

NICON

VALKYRIE



LEGENDARY PERFORMANCE

**THE MOST ADVANCED  
MOTION CAPTURE  
CAMERA IN THE WORLD**

**VALKYRIE IS THE NEW FOUNDATION  
OF YOUR MOTION CAPTURE SYSTEM**

**AGILITY, SPEED AND RAW POWER  
PRECISION-ENGINEERED INTO  
EVERY DETAIL**

# LEGENDARY PERFORMANCE

Valkyrie's combination of fidelity, intelligence and automation elevates your motion capture practice to the next level, allowing you to see deeper, further and faster, whatever environment you are working in.

Engineered from the ground up, based on the invaluable feedback from our global community, Valkyrie builds on nearly four decades of Vicon expertise to fit seamlessly into our best-in-class ecosystem.

For biomechanists, VFX artists, sports science practitioners, games developers, metaverse builders, and users whose applications haven't even been imagined yet, Valkyrie will expand your horizons in a more exciting and confident way.

Valkyrie is the most powerful motion capture tool in the world.

# A DYNAMIC CAMERA FOR A CHANGING WORLD

**SEE DEEPER, FURTHER AND FASTER**

**VALKYRIE IS THE MOST POWERFUL MOTION CAPTURE CAMERA IN THE WORLD**



**A precision-engineered lens**

We built a whole new varifocal lens to increase Valkyrie's range and precision.



**Intuitive operation**

Valkyrie offers easier aiming and monitoring than any other Vicon camera, with a 30FPS full video preview mode to further streamline your work.



**Bleeding edge speeds**

The camera's native speeds go up to 500FPS, and as high as 2000FPS when windowing techniques are used.



**A camera for any environment**

With Valkyrie, you can capture any movement in any environment, safe in the knowledge that your camera is built to perform in challenging conditions.



**Market-leading resolution**

With a resolution of up to 26MP, Valkyrie offers unparalleled clarity.



# LIFE SCIENCES

Over 35 years ago Vicon's work began with life sciences and the desire to make a difference is still at the heart of everything we build. Valkyrie offers a new perspective on the world of motion while integrating seamlessly with Vicon's trusted ecosystem, the most cited motion capture solution in the world.

Valkyrie's incredible resolution and accuracy mean it offers incredible data quality for powerful new insights into movement and the best decisions for patients. The camera's extraordinary fidelity brings new levels of detail to highly complex modeling, offering new insights into structures such as the shoulder, feet, and the spine.

**VALKYRIE'S UNBEATABLE SPEED EASILY BREAKS DOWN THE MOVEMENTS OF FAST-MOVING SUBJECTS SUCH AS ATHLETES INTO CLEAN, GRANULAR DATA**

As technology becomes more complex, so do the challenges facing the engineers building the world of tomorrow. With Valkyrie, those engineers have a powerful new tool for understanding the technologies they are creating.

The combination of Valkyrie's exceptional resolution and its bespoke varifocal lens means that it can see further. That enables operators in industries such as aerospace, defense, automotive and manufacturing to cover vast volumes, using a mixture of passive and active capture alongside techniques such as rigid body tracking for comprehensive analysis of subjects such as UAVs and robots.

Users capturing objects moving at high speeds, such as drones, can tap into Valkyrie's speed to gain split-second insights into their objects' performance and make real-time corrections to their movement.

**VALKYRIE ALLOWS YOU TO UNDERSTAND THE TECHNOLOGIES OF TODAY SO THAT YOU CAN BUILD THE TECHNOLOGIES OF TOMORROW**

# ENGINEERING





# VFX

The field of VFX has undergone unprecedented changes. New techniques such as virtual production, in-camera VFX and virtual scouting, alongside ever-more realistic effects, have changed the face of filmmaking and games development forever.

With exceptional resolution, Valkyrie enables digital artists to visualize the most realistic characters and scenes, while saving time in post production thanks to the quality of data it produces. Meanwhile, Valkyrie's range and the groundbreaking work Vicon has done on finger tracking mean that users can cover large volumes while capturing fine details of human movement. Valkyrie's speed ensures that even the most breakneck action sequences can be analyzed, even for studios working within tighter budgets.

For the rapidly evolving fields of in-camera VFX, immersive virtual production and virtual scouting, Valkyrie's strobeless build offers filmmakers a chance to unlock new creative insights by exploring large virtual environments. Valkyrie is a camera for the next generation of visual creators, and will continue to advance alongside them.

## VALKYRIE IS A NEXT GENERATION MOTION CAPTURE CAMERA FOR A NEXT GENERATION INDUSTRY

As developers drive virtual reality in new directions, Valkyrie pushes the leading edge of the VR field ahead of them, enabling users to create the most convincing and responsive location-based VR experiences imaginable.

Valkyrie's strobeless motion capture solution can see further than ever, increasing freedom of movement for users in VR applications for gaming, engineering, training, and the metaverse, while remaining cost-effective.

The camera's 30FPS video preview mode, robust tracking and calibration, and autohealing ability when used with Evoke, enable operators to focus on running highly immersive VR experiences while keeping throughput high.

Whether the application is engineering, learning, social, the metaverse or gaming, Valkyrie lets you explore new virtual worlds and experiences.

