IMAX StreamAware™ | ON-DEMAND

Keep an eye on what matters.

All-in-one video quality assurance and quality control.



Discover how IMAX StreamAware™ | ON-DEMAND

- Improves visibility of video quality across the media supply chain.
- Uses the best quality metric to ensure consistent quality delivery.
- Validates that video meets defined delivery requirements.
- Automates checks to save time and reduce errors.
- Auto-scales resources to adapt to changing workloads.

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IMAX StreamAware™ | ON-DEMAND

What if you could see video quality as customers see it, and consolidate quality checks and compliance with one simple tool?

Video quality assurance and control

IMAX StreamAware™ | ON-DEMAND offers an all-in-one automated software platform designed for video service providers to streamline quality assurance and control. Our software ensures high-quality video by providing complete visiblity across file-based workflows, while also enabling automated quality checks to verify videos meet delivery requirements.

Most accurate quality metric

IMAX StreamAware™ | ON-DEMAND uses the patented IMAX VisionScience™ technology to provide a single, objective metric to assess quality across the entire media supply chain and provide clear insights into its performance. The software also provides industry standard and customizable quality checks for seamless video, audio, and metadata compliance.

Driven by automation.

IMAX StreamAware™ | ON-DEMAND is an essential tool for video service providers to increase efficiency, eliminate manual tasks, and ensure video consistently meets the highest standards. With IMAX StreamAware | ON-DEMAND, superior video quality and effective quality control have never been easier.

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Quality control automated for accuracy, speed, efficiency, and compliance.

Simplifies workflows

IMAX StreamAware | ON-DEMAND offers powerful video quality measurement and quality control in one software platform, eliminating the need for multiple tools or platforms.

Increases efficiency

The software automates all video quality checks, saving time and resources. IMAX StreamAware | ON-DEMAND enables businesses to shift their focus to other aspects while ensuring consistently high-quality video.

Improves video performance

IMAX StreamAware | ON-DEMAND utilizes the award-winning IMAX VisionScience technology to providing clear insights into video quality, empowering users to maintain high standards and improve the overall viewing experience for their audience.

Reduces costs

By implementing automated quality control verifications, IMAX StreamAware | ON-DEMAND helps reduce the resources needed for video quality assurance. This allows businesses to save costs and reallocate resources elsewhere.

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Partnering for excellence and efficiency.

For a major streaming service in 2023: **50% reduction.**

Cut manual quality assurance interventions in half.

Across all our streaming partners in 2023: **560 million hours assured.**

Automated picture quality, quality control and compliance checks for 2.8 billion minutes every month.

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Future-ready for the win.

A software product that never stops raising the bar on assuring the highest quality while using the fewest resources. Developed with close collaboration from the world's leading streaming media companies.



Recognized as the NAB product of the year for three years in a row (2021-2023).

Comprehensive quality control and assurance with less tools, time and money.

End-to-end visibility

Get a clear view of all video at any point in the media supply chain to monitor the video operation status and identify potential issues before become problematic.

Trusted video quality metric

Use patented IMAX VisionScience technology to provide a viewer score that consistently measures quality across the supply chain.

Efficient automation

Automate tasks that typically require the human eye, improving efficiency and reducing the margin for human error.

Auto scaling

Dynamically adapts to the incoming workload. Automatically scales up resources to execute jobs as they arrive, eliminating constraints imposed by infrastructure limitations.

Pinpoints video quality issues

Pinpoint quality issues, using the same criteria as if evaluated by a team of 'golden eyes.' Helps define expected video quality standards for vendors and workflows.

Configurable test plans

Customize media analysis templates to ensure content meets requirements for contribution and distribution.

Full HDR support

Manage multi-standard HDR workflows including Gamut and Luminance Measurement, Dolby Vision Metadata validation, MaxCLL & MaxFALL cross-validation, and more.

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An unparalleled mirror of the human visual system.

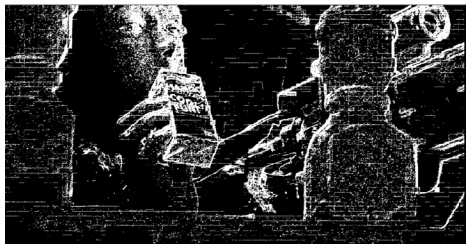
Software engineered to see pixels as people do.



The human perspective
See the original image as humans.
Notice where your eyes focus.



Spot the degradation
See the pixelated, degraded image.
It's easy to notice for us humans.



Focus mapping
IMAX software illuminates and maps human attention.
The brighter the area, the more it indicates where humans focus.



Degradation mapping
IMAX software identifies and maps the degradation like humans.
The darker the area, the greater the degradation.

