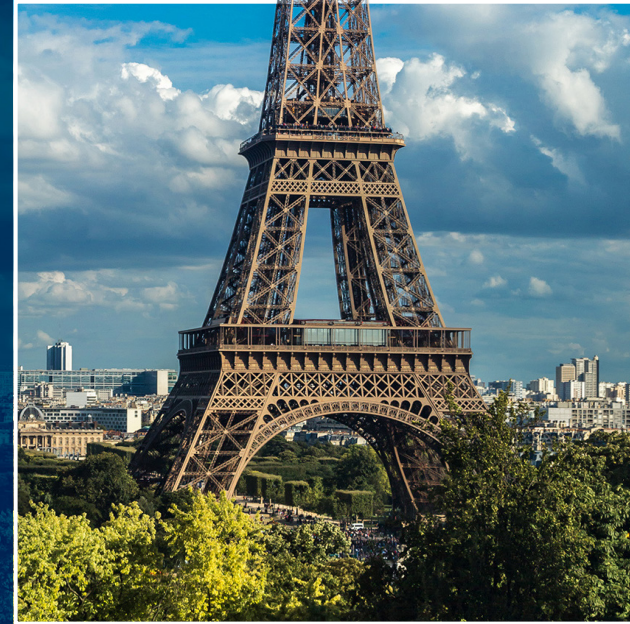
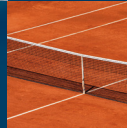




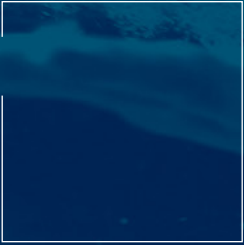
# Intel® Technology Solutions at the Olympic and Paralympic Games Paris 2024



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## Pushing the boundary of possibility

As a worldwide partner, Intel plays a key role in bringing the most innovative Olympic and Paralympic Games to life for Paris 2024. Intel® technology solutions help bring AI platforms everywhere, foster connectivity with 5G technology platforms, enhance the fan experience with 360 content development platforms, and support operations with advanced processing power.

Intel is pushing the boundary of what's possible across key activations, equipping the International Olympic Committee (IOC), the Paris 2024 Organizing Committee, and Olympic Broadcasting Services (OBS) with advanced tools to work efficiently, enable data-driven experiences, extend accessibility for fans, and achieve deeper levels of media immersion while building on the success of previous years' Olympic Games.

These activations show how media and sports organizations, along with the many businesses supporting them, can deploy these solutions successfully at Olympic Games scale. Game-changing technology platforms start with Intel.



Processors



AI platforms



5G technology  
platforms



VR/3D content  
development  
platforms

# Intel® CPUs, GPUs, and FPGAs enable software-defined broadcast production



Live-event broadcasters have long relied on proprietary hardware that is expensive to ship, hard to set up, and slow to scale. Traditional outside broadcast vans (OB vans) and flight packs consist of fixed-function appliances that can make it difficult for media producers and distributors to keep pace with rising consumer demand for high-resolution live content, delivered in near-real time to a variety of devices.

The end-to-end, software-defined broadcast workflow at Paris 2024 can deliver the same functionality as traditional OB vans and flight packs with enhanced scalability and cost efficiency. This solution runs on a common platform architecture with virtualized applications optimized for commercial off-the-shelf (COTS) Intel® Xeon® Scalable processors. OBS manages the workflow to produce live sporting events in 4K HDR and distributes content to media rights holders and fans worldwide.



## Key Benefits



### COST EFFICIENCY

Help reduce setup and maintenance costs for proprietary, monolithic broadcast equipment.



### SIMPLICITY AND REUSABILITY

Deploy workflows using off-the-shelf infrastructure that can be repurposed.



### FLEXIBILITY AND SCALABILITY

Avoid vendor lock-in and scale up production environments quickly.

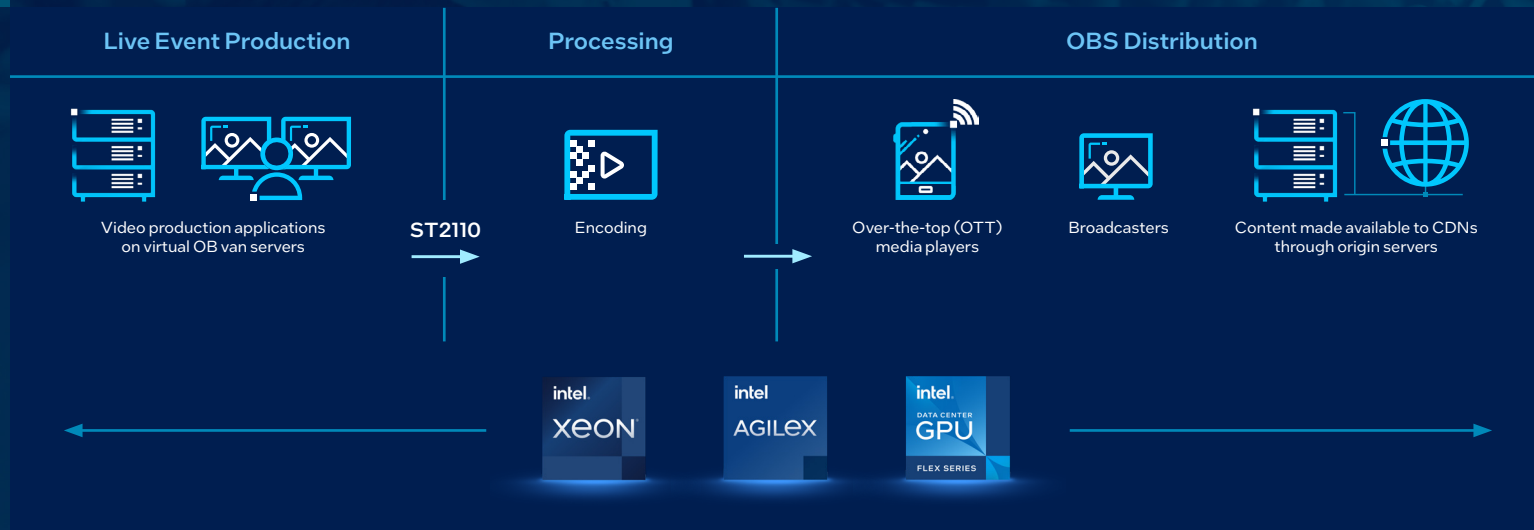


### SUSTAINABILITY

Potentially help reduce the emissions associated with transporting broadcast vans and other equipment.