## VALKYRIE ALLOWS USERS TO CREATE THE MOST CONVINCING AND RESPONSIVE VR EXPERIENCES IMAGINABLE

# VIRTUAL REALITY



# ONE CAMERA BUILT FOUR WAYS

Valkyrie is the most powerful motion capture camera ever brought to market, offered with four different specs with four different focuses: resolution, speed, value, and strobeless.

Taken together, the four different Valkyrie models comprise the highest fidelity motion analysis camera range on the market. Whatever your application, Vicon will tailor your system to your precise needs by combining the right Valkyrie model with advanced software to create a best-in-class ecosystem.

Automated, intelligent, powerful, fast – Valkyrie is the foundation of your next motion capture system.



## VK26

Capturing at an incredible 26.2MP and running at 150FPS, the VK26 offers the highest resolution on the market. The VK26 is your new source of ground truth in the life sciences, a window on motion that will allow AAA VFX studios to create their most hyper-realistic characters to date, and a powerful next-gen tool for engineers. It is our elite model; the pinnacle of motion capture precision.

## VK16

With a base speed of 240FPS and a resolution of 16.1MP, the VK16 offers the best speed/resolution ratio on the market, perfect for motion capture practitioners who need to capture fast-moving subjects such as athletes or drones while maintaining uncompromising resolution.

## VK8

Representing the best speed and resolution per dollar, pound or euro spent, the VK8 boasts an incredible frame rate of 500FPS and 8MP resolution. The VK8 is a cost-effective entry point to motion capture, providing the best high quality coverage of your volume for your budget and democratizing movement analysis.

## VKX

Built for use in virtual reality, virtual production and virtual scouting, the VKX allows users to be captured in immersive digital environments thanks to its strobeless tracking of active LED markers. The VKX is a perfect solution for fast-moving subjects in training or gaming environments, and an ideal complement for other cameras in the Valkyrie range when operators such as industrial engineers seek to maximize range.

# LOW LATENCY, UNCOMPROMISING PERFORMANCE

To support its industry-leading frame rates, Valkyrie begins processing your data onboard the camera, enabling users to capture fast-moving targets such as drones and athletes or multiple subjects with extremely low latency.

When latency is critical, such as when users are controlling drones or robots over a wireless network, or during interactive scenarios in virtual reality, Valkyrie is the difference between success and failure.



## UNRIVALED RESOLUTION

Valkyrie offers the highest resolution on the motion capture market, going up to 26.2MP for unmatched accuracy.

Your camera's higher pixel count means a higher quality of data, which in turn means more powerful insights and more time-efficient processing thanks to the reduced cleanup time.

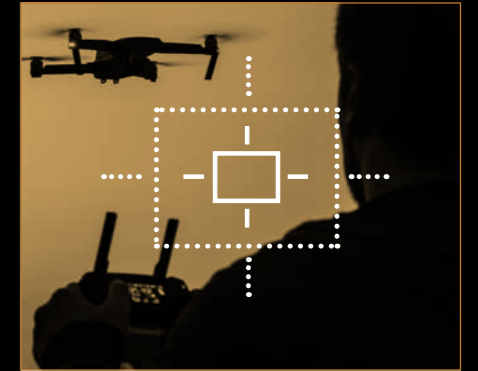
Combined with Valkyrie's bespoke varifocal lens, higher resolution can also mean improved range and greater volume coverage with fewer cameras.



## EXTREME SPEED

Valkyrie tracks subjects at base speeds of up to 500FPS and can record at 2000FPS when windowing/subsampling is used, offering exceptional fidelity when tracking fast-moving subjects such as athletes and drones.

Combined with Vicon's best-in-class ecosystem, that means you get the highest-quality data, actionable in real time for applications such as UAV control.



## NEXT-GEN ACCURACY

Valkyrie is Vicon's most accurate camera ever, producing data you can trust every single time.

## VALKYRIE TECH SPEC

	VK26	VK16	VK8	VKX
FPS full frame	150	240	500	380
RES (MP)	26.2	16.1	8.0	7.2
H FoV (wide)	72	72	72	66
V FoV (wide)	72	46	42	66
H FoV (narrow)	54	54	54	54
V FoV (narrow)	54	35	30	54
IP65	✓	✓	✓	✗

# NEXT-GEN INTELLIGENCE

Valkyrie's intelligent, automated features and algorithms reduce the burden on operators and cut down cleanup time.

Working with Vicon's holistic motion capture ecosystem, Valkyrie monitors its own temperature and position for optimal performance.

As soon as your capture session begins, so does the work with the camera's onboard grayscale and centroid processing. The Vicon software performs many functions without need for further refinement or third-party pipelines. You can also take your capture data and apply your own scripts or biomechanical modeling to it – the choice is yours.



## FOCUS ON YOUR LATEST PROJECT WITH VALKYRIE'S INTELLIGENT, AUTOMATED FEATURES AND ALGORITHMS

### A SELF-HEALING SETUP FOR UNBROKEN COVERAGE

If Valkyrie is knocked your Vicon software\* will automatically recalibrate the camera, minimizing the need for operator input and ensuring that every camera is aimed where you want it to be, while the camera's display and status lights provide essential updates on system status and performance. This reduces reliance on operator expertise and allows users to focus on their motion capture project.

### A LENS FOR ALL RANGES

As well as a new range of powerful sensors, Vicon has developed a custom varifocal lens to optimize Valkyrie's performance. As well as being able to focus at different ranges, Valkyrie can capture with wide, center and narrow fields of view.

\*Specific to certain Vicon software packages.





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**#beyondmotion**

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