



THE IMAGINE ICE® BROADCAST SYSTEM

imagine offering the most HD content, the best video quality, and the most effective operations center on the most reliable and future proof video processing platform available.

The ICE Broadcast System was the first platform to offer advanced compression efficiency without sacrificing video quality and is now the first to bring that same quality of experience to the advanced networks and distribution systems powering the next generation of video delivery.

The demand for HDTV continues to climb as consumers demand more programming choices as well as the flexibility to enjoy those choices on a wider variety of devices.

The system operator's fundamental paradox—how to expand digital video services without sacrificing picture quality—has never been more pronounced. Fortunately, it's also never been easier to solve.

The Imagine ICE Broadcast System enables system operators to carry more HD and SD digital broadcast across more networks to more devices without sacrificing video quality.

It's also the first solution with integrated Imagine ICE Video Quality Assurance (VQA), enabling service providers to establish, maintain, and monitor the Quality of Experience (QoE) across all digital services.

And because of the software-based architecture, the Imagine ICE Broadcast System is quickly and easily upgraded to support future capabilities and requirements.

Most streams. Best quality. Choose both.

With the Imagine ICE Broadcast System, you can have it all.

DELIVERING QUALITY OF EXPERIENCE

Delivering the best quality video in bandwidth-constrained networks remains a challenge for service operators. The Imagine ICE Broadcast System solves this problem with the flexibility and scalability required to rapidly deploy new advanced video services, while also ensuring the highest video quality and Quality of Experience.

HIGH DENSITY, LOW COMPLEXITY

The ICE Broadcast System re-codes or transcodes up to 32 HD channels or 128 SD channels in one carrier-class blade server system. Alternatively, the ICE Broadcast System is available in a custom one RU server supporting up to eight HD channels or 32 SD channels. And because both ICE Broadcast System platforms are pure IP/Linux, they are unparalleled in configuration flexibility and simplified system maintenance. What's more, the integrated IP switching function delivers up to 90% savings in cabling related materials, costs, and headaches.

SERVICE RELIABILITY

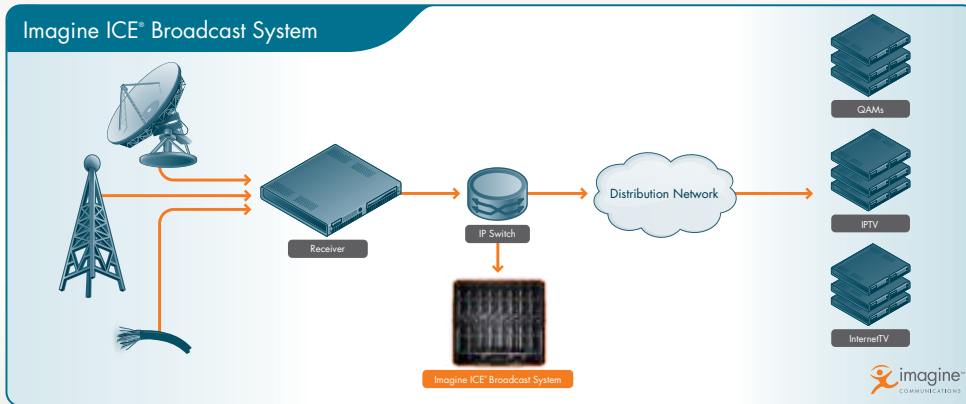
High-availability redundancy clustering and fully programmable system components make the Imagine ICE Broadcast System the most reliable and future-proof video processing platform available today. Available in AC, DC, or NEBS-certified hardware, the Imagine ICE Broadcast System extends service uptime through automatic service protection and dynamic healing of corrupt input sources.

ENVIRONMENTAL EFFICIENCY

The Imagine ICE Broadcast System is a high-density carrier-class solution that provides up to 50% savings in power consumption and up to 70% savings in rack space compared to competitive solutions, dramatically lowering operating expenses.

ABOUT US

Imagine Communications is a leading innovator in digital video infrastructure solutions, enabling content distributors and system operators to deliver bandwidth-intensive services with the highest video quality and Quality of Experience (QoE). Imagine's products address the traditional digital broadcast business (HD and SD) as well as the emerging PersonalizedTV® market (VOD, internet video, IPTV).



The Imagine ICE Broadcast System consists of ICE Broadcast Processors and ICE Multiplexers, managed by the ICE Video Manager software. Imagine ICE Broadcast Processors accept compressed digital signals as inputs, and then re-process these signals using our core Interchangeable Compressed Elements (ICE) technology and the powerful Imagine ICE-Q® video quality algorithms, ensuring the highest video quality at any given bit rate.