## A software-defined workflow on common Intel® processors

Virtual outside broadcast (vOB) van servers enabled by Intel® Xeon® processors ingest and encode live 4K HDR footage, leveraging an ST 2110-compliant media transport library that's optimized for Intel® hardware.<sup>1</sup> These servers also use the Intel® Data Center GPU Flex 140 Series and Intel Agilex® FPGAs to accelerate media processing<sup>2,3</sup> and help achieve the ultralow latency needed for live UHD video transfer. Content is delivered to OBS for distribution and postproduction, as well as AI platform-driven clips and highlights generation.



## Reusability changes the economics of video production

Traditional fixed-function appliances sit idle between events, taking up space without generating value. The COTS Intel® hardware used in this virtualized workflow is based on open standards and APIs that can allow for greater flexibility. These solutions can be repurposed to produce nonlive content and video on demand (VOD) or can even be used as common IT servers, enabling organizations to potentially monetize their hardware's idle time.

1. "Optimized Real-Time Video Transport using Intel® Data Streaming Accelerator," Intel, January 2023, [networkbuilders.intel.com/solutionslibrary/optimized-real-time-video-transport-using-intel-data-streaming-accelerator](https://networkbuilders.intel.com/solutionslibrary/optimized-real-time-video-transport-using-intel-data-streaming-accelerator).

2. "Intel® Data Center GPU Flex Series for Media Processing and Delivery," Intel, August 2022, [intel.com/content/www/us/en/products/docs/discrete-gpus/data-center-gpu/flex-series/media-delivery-solution-brief.html](https://intel.com/content/www/us/en/products/docs/discrete-gpus/data-center-gpu/flex-series/media-delivery-solution-brief.html).

3. "Intelligent Vision & Video," Intel, accessed June 2024, [intel.com/content/www/us/en/smart-video/products/programmable/overview.html](https://intel.com/content/www/us/en/smart-video/products/programmable/overview.html).

# Intel® processors and FPGAs enable private 5G technology platforms for wireless UHD video and photo transfer



Traditional UHD video transmission for live broadcasts relies on fixed-point content-capture devices with wired connections. However, at large-scale events, wired connections in hard-to-reach places may not always be feasible. Public Wi-Fi networks are often congested and can have coverage gaps, and private slices of public infrastructure can't always offer a fully guaranteed service-level agreement (SLA) that also meets changing needs.

At the Olympic Games Paris 2024, Intel® processors and FPGAs enable private 5G virtual radio access network (vRAN) technology platforms at multiple venues to help deliver UHD video streams in near-real time, concurrently with high-resolution photo uploads. Each vRAN node can support up to five live UHD video streams with latency of no more than 80ms, up to 20 content capture devices for journalistic photo upload, and up to 20 additional personal devices for members of the press.<sup>4</sup> New radio nodes can be set up quickly to extend coverage for any venue.



## Key Benefits



### ENHANCED PERFORMANCE

Support hardware-accelerated encoding, decoding, and wireless transmission of live UHD video and photo uploads.



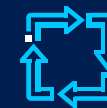
### CONTROL AND SECURITY

Prioritize video streams and isolate networks from public use to help comply with stringent SLAs.



### EASE OF USE

Set up portable vRAN nodes quickly to expand coverage areas in hard-to-reach venues.



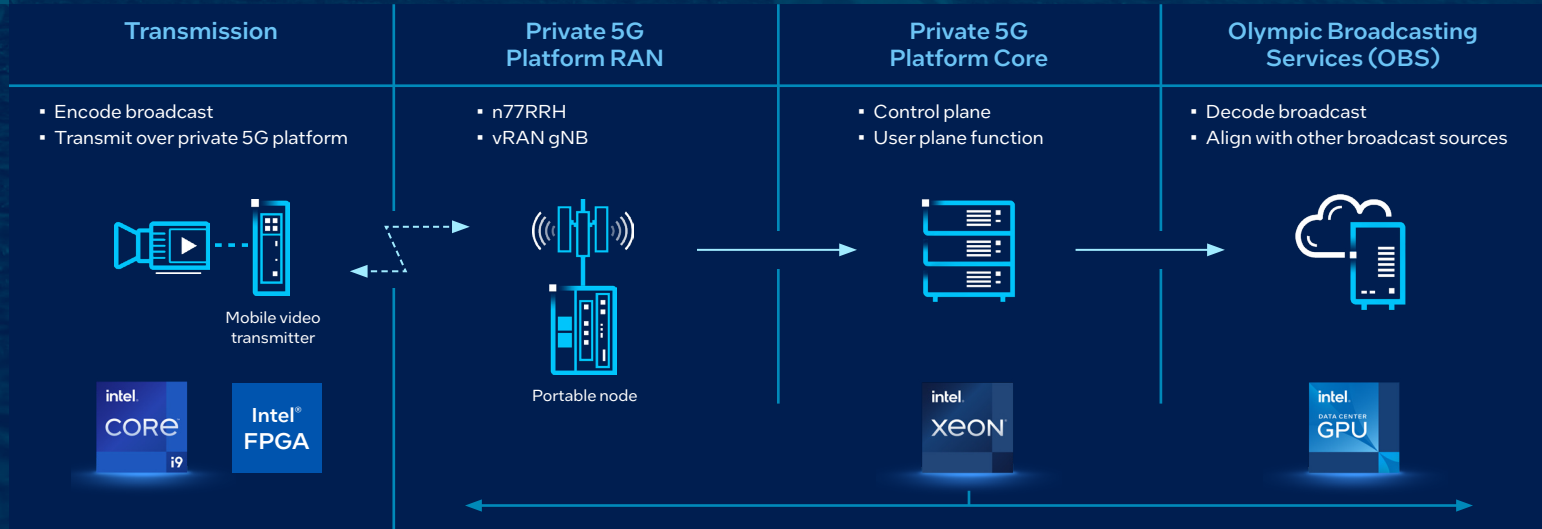
### REUSABILITY

Repurpose private 5G technology platforms beyond events to support edge AI and analytics.

