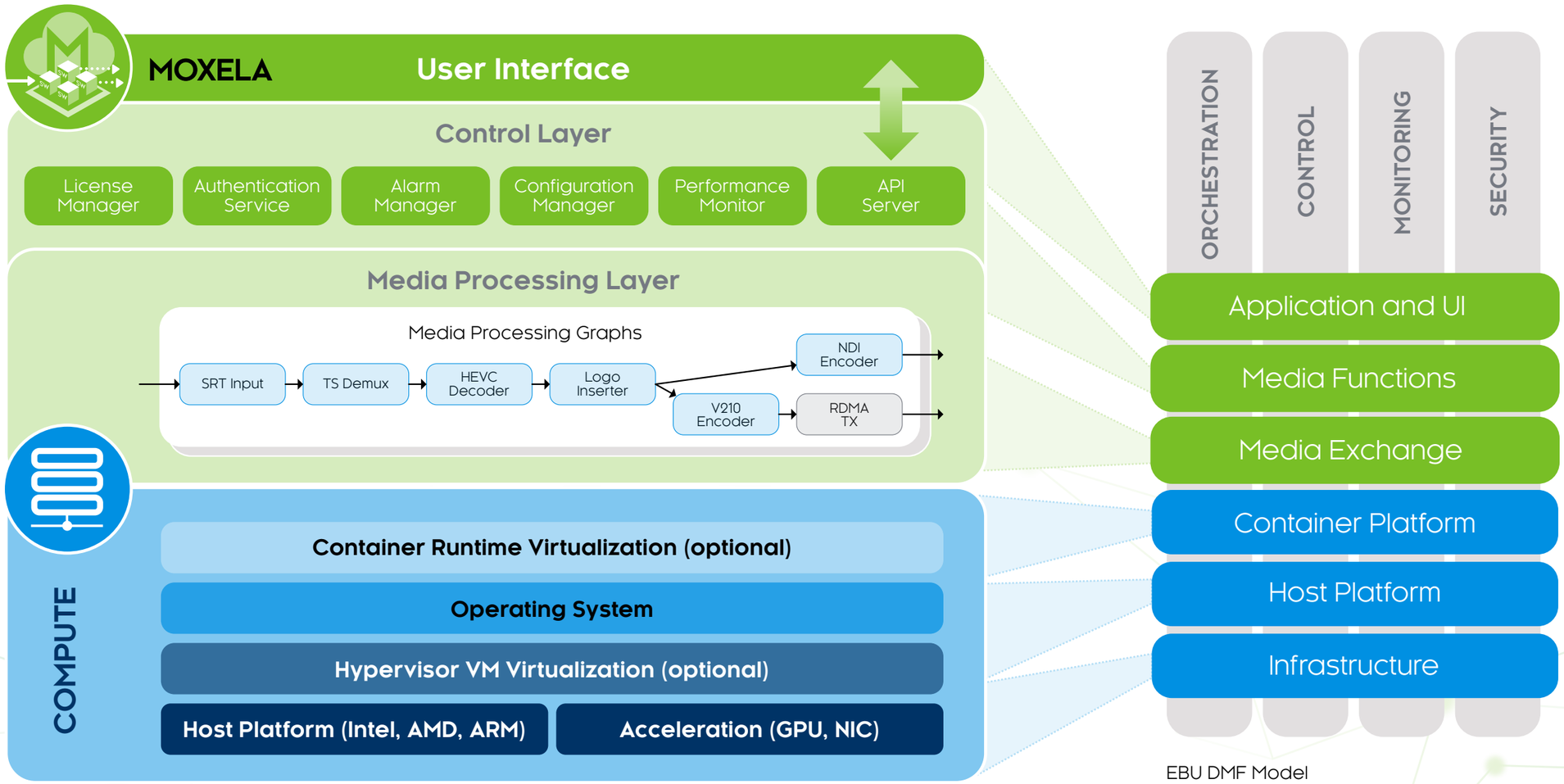
MOXELA is designed to operate on any appropriately sized compute infrastructure. The platform has been benchmarked to estimate resource requirements across a range of workflow sizes and deployment scenarios. While MOXELA does not require a GPU, it can take advantage of GPU acceleration to run compute-intensive media functions more efficiently.

Host platform

Although the default deployment model is based on containers, MOXELA can also be hosted on hypervisor-based virtual machines (VMs) or deployed directly on bare-metal servers when required. MOXELA is deployable on Linux-based operating systems.

Container platform

The Container Platform layer provides an environment for packaging, deploying, running, managing, monitoring and removing media functions as software containers. MOXELA is designed to be deployed using container runtime technologies such as Docker or Podman, with the container runtime being the default deployment model. It can also take advantage of container orchestration platforms such as Kubernetes and Kubernetes-based distributions to provide enhanced scalability, resilience and operational management.