The patented and award-winning IMAX VisionScience technology successfully maps the intricacies of the human visual system, producing an unparalleled measure of perceptual quality.

This technology incorporates a unique set of quality components to produce a single score, the IMAX ViewerScore (XVS), which boasts over 90% correlation to audience perception as measured by Mean Opinion Score (MOS).

Unlike other metrics, XVS can detect quality differences that were previously undetectable. Additionally, XVS offers both no-reference and full-reference metrics, and is suitable for all content types, including:

- Content complexities (even scene-by-scene variations)
- Frame rates
- Resolutions
- Codecs (including AVC, HEVC and AV1)
- Dynamic ranges (HDR, SDR)
- Devices (from handhelds to the biggest and best TVs)

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All the factors. One directly comparable score.

The IMAX ViewerScore quantifies picture quality as people do.

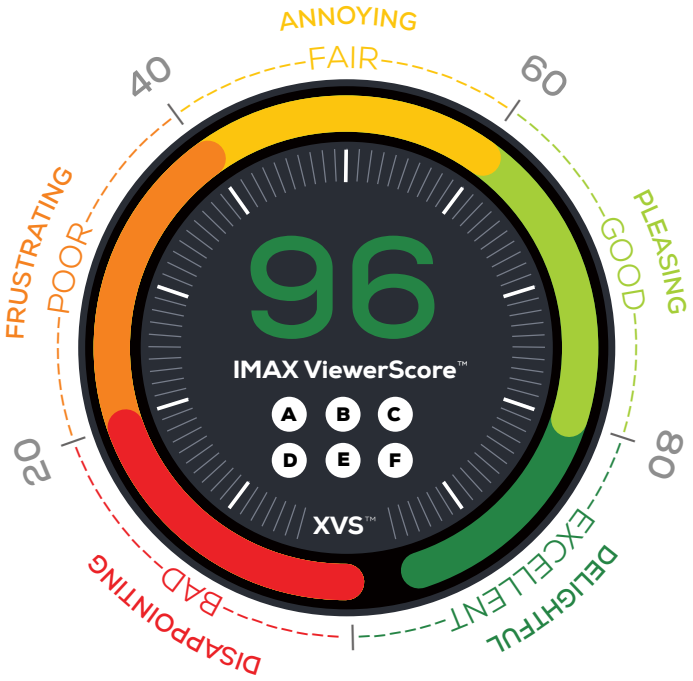
The *resolutionary*™ software analyzes pixels like a pro and operates at the speed of streaming.

XVS provides a unified score across all devices, resolutions, dynamic ranges, and content types.

Accurate
Correlates ›90% to how humans would rate picture quality.

Complete
One score across all devices, content types and formats including 4K, 60 fps, and HDR.

Fast
Real-time speed with low compute– 10x faster than anything else.



Automated pixel watching offers unique insights into the precise quality of the stream and the factors influencing it to enable optimal business decisions.

A Video Content
- Dynamic range
- Resolution
- Frame rate
- Color space
- Scan format

B Human Visual System
- Alignment across content
- Linear scale
- Masking behaviors
- Impairment visibility
- Psychovisual behaviors
- Spatiotemporal attention
- Studio + expert + typical viewers

C Device & Viewing
- Any client device
- Device scaling
- Display brightness
- Display contrast
- Viewing distance
- Viewing angle
- Display area
- Surround brightness
- Ambient environment

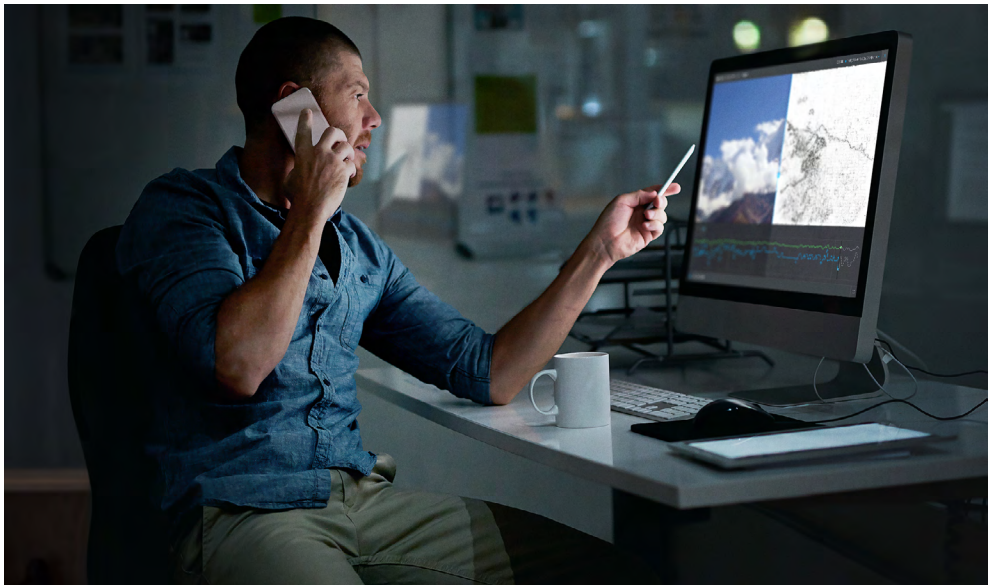
D Source Analysis
- Full-reference
- Single-ended no-reference
- Deep learning-based
- Pixel based
- Banding detection
- Macroblocking detection
- Supports all codecs
- Full range of quality