<sup>4</sup> Performance based on measurements of distance, latency, and uplink capacity performed by Olympic Broadcasting Services, Intel, and other suppliers. Results may vary.

## Private 5G technology platforms with end-to-end Intel® hardware

In addition to Intel® Xeon® Scalable processor-enabled portable vRAN nodes, an encoding module powered by Intel® Core™ processors and Intel® FPGAs is connected to content capture devices for live UHD video transmission. Intel® Data Center GPUs are also available as an upgrade option to help boost stream density per server.<sup>2</sup> Across RAN, core, and OBS server infrastructure, the stack depends on 100 Gbps Ethernet to support ultralow-latency data transmission.<sup>4</sup>



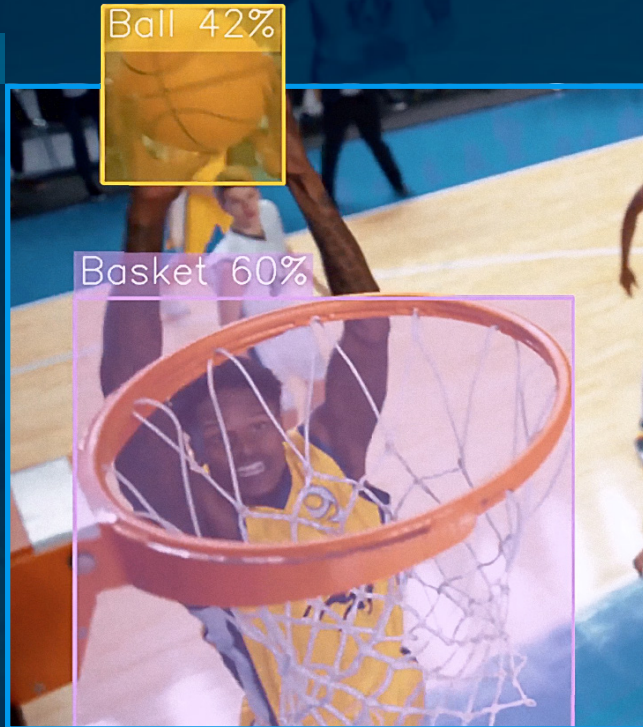
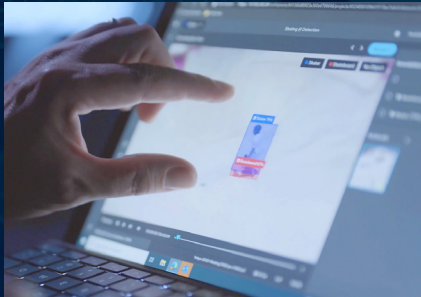
## Extending the use of private 5G technology platform infrastructure

The platform design is extremely versatile and can support many use cases that go beyond isolated media transmission. In sports or entertainment venues, for example, the private 5G technology platform nodes can support edge AI platform workflows to help manage foot and vehicle traffic or generate data for analytics pipelines.

2. "Intel® Data Center GPU Flex Series for Media Processing and Delivery," Intel, August 2022, [intel.com/content/www/us/en/products/docs/discrete-gpus/data-center-gpu/flex-series/media-delivery-solution-brief.html](https://www.intel.com/content/www/us/en/products/docs/discrete-gpus/data-center-gpu/flex-series/media-delivery-solution-brief.html).

4. Performance based on measurements of distance, latency, and uplink capacity performed by Olympic Broadcasting Services, Intel, and other suppliers. Results may vary.

# AI platform-driven highlights creation enabled by the Intel® Geti™ AI Platform



Modern sports fans watch fewer full games, instead consuming short-form videos or highlights of their favorite players and teams. Media rights holders that still rely on time-consuming, labor-intensive video editing methods may struggle to keep pace with escalating demand for quality content—especially highlights tailored to each fan’s interests and delivered in near-real time to a growing number of platforms and devices.

An AI-driven video highlights creation platform, using AI models trained with the Intel® Geti™ platform and Intel® Xeon® Scalable processors, empowers OBS to automatically generate thousands of highlights and clips in near-real time and distribute them to media rights holders. Stakeholders can easily sort, generate, store, distribute, and syndicate personalized content for audiences worldwide.

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GETI™

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XEON®

## Key Benefits



### FAN ENGAGEMENT

Automatically create highlights based on user preferences, offering rights holders personalized content suggestions.



### NEW OPPORTUNITIES

Easily integrate brand overlays, subscription offers, traditional advertising, and more.



### EFFICIENCY

Help save countless hours of manual video editing; quickly sort entire events by sport, team, or player; and output clips in a variety of social media formats.



### SCALABILITY

Scale the AI platform easily and rapidly to help meet growing demand for customized video highlights that are quick to generate, easy to review, and easy to publish.