EBU DMF Model

Application and User Interface

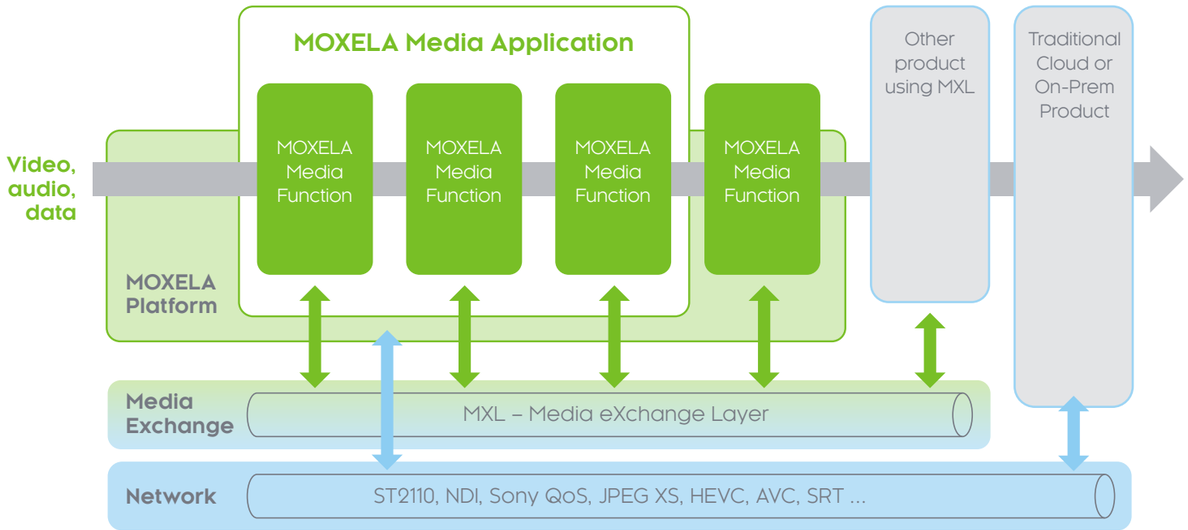
Each MOXELA instance provides its own web-based user interface and modern REST API, enabling standalone operation and seamless integration with third-party systems without additional dependencies.

The web-based user interface provides an easy and intuitive way to design and configure media pipelines across MOXELA modules.

Media exchange

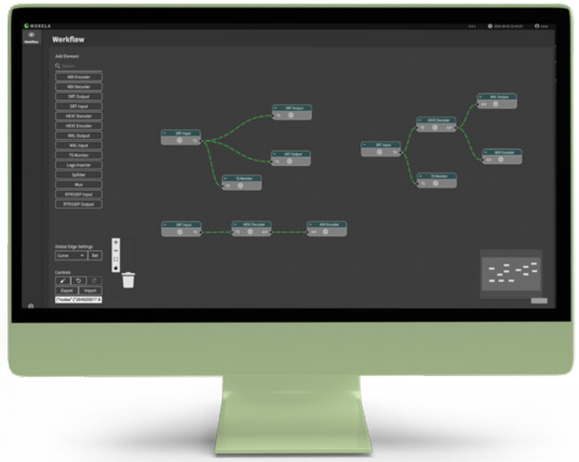
Within the DMF model, the Media Exchange layer provides high-performance transport of uncompressed or compressed media payloads between software media functions running on containers on the same compute node, or on different compute nodes in a compute cluster.

MOXELA does of course support the MXL (Media eXchange Layer) standard. However, in a distributed environment, media exchange can be extended to include the exchange of media with transport and processing resources other than software media functions. MOXELA supports a variety of transport protocols, including UDP, RTP, SRT, NDI and SMPTE ST 2110 (in the future release).



Media functions

According to the model, the Media Functions layer provides well-defined units of functionality that act on media streams, files or objects. MOXELA follows the same approach. Details are provided earlier in this brochure.



While MOXELA can operate independently, the close integration with Nevion's VideoIPath media orchestration platform provides significant operational advantages.

Through its dedicated MOXELA Manager App, VideoIPath delivers a unified user experience across multiple MOXELA instances, as well as other parts of the production workflow. It enables, amongst others:

- Auto-discovery of deployed instances
- Advanced connection management with the unique Resource-Routing ability to find the path through multiple hops and automate configuration of each hop
- Dynamic resource orchestration – extension of the Resource-Routing concept with ability to spin up/down resources based on connections
- End-to-end monitoring

VideoIPath is also key to supporting the vertical pillars of the DMF model, i.e. provisioning, control, monitoring and security.

Licensing

A software-based media platform for live broadcast workflows brings tremendous flexibility — the ability to spin up resources on demand, scale across cloud and on-premises environments and adapt to changing production requirements at a moment's notice.