E Encoder Performance
- ABR ladder analysis
- Quality maps
- Supports all codecs
- Full range of quality
- Temporal alignment
- Color quality map
- Tone mapping

F Playback
- Rebuffering/stalling
- Profile switching
- Startup delay
- Score alignment
- Manifest inspection
- Native resolution detection
- Player colocation or HDMI

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Meet industry-standard quality requirements.



Meet delivery requirements with automated industry-standard quality, regulatory and viewer experience checks.

Media metadata
File, video, IMF, and audio.

Video checks
Cadence, V/A duration mismatch, freeze frames, black frames, color bars, macroblocking and frame rate and scanning cross-validation.

Audio checks
Silence, audio loudness, phase mismatch, clipping, clicks and pops.

Closed Captions
CEA-608 and CEA-708

Compliance checks
PSE Test (HardingFPA), loudness (ITU-R BS.1770), MXF/ QuickTime compliance checks

HDR
HDR checks, measurements, and validations required to manage the multi-standard HDR workflows such as Dolby® metadata validation, MaxCLL and MAXFall cross-validation between measured and declared values.

Content layout detection
Including active A/V detection, that facilitates the validation of content components like audio sidecars, subtitles, markers, etc.

Analysis templates
Ensure content acceptance for both contribution and distribution.

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Exceed with uniquely-IMAX quality checks.

R*esolutionary™* IMAX VisionScience powered quality checks built right in.

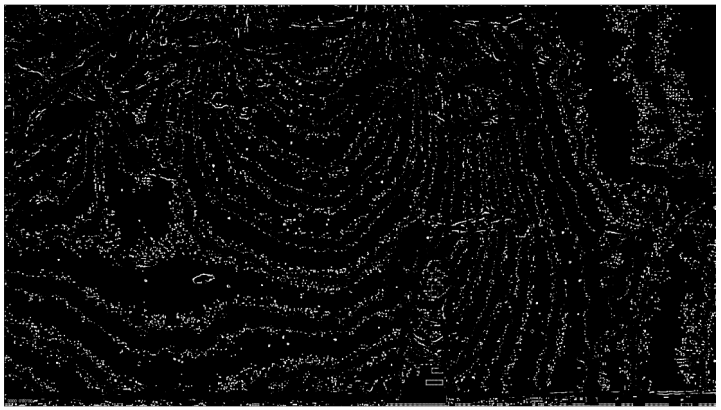
Perceptual quality scoring
Emmy® award-winning, proprietary, non-reference and reference metrics like IMAX ViewerScore (XVS), IMAX Encoder Performance Score (XEPS), IMAX Banding Score (XBS), and more.

User-defined checks
Luminance, bandwidth, color difference, and encoding performance for quick identification of content sections where thresholds and duration compromise quality.

Content similary analysis
Compare two video assets and look for frames or mismatched scenes.