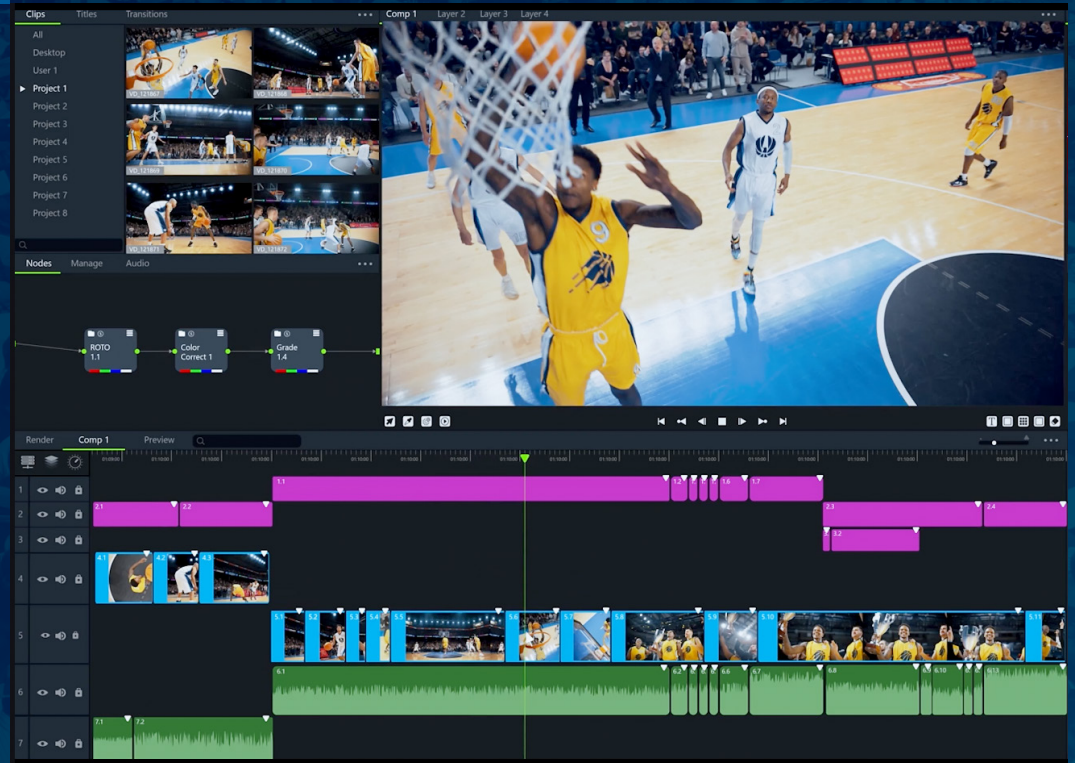
## AI platform-curated, personalized clips

Intel® Geti™ software uses technologies such as active learning to accelerate the process of building and training AI models for different sports. The models are automatically optimized with the OpenVINO™ toolkit, enabling optimized performance across Intel® Xeon® Scalable processor-based servers. This empowers teams to build custom AI models for different sports, at scale.

During and after sports events, the highlights creation platform uses AI to detect highlight-worthy plays and generate video clips based on customizable parameters. An editor at OBS can then review and distribute content to media rights holders in just a series of clicks.

## Powerful content control that doesn't require data scientist-level expertise

The AI-driven highlights creation platform provides complete control over the type and format of content created and published. Editors can personalize, localize, and package content as desired to meet the needs of different audiences. These actions all take place within a simple user interface, requiring only minimal training time to learn. Users don't need to understand the underlying AI technology to select and publish automatically generated video clips.



# Intel® Xeon® processors drive a simple, powerful, 3D volumetric video platform



AR/VR and 3D content can have wide appeal across industries including broadcasting, sports, and entertainment as organizations seek to provide the more-immersive experiences that audiences crave. However, the requirement for AR/VR headsets or devices with high graphics processing power can be a steep barrier of entry to consumers. AR/VR content development can also be cost prohibitive for media producers, potentially requiring large studios and truckloads of equipment.

3D volumetric video platforms are an innovative approach to immersive 3D content development that captures volumetric footage of real-life people or objects and makes it available for integration into 3D or live-action environments. At the Olympic and Paralympic Games Paris 2024, Intel® Xeon® processor-enabled systems with the Intel® Advanced Volumetric Library (Intel® AVL) capture, render, and transmit live volumetric footage of athletes to OBS for delivery to media rights holders worldwide. Viewers can watch live footage without any specialized equipment, using their TVs, PCs, and smartphones.

## Key Benefits



### POWERFUL PERFORMANCE

Process, composite, and compress volumetric videos fast with a single Intel® Xeon® processor-powered workstation.



### COST EFFICIENCY

Deploy volumetric solutions with limited equipment, which can reduce the need for extensive skilled staff or large studio rental costs.



### EASE OF USE

Set up the highly portable volumetric studio inside a conference room in just a few hours.



### SCALABILITY

Intel® AVL enables high quality and ultralow latency for at-scale delivery.<sup>5</sup>

5. "Delivering Volumetric Media at Scale with Intel® Advanced Volumetric Library," Intel, December 2023, [intel.com/content/www/us/en/content-details/812379/delivering-volumetric-media-at-scale-with-intel-advanced-volumetric-library.html](https://www.intel.com/content/www/us/en/content-details/812379/delivering-volumetric-media-at-scale-with-intel-advanced-volumetric-library.html).

intel  
XEON

## Setting up the portable volumetric studio takes just a few hours

The portable studio consists of up to 30 volumetric capture devices connected to an Intel® Xeon® processor-powered workstation, which captures, composites, and renders live volumetric footage. Built-in AI acceleration in the processor helps the proprietary AI models rapidly construct a 3D model of subjects in full motion. A second Intel® Xeon® processor-based workstation transmits live volumetric footage to OBS for distribution and to upstream cloud servers for high-resolution rendering that can be ready within 40 minutes.

## Cost-efficient immersive 3D media with powerful creative control

This Intel® processor-enabled volumetric video platform enables media rights holders to deliver unique experiences for audiences while bringing fans closer to their favorite athletes. At Paris 2024, the portable, low-cost volumetric studio provides rare opportunities to interview Olympians and Paralympians inside the Olympic and Paralympic Village, where it's notoriously difficult to get physical access to premises or athletes.

Media rights holders can show different angles of 3D athletes and integrate volumetric footage into broadcasts, enabling live interviews with athletes who appear in 3D and are physically located elsewhere. High-resolution 3D assets are also reusable and can be added to a variety of content across industries to help create deeply immersive videos and interactive experiences.