However, to truly enable this flexibility, the licensing model for the software must be equally flexible. A rigid per-channel or per-feature license structure would undermine the very agility that makes a software platform valuable.

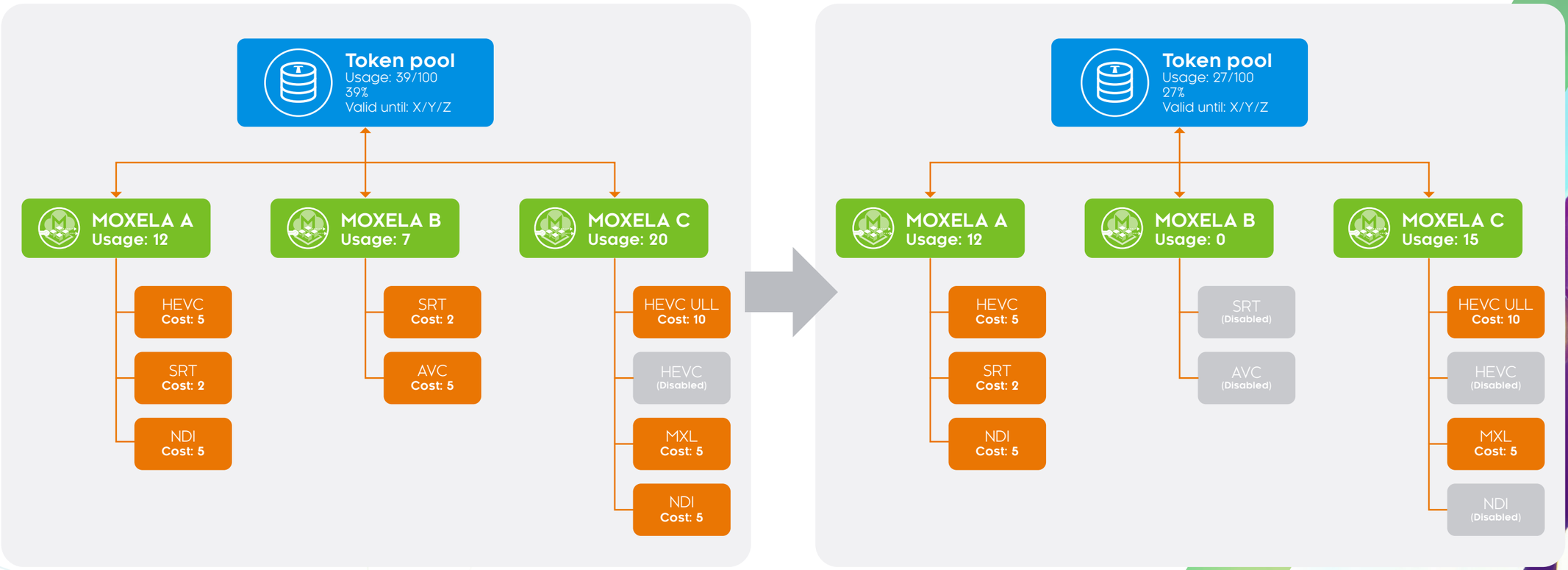
MOXELA's licensing is designed from the ground up to match the dynamic nature of modern broadcast operations.

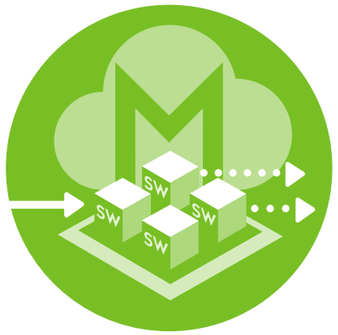
Token-based licensing

MOXELA uses a token-based licensing model. Rather than locking customers into fixed per-channel or per-feature entitlements, the token model assigns a specific token cost to each media function and module. Organizations can purchase a pool of tokens and consume them dynamically based on the capabilities they have enabled and use at any given time. A token is not consumed through use. Instead, it remains available throughout its licensed validity period and can be assigned, released and reassigned as often as required.

This means that as production requirements change (between events, across different projects) and workflows evolve, capabilities can be enabled, disabled or repurposed without requiring new licenses or renegotiating contracts.

Token pools are not tied to individual MOXELA instances. A single pool can be shared freely across one or multiple instances, giving organizations complete flexibility in how they structure their deployments. This applies whether they are running a single instance for a specific workflow or distributing processing across multiple nodes in the cloud and on-premises coverage, including 24/7 support for prime-time live events.





Protecting investments

One of the key advantages of MOXELA's token model is its forward compatibility. Purchased tokens are not tied to a fixed feature set: they can also be applied to new MOXELA modules and functionalities as they become available in future releases. This means that as the platform grows and new capabilities are introduced, existing token investments remain fully relevant.

