

Imagine Communications' Prismon is a software-defined multiviewer and monitoring solution that provides a single platform for monitoring SDI, SMPTE ST 2110, NDI®, SRT, HLS, MPEG-TS and other IP video streams. Running on standard COTS hardware, Prismon enables broadcasters and media organizations to deploy a scalable, flexible monitoring solution for SDI, hybrid, and all-IP production environments.

Designed for operational efficiency, Prismon supports distributed deployments across multiple servers, centralized multiviewer management, and intelligent PiP sharing to minimize processing and network bandwidth. Advanced monitoring capabilities—including liveQM® real-time image comparison—provide operators with comprehensive visibility and confidence across the entire signal chain.

Prismon — Software-Defined Monitoring from SDI to Full IP

Prismon is Imagine Communications' answer to the growing complexity of modern broadcast environments. Built on standard COTS hardware, this software-defined multiviewer supports all common IP formats — including ST 2110, SRT and NDI — alongside traditional SDI, giving facilities a single, unified monitoring solution regardless of where they are in their IP transition.

Unlike hardware-bound alternatives, Prismon's flexible software architecture scales with your operation. Multiple servers interconnect seamlessly, while its intelligent PiP-sharing technology ensures that each signal is processed only once and distributed across the network as needed — dramatically reducing bandwidth consumption and infrastructure overhead.

Beyond standard signal monitoring, Prismon offers advanced quality analysis tools — including liveQM, a unique real-time image comparison feature that enables side-by-side quality assessment between identical video content across different formats and signal paths. This makes it an invaluable tool for validating transcoded and distributed signals with confidence.

Full visibility across large display environments is managed from a single pane of glass through Prismon's workflow-optimized Multiviewer Control Center, giving operators immediate multiviewer control without added complexity. Together, these capabilities deliver the flexibility, efficiency, and reliability that modern broadcast operations demand.

Key Benefits

Universal Signal Support: From traditional SDI to ST 2110, NDI, and OTT — Prismon handles the full signal spectrum in a single platform, eliminating the need for separate monitoring tools across different signal types.

Future-Proof by Design: Prismon evolves through regular software updates — new formats and features are added without replacing infrastructure. As broadcast standards shift, your monitoring platform keeps pace, eliminating the upgrade cycles of traditional hardware solutions.

Built to Scale: As channel counts grow or new sites come online, Prismon expands by adding capacity — not by replacing the system. Distributed deployments across multiple locations are natively supported within one unified platform.

Deploy Anywhere: Whether on dedicated on-premises servers, in the cloud, or across a hybrid environment Prismon runs the same software everywhere. Operations can start on-prem and migrate to cloud at their own pace, with



Solution: Built for Every Broadcast Environment

Production Multiviewing: Ensure operators always have the right information at the right time with broadcast-quality multiviewing. Prismon delivers multiviewer layouts at resolutions up to UHD, enabling teams to create and switch layouts quickly as production requirements evolve. Native UMD and Tally support from multiple control systems ensures talent status, routing, and source information are always accurately reflected across every display for confident, real-time decision-making.

MCR & Channel Origination: Protect playout quality and simplify compliance by bringing video, metadata, and monitoring into a single view. Prismon ingests a wide range of video formats and presents them alongside critical metadata and monitoring widgets on one multiviewer canvas. Full ancillary data monitoring—including captions, subtitles, and SCTE markers—helps ensure playout integrity and regulatory compliance, while open APIs enable seamless integration with automated workflows and third-party systems.

Delivery Network Monitoring: Monitor more streams with less effort and respond to issues before they impact viewers. Prismon simultaneously monitors large numbers of streams across multiple protocol layers, presenting status and quality metrics in high-density layouts designed for rapid assessment. Automated monitoring reduces operator workload and accelerates issue detection, while northbound interface support enables straightforward integration with existing Network Management Systems (NMS) and Network Operations Center (NOC) environments.