# Intel® processors and AI platform technology deliver stunning end-to-end 8K video



Intel® processor-powered 8K is possible now and can help broadcasters competitively differentiate their offerings to experience-hungry audiences, but traditional broadcast infrastructure is not equipped with the high bandwidth required to support 8K video transmission. At 4x the pixel density compared to 4K and 16x more pixels than 1080p, 8K requires highly efficient media encoding/decoding. In addition, many consumers do not have the connection bandwidth required to watch 8K video in their homes, making the widespread distribution of 8K content seem out of reach.

At the Olympic Games Paris 2024, Intel® processors are pioneering an end-to-end workflow that enables OBS to bring live 8K/60FPS/HDR video to global audiences watching over a home internet connection. Encoding optimized for Intel® Xeon® Scalable processors using the H.266 versatile video coding (VCC) standard helps reduce the connection bandwidth required for 8K transmission from about 40 Gigabits per second (Gbps) down to 40 to 60 Megabits per second (Mbps).<sup>6</sup> This can make it possible for homes to receive 8K signals over a typical internet connection of 250Mbps.

## Key Benefits



### POWERFUL PERFORMANCE

Ingest, encode, and transmit live 8K video, with a glass-to-glass latency of a few seconds.



### VERSATILITY

Help appeal to potentially wider audiences with multiformat distribution in 8K, 4K, 2K, HD, and SD.



### NEW EXPERIENCES

Deliver some of the first 8K consumer experiences on Intel® processor-powered laptops and smart TV-connected PCs.



### STUNNING DETAIL

Experience content with 16x more pixels than 1080p and 4x more pixels than 4K.

<sup>6</sup>. Performance based on measurements from Olympic Broadcasting Services and Intel. Results may vary.

## More pixels and fine details with Intel® processor-powered 8K

Intel® Xeon® processors use built-in Intel® Deep Learning Boost (Intel® DL Boost) AI platform technology to optimize 8K frame compression, analyze complex scenes and detail such as flowing water, and provide H.266 encoding in near-real time. OBS distributes Intel-powered 8K, which can help enable media rights holders to deliver low-latency 8K video to global audiences over the public internet.

Efficient decoding makes it possible to watch livestreaming 8K media on Intel® Core™ processor-based PCs with Intel® Arc™ graphics and playback on Intel® Core™ Ultra processor-based laptops connected to 8K TVs using HDCP 2.2. This enables audiences to see an extreme level of detail, smooth action, and eye-popping, life-like color in 60 FPS high dynamic range (HDR). This next-generation media format delivers the highest degree of lifelike immersion currently possible on a screen without using augmented or virtual reality (AR/VR).

## Prepare for the Intel® processor-powered 8K future

The Intel® processor-powered 8K workflow can support multiformat distribution that transcodes 8K signals to simultaneously support 8K, 4K, 2K, HD, and SD distribution, so even viewers without an 8K TV can still enjoy their device's maximum resolution. By investing in Intel® processor-powered 8K broadcast workflows now, media rights holders can help differentiate their offerings and prepare for the future while continuing to support potentially wider audiences using multiformat distribution.



# Efficient event planning with Intel® processor-powered 3D digital twin platforms



Extensive planning is required to organize media and entertainment events on the scale of the Olympic Games. Not only must event organizers fly in teams for on-site visits, but so must participating National Olympic and Paralympic Committees, vendors, and media rights holders. Thousands of people are involved in planning everything from hospitality to accessibility, potentially culminating in a vast, expensive, and time-consuming effort. While more efficient, working remotely can lead to errors and oversights, with teams struggling to collaborate across multiple systems and tools.

At the Olympic and Paralympic Games Paris 2024, Intel® Xeon® Scalable processors and Intel® Arc™ A770 GPUs are powering the development of 3D digital twin platforms to help organizers make their preparations. These platforms are detailed 3D re-creations of 30 different venues that are hosted in the cloud for easy access and synchronized collaboration in near-real time. Organizers use these platforms to make fast, informed decisions about the placement of staff, infrastructure, and content capture devices, all without having to travel to the venue.



## Key Benefits



### EFFICIENT PLANNING

Empower cross-functional teams around the world to collaborate and make decisions with a single source of data.



### EASE AND CONVENIENCE

Reduce or eliminate costly travel requirements that can potentially help contribute to a smaller carbon footprint.



### HIGH QUALITY

Create detail-rich 3D models of venues and spaces with Intel® Xeon® Scalable processors and Intel® Arc™ A770 GPUs.



### FLEXIBILITY

Use a range of devices, such as tablets and laptops, for online visualization and planning.

## A single source of data for planning global-scale events made easy

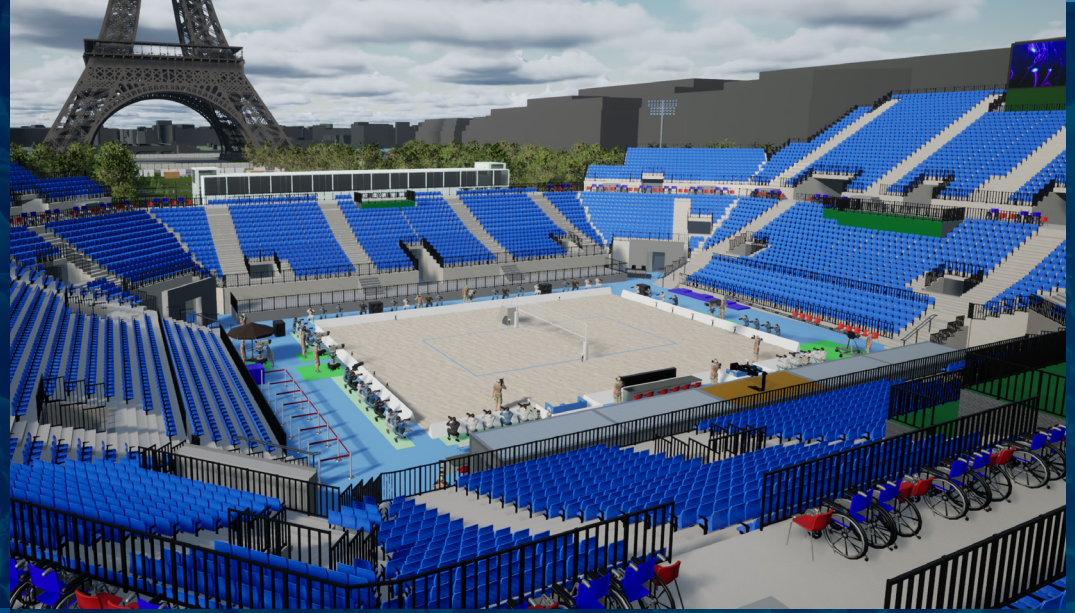
The Intel-enabled 3D digital twin platform provides a single source of data that users can access anytime, from anywhere. If a user wants to insert a change to the venue plan—such as adding ramps, first aid equipment, or signage—they can easily update the 3D model. Other approved users will see the change in near-real time, so they can contribute to the updated plan while helping to avoid version-control issues.