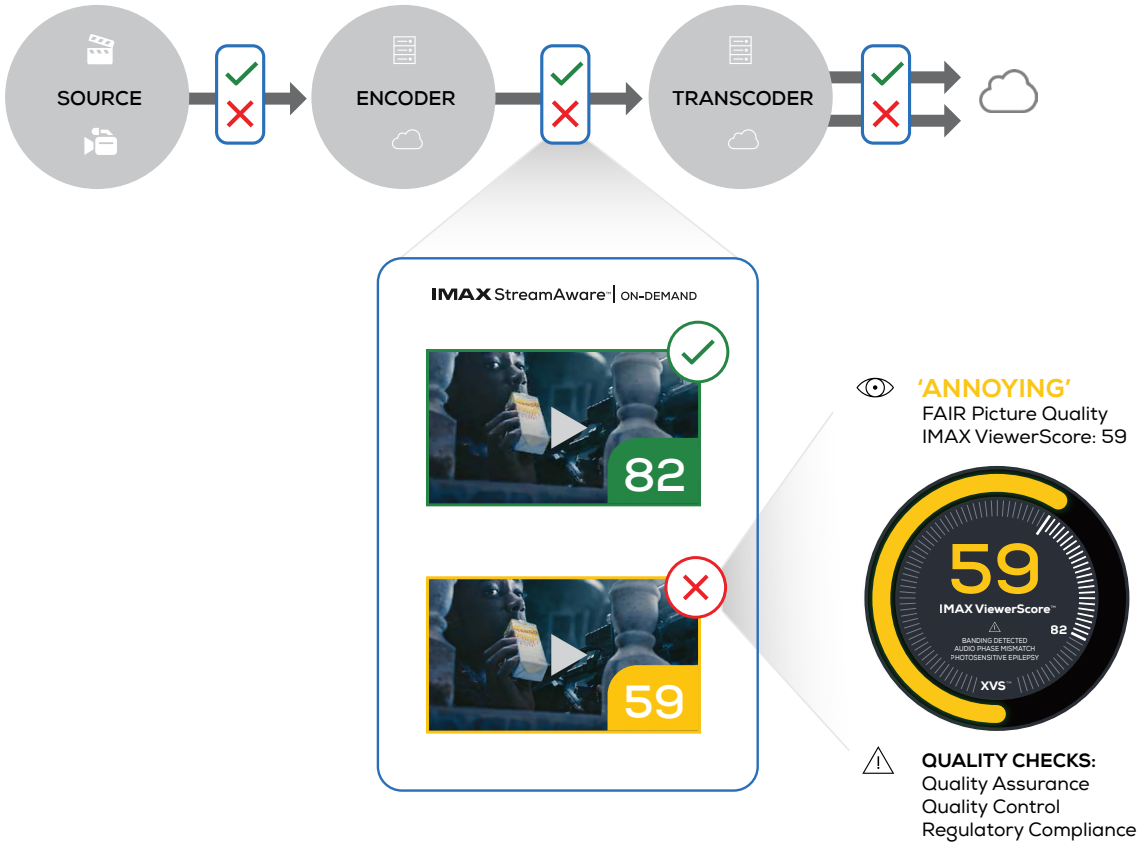
The human perspective
See the original image as humans.
It's clear to notice the banding. A human would rate it as 'Disappointing' and 'Bad' picture quality.



Banding mapping and scoring
IMAX software delineates, maps and scores the banding.
The score for this image is '19' and the brighter area identifies the banding.

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Pass and fail at scale. Source to output visibility.



Pass/fail notification

Set viewer experience thresholds and get notified when videos meet or fail them. Scale up or down as needed and integrate with workflow via RESTful API.

Video quality comparison

Measure and compare the quality of videos from source to different outputs (encode, transcode, or both) using a standardized metric.

Custom alert templates

Create and apply unlimited templates for different content types (animation, sports, news, etc.) and delivery formats (devices, codecs, bitrates, etc.) to optimize video quality and performance.

Algorithmic processing

Process HD and 4K videos at blazing speeds using advanced algorithms and techniques.

Elastic compute

Balance video quality and customer satisfaction with a platform that adjusts compute power as needed. Save resources and keep viewers happy with a winning score.

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Automate QA and QC with IMAX and relax.

You've got this.

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Technical specifications and system requirements

Auto-scaling and containerized.

StreamAware | ON-DEMAND includes video analysis tools that can be flexibly deployed either in the cloud or on-premise, as well as a business intelligence cloud data platform. Deploys as a single server or in a cluster, as a containerized solution on Kubernetes, ensuring unparalleled efficiency and reliability. Scales computing resources dynamically to match the current workload.

Containers / Codecs / Formats Support

Containers	IMF, MXF, MOV, MP4, MPEG-TS, AVI, M4V, MPG, V210, WebM, YUV
Video	Raw, Image Sequence (EXR, DX, Targa, TIFF, PNG...) ProRes, JPEG 2000, DNxHD, H.264/AVC, H.265/HEVC, VP9, AV1, MPEG-2, EVC, LCEVC
Audio	PCM, MPEG-2, MPEG-3, Dolby Atmos, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3), AAC, HE-AAC
Closed Captions	CEA-608/CEA-708 in Line 21 video
HDR Formats	HDR10, HLG, Dolby Vision

System Requirements

Server	Minimum requirements 16 vCPU/16 GB RAM
Cloud	Cloud-native Kubernetes Amazon Web Services (AWS) Google Cloud Platform (GCP)
Deployments	AWS/EKS Managed Service VPC in AWS/EKS or Google/GKE Amazon Machine Image (AMI) Virtual Machines (OVA/QEMU) for bare-metal deployment

Full Tech Specs on imax.com/sct

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