Flexible Duration Options

Token licenses are available in a range of durations to suit different operational and financial planning horizons.

This range of options means MOXELA's licensing aligns naturally with both ad-hoc live event production and longer-term infrastructure commitments, thereby supporting the full spectrum of broadcast operational models.

Shared Across Instances

One token pool can be shared freely across one or multiple The Product instances.

Deploy how you want. Use where you need.

Protecting Your Investment

Forward Compatible
Tokens are not tied to a fixed feature set. Use them for new modules and functionalities as they become available.

Software Maintenance Included
Keep your platform up to date at no extra cost.

Your token investment remains fully releveant - today and in the future.

Pay for Value, Not Potential

Only pay for what you use, when you use it.
No overprovisioning. No wasted budget.

Traditional Licenses
Pay for maximum capacity or features

The Product
Pay for actual usage

Flexible Duration Options

Choose the term that fits your operational and financial planning.

From ad-hoc live events to long-term infrastructure - our licensing fits the way you work

Support When You Need It

Software maintenance is included.
Choose a support package that matches your requirements.

Standard Support
Business hours coverage

Enhanced Support
24/7 coverage for mission-critical and prime-time events

We're here to keep your operations running smoothly

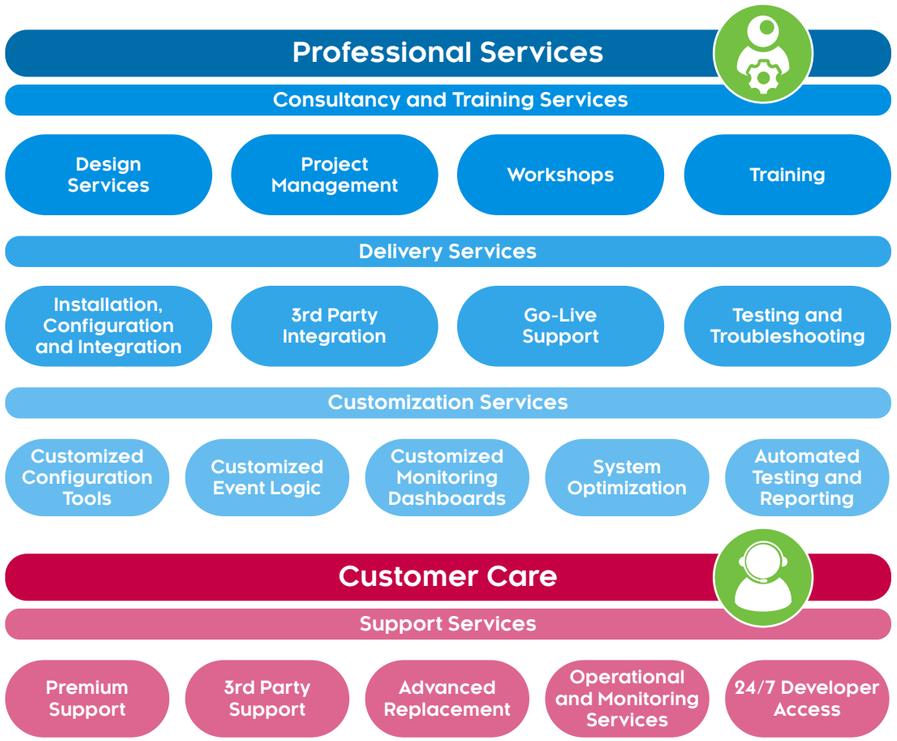
Services

Sony and Nevion provide an extensive portfolio of services before, during and after product or project delivery.

Specifically relating to MOXELA, Nevion's services include:

- **Configuration** i.e. setting up the software instances
- **System testing,** prior to shipping and onsite, stand-alone and in the context of the complete system deployment
- **Training on the software and its specific deployment**
- **Commissioning of MOXELA and the complete solution**
- **Active monitoring and reporting of the appliances within the solution**
- **Support,** such as answering questions and concerns, solving issues etc.
- **Upgrading software versions**

And much more...



For a full overview of the support offered by Nevion, visit **nevion.com/services**

Nevion is a Sony Group Company

Copyright ©2026 Sony Corporation.

All rights reserved. Reproduction in whole or in part without written permission is prohibited. Features and specifications are subject to change without notice. "SONY" is a registered trademark of Sony Corporation. All other trademarks are the property of their respective owners.

Confidentiality Statement:

All information contained in this documentation is provided in commercial confidence for the sole purpose of adjudication by Nevion. The pages of this document shall not be copied published or disclosed wholly or in part to any party without Nevion prior permission in writing, and shall be held in safe custody.

pro.sony/
networked-live

nevion.com