Because the venue information is always the most up-to-date version, support staff can also use the 3D digital twins to facilitate navigation around training grounds and locker rooms or direct athletes where to go and where to put their equipment.

## A 3D digital twin platform that's accessible online

In the months leading up to Paris 2024, technicians used high-powered workstations enabled by Intel® Xeon® Scalable processors and Intel® Arc™ A770 GPUs to quickly develop 3D digital twins of dozens of venues. All the software packages used to develop and visualize the 3D digital twins are optimized for Intel® architecture for fast and efficient 3D platform creation.

The 3D models were then uploaded to Intel® Xeon® Scalable-based servers for convenient, widespread access. All the processing takes place on these upstream servers, so organizers can access 3D digital twins and collaborate from any web browser without requiring the use of a high-powered workstation.



# Intel® processors power an innovative platform to enhance accessibility



Organizations want to make indoor environments more accessible to all people, including persons who are blind and low vision, deaf, mobility impaired, and neurodiverse. High-quality, reliable accessibility solutions can be hard to find, and those that exist are often expensive, complex, and time-consuming to implement and manage. A highly accurate solution that fuses AI platform technology with an intuitive user experience is key to meeting the needs of a wide range of users.

Intel® Xeon® Scalable processors enable an innovative universal accessibility platform that the International Paralympic Committee uses at its headquarters to help persons with and without disabilities independently navigate indoor spaces. The platform uses Intel® AI platform-accelerated compositing of detailed computer vision models in combination with real-time location data from users' devices. Users receive verbal and visual directions on how far to walk, where to turn, and when they have arrived at points of interest.



## Key Benefits



### FAST PROCESSING

AI platform-accelerated Intel® Xeon® Scalable processors can help reduce the time and resources needed to process rich computer vision scans.



### GRANULARITY AND ACCURACY

Enhanced processing power increases the amount of detail that can be included in each facility map.



### VISITOR SAFETY

The Intel® processor-powered platform can help direct users with and without disabilities around hazards and changes to the environment in near-real time.



### BETTER EXPERIENCES

The AI platform-driven solution goes beyond basic accessibility—for example, allowing people in wheelchairs to find stepless routes with ramps and elevators.



## Intel® processors deliver up-to-date computer vision environments

Weeks before an event, technicians create and send high-density, LiDAR point scans of facilities to upstream Intel® Xeon® Scalable processor-enabled servers, which use the data to create detailed computer vision models. A subsequent scan is layered onto computer vision models nearer to the date of the event to capture any changes to the environment. At the time of the event, visitors access the platform using a free, downloadable app that uses location data to deliver step-by-step directions.

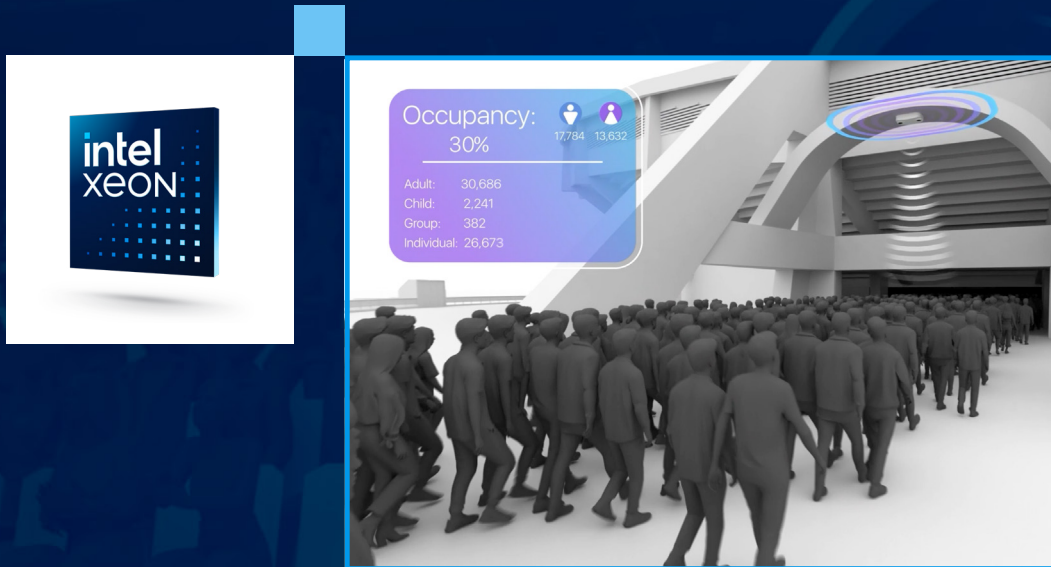


## Offsetting costs while exceeding basic accessibility

The universal accessibility platform enabled by Intel® Xeon® Scalable processors keeps up-front costs low by reducing the time and resources needed to create computer vision models. The solution can also potentially provide valuable demographic data to event hosts, help improve accessibility and experiences for users, and help reduce crowding and congestion by making it possible for people to reach their destinations faster, all of which can help offset deployment soft costs such as staff training.