IMAGINE ICE BROADCAST SYSTEM SPECIFICATIONS

SIGNAL PROCESSING		DEPLOYMENT OPTIONS	10 RU BLADE SYSTEM	1 RU ICE MICRO SERVER
Video Processing		Chassis		
Encoding and Transcoding	MPEG-2 High and Main Profile MPEG-4 AVC High, Main and Baseline Profile* CBR, VBR, and Capped VBR	Rack Size	10 RU rack-mountable server chassis with hot-swappable server blades	1 RU rack-mountable server chassis
Resolutions	MPEG-2 HD (720P, 1080i, 1080P) at full, ¾, and ½ resolutions MPEG-2 SD (480) at full, ¾, and ½ resolutions MPEG-4 HD (720P, 1080i, 1080P) at full, ¾, and ½ resolutions* MPEG-4 SD (480) at full, ¾, and ½ resolutions* MPEG-4 Mobility: 544 x 960, 480 x 848, 352 x 640, 352 x 480* HD to SD down-conversion (AFD)*	Stream Capacity	Flexible to support up to 32 HD channels or 128 SD channels per chassis	Flexible to support up to 8 HD channels or 32 SD channels per chassis
Filters	Motion Compensated Temporal Filter (MCTF) De-blocking	Dimensions	(WxHxD) 17.6" x 17.4" x 32" (447.04mm x 442mm x 813mm)	(WxHxD) 17.2" x 1.7" x 28.2" (437mm x 43mm x 716 mm)
ICE Illustrate™ Pixel Processing*	Split-screen evaluation mode Sharpness correction Texture correction Adaptive contrast correction Pixel-accurate, motion-adaptive de-interlacing Face and feature detection Mosquito de-noise (de-ringing) Spatial and Temporal de-noise Frame-rate conversion Aspect ratio correction	Network Interface	Up to 4 Integrated GigE switches per chassis. 10GigE option available On board administrator with Integrated IP KVM out of band Management. Insight Control Suite with Integrated Lights Out (ILO) management system.	Dual-Port GigE Controller and input/output interfaces Additional NIC with Dual Port GigE Controller
Optional ICE Broadcast System feature		Redundancy Options	Video processing, multiplexing, management cards, network interfaces, power, and fans	Signal processing and system
Image Processing	Multi-pass look ahead Flash detection Texture detection Scene change detection (automatic I-frame insertion)	Power	AC or DC power options Redundant and hot-swap 100W per HD, 25W per SD	AC power only Swappable power module 75W per HD, 20W per SD
Audio Processing		Certifications	FCC (U.S. only) Class A ICES (Canada) Class A CE Mark CSA USA and Canada UL Optional NEBS Configuration	FCC (U.S. only) Class A ICES (Canada) Class A CE Mark CAN/CSA C22.2 No. 60950-1 EN 60950-1, IEC 60950-1
Capacity	Up to 6 audio programs per video program	Environmental		
Encoding, Transcoding, and Pass-through	Re-code AC-3, AAC, and HE-AAC Transcode from MPEG-1, Layer 2 to AC-3 Transcode from MPEG-2, Layer 2 to AAC Transcode from AC-3 to AAC/HE-AAC and HE AAC V2 Pass-through and synchronization with processed video streams	Operating Temperature	10° C to 35° C (50° F to 95° F)	10° C to 35° C (50° F to 95° F)
Data Services		Storage Temperature	-30° C to 60° C (-22° F to 140° F)	-40° C to 70° C (-40° F to 158° F)
Transcoding and Pass-through	VBI DPI (multiple SCTE35 PIDs per program) ETV (including synchronization with video streams) PSIP (One channel per MUX) SCTE-127 pass-through DTMF detection and SCTE-35 insertion	Operating Relative Humidity (non-condensing twmax=28C)	10% to 90% non-condensing	8% to 90% non-condensing
Management		Storage Relative Humidity	5% to 95% non-condensing	5% to 95% non-condensing
Graphical UI	Imagine Broadcast Management System	Operating Vibration	0.30 Grms at 10Hz to 300Hz, varied exposure	0.25 Grms at 5Hz to 200Hz for 15 mins/axis
SNMP	SNMP v2	Storage Vibration	2.0 Grms nominal at 10Hz to 500Hz, 30 minutes/axis	0.98 Grms at 5 to 200 Hz for 30 mins/axis
Video Quality	ICE-Q® Video Quality Measurement ICE VQA (Video Quality Assurance) Monitoring	Operating Shock	1 shock pulse of 41G for up to 2ms	2.5 ms duration, 20G, half-sine, 1 shock/side
Security	VCAS Encryption	Storage Shock	6 shock pulses of 71G for up to 2ms	10 ms duration, 20G, square wave, 1 shock/side

* Requires HW Acceleration Card

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