The Power of One Platform Across Your Entire Operation

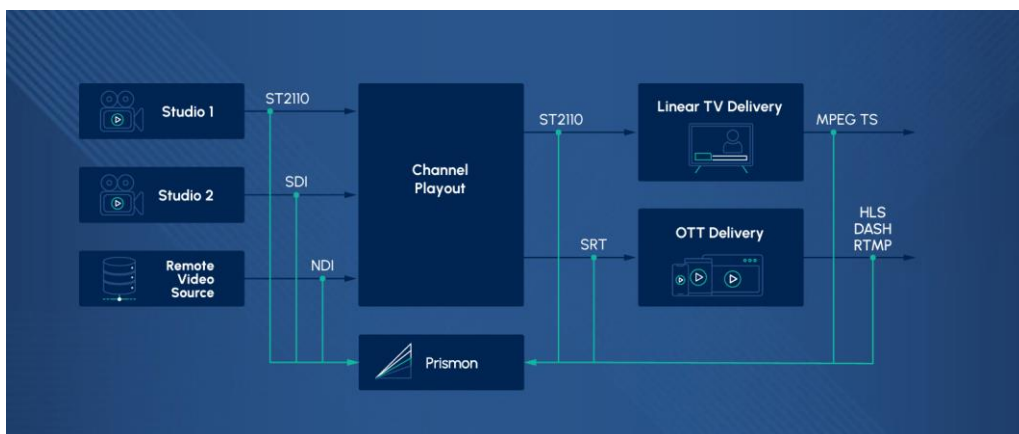
When Prismon is deployed across production, master control, and delivery network environments, the benefits extend well beyond individual use cases.

Simplified Operations & Integration: A unified user interface, consistent multiviewer output, and standardized interfaces — including SNMP and REST API — mean operators work with the same system regardless of environment, reducing training effort and minimizing the risk of human error.

License Efficiency: Prismon licenses are reusable across applications. A license deployed in production today can be reassigned to MCR or network monitoring tomorrow — protecting your investment without additional license costs.

Consistent Quality of Service: With Prismon monitoring every stage of the signal chain, advanced capabilities such as video mismatch detection and liveQM quality comparison are applied consistently from ingest to delivery — detecting issues earlier and reducing the risk of quality problems reaching the viewer.

One Vendor, Full Visibility: A single platform means unified alarm management, consistent reporting, and one support relationship — giving teams a complete, correlated view of their entire signal chain.



Key Features:

Available in Multiple Variants — Choose the Right Deployment Model for Your Operation

Prismon is available in several purchasing and deployment options, giving operations the freedom to choose the model that best fits their infrastructure and budget:

- All-inclusive turnkey appliance: software pre-installed on a 2RU Imagine Compute Platform, including MyCare hardware support
- Software-only for bare metal installation on validated COTS platforms (HPE, Dell, Lenovo, Cisco)
- Virtual deployment on popular hypervisors: VMware, KVM, Proxmox and others
- AMI images for AWS cloud deployments

Connect Everything — Unmatched Signal Versatility Across All Workflows

Prismon supports the full spectrum of broadcast signal types, eliminating the need for separate monitoring tools:

- Baseband: 3G-SDI inputs and HDMI/mDP multiviewer outputs
- Uncompressed IP: ST 2110 and ST 2022-6/7, including AWA NMOS IS-04/05 support
- Mezzanine compressed IP: NDI, JPEG 2000, JPEG XS (TR-07)
- Transport stream over IP: SMPTE 2022-1/2 and SRT
- Streaming protocols: HLS, MPEG-DASH, RTMP, Smooth Streaming — including customized DRM integration hooks
- Rich codec support: MPEG-2, H.264, HEVC, MP@L2, AAC, HE-AAC, Dolby Digital+, Dolby E and more

Broadcast-Quality Multiviewing — Rich Metadata, Low Latency, Full Operator Control

Prismon delivers high-quality multiviewer images with comprehensive metadata overlays and flexible layout options:

- Up to 8x UHD multiviewer outputs per Prismon instance
- End-to-end latency down to 2–3 frames depending on format
- Flexible layouts in portrait and landscape orientation

- Audio preview via UI, IP stream, or USB device
- ANC data support: SCTE-35/104 markers, Subtitles (OP-47, DVB, TTML, ST 2110-43), Closed Captions, VITC/LTC timecode, Teletext, Kantar watermarking
- Technical metadata: A/V formats and codecs, bitrates, PSI/SI information, Dolby metadata
- Widgets: counters, clocks, graphics
- UMD & Tally support: TSL v3.1, v4.0, v5.0



Catch Every Issue — Comprehensive Automated Signal Probing

Prismon continuously monitors signals across all layers, detecting issues before they reach the viewer:

- Transport layer: packet loss, bandwidth deviations, ST 2022-7 redundancy errors
- Protocol compliance: full ETR 290 Priority 1–3, OTT streaming conformity, RTP/PTP offset measurements
- Content integrity: video freeze & black, audio silence & overload, Teletext & subtitle errors, Closed Caption errors, A/V template checking
- Internal issue recording for compressed inputs

Stay Focused — Intelligent Monitoring by Exception

Prismon reduces operator workload by surfacing only what matters:

- Probing of signals with or without multiviewer display
- Penalty screen to highlight signals in error state until resolved or acknowledged
- Input- or view-based round robin for cyclic visualization in high-density use cases
- Grouping mechanism to display multiple related signals on penalty or round-robin screen

Key Features:

Unmatched Quality Intelligence — Real-Time Cross-Format Video Quality Analysis

Prismon's liveQM feature delivers unique quality monitoring capabilities not available in any competing platform:

- Multiple parallel reference-based video quality measurements — full pixel-by-pixel comparison of two unsynchronized signals, with results in standardized metrics: PSNR, SSIM, MOS
- Automated video & audio latency measurements and compensation, including lip sync indicators
- Heatmap visualization of quality deviations directly on the multiviewer
- Automated alerting when defined QoS thresholds are violated
- Content mismatch detection based on high-performance fingerprinting



Scale Without Limits — Efficient Any-Signal-to-Any-Display Architecture

Prismon's distributed architecture enables large-scale deployments without compromising quality or adding latency:

- PiP input sharing between server instances for any-signal-to-any-display operation, and unlimited signal duplication
- Based on downscaled, uncompressed proxies for minimal additional latency and maximum video quality
- Supports scaling to different PiP sizes
- Full overlay element generation including subtitles, audio bars, icons and more

Intuitive Control — Purpose-Built Interfaces for Every User Role

Prismon provides role-optimized interfaces that reduce training effort and operational complexity:

- Native HTML5 user interfaces including layout designers
- Engineering UI for remote configuration, system administration, and signal analysis
- Operator-optimized Multiviewer Control Center with Rooms & Scenarios concept for layout creation, management, and activation
- Role-based user management with LDAP and Kerberos support



Seamless Integration — Open APIs for Full Automation and Third-Party Connectivity

Prismon's open interface architecture enables seamless integration into existing broadcast and IT infrastructures:

- SNMP and MQTT APIs for notifications and telemetry data
- AMWA NMOS IS-04/05 support for orchestrated ST 2110 environments
- Full HTTP REST API with OAuth2 authentication for remote control and automated workflows
- Integration with popular network management systems and broadcast controllers

Enterprise-Grade Security — Built-In Protection for Broadcast Environments

Prismon is built on a hardened, regularly updated software foundation, ensuring broadcast operations remain protected against evolving cybersecurity threats without compromising operational continuity:

- Based on Linux LTS operating system with current security patches included in every release; critical OS patches can be installed independently from application updates
- Built-in firewall for protection in internet-connected environments
- Secure communication via HTTPS throughout

Ordering Information

Prismon Hardware Options

PRM-BU250	Prismon 2RU hardware platform based on HPE Gen11 COTS server. System comes with Prismon software application pre-installed and includes red. PSUs and HDDs . 4 x GigE network interfaces included for compressed I/O and system administration. Additional I/O cards available as an option.
PRM-NIC-OCP-E810	Dual-port 10/25GE Ethernet Card. No SFPs included.
PRM-B350	4X Mini-DisplayPort 1.4a (mDP) outputs Mosaic Output Card. 4 x Cable Adapters mDP to HDMI included.
PRM-B640	Dual-port 100GE Ethernet Card for ST 2110 and ST 2022-6/7 Inputs and Output. Provides additional PTP Sync support. No SFPs included.
PRM-B1000	SDI/ASI input card for 8 x 3G-SDI or 8 x ASI input via 1x PRM-B1100 breakout box w/ 8x BNC
PRM-B1100	SDI/ASI BNC Interface Breakoutbox for PRM-B1000 SDI/ASI Input Card, 1RU rack mountable

Prismon Software Licenses

PRM-CMCONT	Prismon CodeMeter License Container for Prismon Software License - Requires one per deployment in license server mode or one per PRM-KXCORE in local license mode
PRM-KXCORE	Prismon Core License - Provides basic system-SW framework for Prismon instance and enables core functions for decoding, monitoring, output, management. One license per Prismon instance.
PRM-KVDC	Prismon Video Input & Analysis - Video input & continuous analysis of the media stream for a single service in SD/HD/UHD resolution. One license per active input.
PRM-KVTAD	Video-Thumbnail/Audio Only Input & Analysis - Video input & periodic analysis of thumbnail snapshots of video streams. Full analysis of audio and data streams. One license per Prismon instance.
PRM-KVWMMO	Multiviewer Output - Output of a multiviewer mosaic for video services via HDMI/DVI or SMPTE 2022-2/2022-6/2110-20 or compressed. One license per active MV output.
PRM-KJXS	Add-on to PRM-KVDC to enable decoding of JPEG XS video in SD/HD/UHD resolution from VSF TR-07. One license per active decode.
PRM-KMCCD	Multiviewer Control Center - MCC dashboard for configuration of Prismon Systems. One license per MCC instance.
PRM-KVLQM	Video Live Quality Measurement (LiveQM) - Live quality comparison of a signal video stream to a reference video stream having equal resolution and frame rate. One license per Prismon instance.