# Intel® AI platform-enabled venue count helps enhance operational efficiency



Large-scale events like the Olympic Games Paris 2024 attract massive numbers of attendees who move through several environments. As people gather, large crowds and congested spaces can impact the guest experience and lead to safety concerns. Venue operators and event organizers need ways to understand space occupancy at any given time—especially in nonticketed environments—so they can make decisions that best support guest needs.

At Paris 2024, event organizers are deploying Intel® AI platform-enabled venue count at 22 competition locations—each including one or more Olympic Family Lounges and Venue Media Centers. The solution uses AI platforms enabled by the OpenVINO™ toolkit, running on upstream servers powered by Intel® Xeon® Scalable processors, to inform event organizers about occupancy data in near-real time. With this information, organizers can maintain visibility into current conditions at each location to help make informed decisions about resourcing, transportation, and operating hours and help ensure smooth experiences for all.

**OpenVINO™  
Toolkit**

## Key Benefits



### HIGH-PRECISION PEOPLE COUNTING

Intel® AI platform-enabled venue count helps provide detailed insights into crowd dynamics through more-accurate visitor counting and traffic flow monitoring.



### ADVANCED INSIGHTS

Organizers can understand visitor flow, dwell times, and engagement across different event areas to identify hotspots and optimize space layout.



### CUSTOMIZABLE ZONES

Organizers can define specific areas of interest within each event space to monitor and analyze more granularly.



### EASY DEPLOYMENT

Battery-powered, wireless sensors provide essential environment monitoring with minimal footprint.

## Optimized AI platforms deployed to wireless edge devices

At each venue, stereoscopic sensors and 3D capture devices running OpenVINO™ continually measure the number of people with the ability to differentiate distinct zones within the environments. The sensors and capture devices transmit data wirelessly to upstream servers for rapid analysis powered by Intel® Xeon® Scalable processors. OpenVINO™ optimizes AI performance to help deliver near-real-time insights and help make it possible to run AI on lightweight capture devices at the edge.

## Maintaining user privacy with platform security features

AI-platform-enabled venue count only measures the number of people in each area and does not include any identifying characteristics in datasets. AI data is processed anonymously and with enhanced security on upstream servers enabled by Intel® Xeon® processors, which can feature hardware-level data protection and confidential computing capabilities, including Intel® Software Guard Extensions (Intel® SGX).



# The Intel® AI platform experience helps audiences find their ideal Olympic sport



AI platforms are enhancing sports science with the ability to analyze thousands of data points, deepening our understanding of athletic potential while making those insights more accessible to everyone. Sports federations are using AI platforms to help inform their coaching practices and push the boundaries of sports performance.

At the Olympic Games Paris 2024, visitors can freely participate in the Intel® AI platform experience to receive customized Olympic sport recommendations based on their unique athletic profile. The activation uses the same Intel® AI platforms that sports organizations can leverage to coach or scout professional athletes worldwide. AI models optimized with the OpenVINO™ toolkit, running on edge servers and devices powered by Intel® Xeon® and Intel® Core™ processors with Intel® Gaudi® AI accelerators, can support the fast, efficient AI platform inference needed to deliver a seamless and engaging user experience.



OpenVINO  
Toolkit

## Key Benefits



### POWERFUL AI PLATFORM PERFORMANCE

Intel® processors combined with Intel® AI accelerators and OpenVINO™ can achieve the high performance needed for fast inference and near-real-time results on-site.



### INSIGHTFUL ENGAGEMENT

Intel® AI platforms crunch thousands of data points using AI computer vision to give participants a deeper understanding of their athletic potential.



### EASE OF ACCESS

Intel® AI platforms running on Intel® processor-powered edge devices keep AI processing on-site to help minimize latency and control costs.



### SECURITY AND PRIVACY

Hardware-enabled data security in Intel® processors helps protect user data from unauthorized access and system tampering.

## Hands-on experience with AI platform-powered professional sports science

Intel® Xeon® processors, Intel® Core™ processors, Intel® Gaudi® AI accelerators, and the OpenVINO™ toolkit enable the on-site data servers and edge devices used to deliver near-real-time recommendations to participants at Paris 2024.

1

### Intake

The AI platform measures height and wingspan while creating a digital avatar of each consenting participant.

2

### Speed and endurance

Participants run in place while the AI platform converts up to 60 FPS 2D video into 3D biomechanics data in near-real time.

3

### Reaction time and force

Fast-tap wall sensors test each participant's response time, focus, and accuracy. Force sensors measure the impact of standing jumps and upper body strength.

4

### Sprint acceleration

Participants take off from an official starting block as the AI platform measures their explosive strength, power, and acceleration.

5

### Event match

Data from all previous zones is analyzed on-site to match each participant with their ideal Olympic sport. Anyone who participates can pass the test and get a recommendation.

## Building on the success of AI platforms at previous Olympic Games

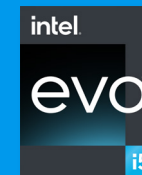
The Intel® AI platform experience uses the same AI platform innovations, enabled by 3D athlete tracking (3DAT) technology, that were used at the Olympic Games Tokyo 2020 and Olympic Winter Games Beijing 2022. At Tokyo 2020, the AI platform helped enrich broadcasts with data visualization overlays during relay and hurdle athletic events. At Beijing 2022, the platform created virtual elements such as snowflakes that interacted in near-real time with hundreds of performers during the Opening Ceremony.

# Intel® processors drive portability and all-day battery<sup>7</sup> in a laptop



At the Olympic and Paralympic Games Paris 2024, the enterprise workforce responsible for organizing events needs all-day productivity and portability as they move between office and venue environments. As team members bounce from location to location, they also need seamless connectivity to collaborate in videoconferences and to transfer files between their devices easily.

Intel® Evo™-enabled laptops can boost workers' productivity as they move between locations, take back-to-back online meetings, and pair their laptops with other devices<sup>8</sup> to transfer files on the go. These sleek, lightweight laptops feature 12th Gen and newer Intel® Core™ processors with integrated graphics and are engineered to Intel® Evo™ platform specifications that meet the highest expectations of professional users.



Tested for 75+ technical specifications and hardware requirements<sup>9</sup>

## Key Benefits



### ADVANCED CONNECTIVITY

Enjoy capabilities such as docking, up to 40 Gbps data transfer, and device charging, all over a single cable.



### ALL-DAY BATTERY<sup>7</sup>

Stay productive on the go with battery life that's tested against real-world conditions.



### MULTIDEVICE EASE OF USE

Pair with other devices to enable text messages directly from the laptop as well as drag-and-drop file transfer between devices.<sup>8</sup>



### VISUAL CLARITY

Prioritize Wi-Fi bandwidth for important tasks like online collaboration over background file downloads.

7. Based on verified real-world battery life of Intel® Evo™ designs while performing typical workflows in a realistic environment within average daily usage scenarios. Testing results are as of December 2022. Individual system results may vary. See [intel.com/Performance-Evo](https://www.intel.com/Performance-Evo) for details.
8. Currently available for eligible Intel® Evo™ designs on Windows-based PCs powered by 12th Gen or newer Intel® Core™ processors and only pairs with Android- or iOS-based phones; all devices must run a supported OS version. See [intel.com/Performance-Evo](https://www.intel.com/Performance-Evo) for details, including setup requirements.
9. Intel® Evo™ designs are verified, measured, and tested against a premium specification and key experience indicators as part of Intel's innovation program, Project Athena. Testing results are as of December 2022. Individual system results may vary. See [intel.com/Performance-Evo](https://www.intel.com/Performance-Evo) for details.



## Embracing the wow factor that can only be experienced with the device in hand

User friendliness and satisfaction with the Intel® Evo™ platform-enabled laptops can be an important factor in contributing to overall productivity. These laptops bring the ultrathin and lightweight feel that users have come to expect in their personal devices, resulting in a laptop that workers may actually want to use rather than one they only need to use. Advanced capabilities such as single-cable docking also make it a snap to connect to additional monitors and peripherals quickly and easily.

## Battery life tested for real-world workloads

The battery life of many productivity devices is sometimes tested against minimal workloads in tightly controlled laboratory conditions. Intel® Evo™ platform-enabled laptops are tested against real-world workloads that include multitasking across several apps. All-day battery life can mean a full workday of online collaboration and productivity while staying unplugged.<sup>7</sup>

## High-quality online meetings that help eliminate freezes, skips, and blips

Intel® Evo™ laptops are designed for how people work, with a built-in connectivity performance suite for Wi-Fi prioritization. If you start to download a large file and get a meeting invite at the same time, you can still have a high-quality, smooth online collaboration session without freezes, skips, and blips.

Learn more at [intel.com/evo](https://intel.com/evo).

7. Based on verified real-world battery life of Intel® Evo™ designs while performing typical workflows in a realistic environment within average daily usage scenarios. Testing results are as of December 2022. Individual system results may vary. See [intel.com/Performance-Evo](https://intel.com/Performance-Evo) for details.

# Intel® processors, 5G, AI, and 3D content development platforms strive for excellence at the Olympic and Paralympic Games Paris 2024

These innovative use cases at Paris 2024 can bring fans closer to the action while helping event planners increase their flexibility in the face of new demands and challenges. From advanced media transport to remote productivity, from accessible smart facilities to creating new experiences that engage and excite, organizations don't have to be limited by traditional solutions and proprietary infrastructure.

Open vendor ecosystems and off-the-shelf Intel® CPUs, GPUs, and FPGAs help make these Paris 2024 use cases readily accessible to industries including sports, media, and beyond. Intel offers the reference architectures, expertise, and technology partnerships that can simplify deployments and help ensure success. The spirit of the Olympic and Paralympic Games is competition, and organizations can push themselves to achieve while getting the scalability and flexibility they need. It starts with Intel.



## Notices and disclaimers

1. "Optimized Real-Time Video Transport using Intel® Data Streaming Accelerator," Intel, January 2023, [networkbuilders.intel.com/solutionslibrary/optimized-real-time-video-transport-using-intel-data-streaming-accelerator](https://networkbuilders.intel.com/solutionslibrary/optimized-real-time-video-transport-using-intel-data-streaming-accelerator).
2. "Intel® Data Center GPU Flex Series for Media Processing and Delivery," Intel, August 2022, [intel.com/content/www/us/en/products/docs/discrete-gpus/data-center-gpu-flex-series/media-delivery-solution-brief.html](https://intel.com/content/www/us/en/products/docs/discrete-gpus/data-center-gpu-flex-series/media-delivery-solution-brief.html).
3. "Intelligent Vision & Video," Intel, accessed June 2024, [intel.com/content/www/us/en/smart-video/products/programmable/overview.html](https://intel.com/content/www/us/en/smart-video/products/programmable/overview.html).
4. Performance based on measurements of distance, latency, and uplink capacity performed by Olympic Broadcasting Services, Intel, and other suppliers. Results may vary.
5. "Delivering Volumetric Media at Scale with Intel® Advanced Volumetric Library," Intel, December 2023, [intel.com/content/www/us/en/content-details/812379/delivering-volumetric-media-at-scale-with-intel-advanced-volumetric-library.html](https://intel.com/content/www/us/en/content-details/812379/delivering-volumetric-media-at-scale-with-intel-advanced-volumetric-library.html).
6. Performance based on measurements from Olympic Broadcasting Services and Intel. Results may vary.
7. Based on verified real-world battery life of Intel® Evo™ designs while performing typical workflows in a realistic environment within average daily usage scenarios. Testing results are as of December 2022. Individual system results may vary. See [intel.com/Performance-Evo](https://intel.com/Performance-Evo) for details.
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Performance varies by use, configuration, and other factors. Learn more on the [Performance Index site](#).

Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. See configuration disclosure for details.

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