# CANON AV AND IMAGING SOLUTIONS

For Education and Training Institutions



PTZ • MIRRORLESS • CINEMA EOS • STREAMING • CASE STUDIES ACCESSORIES • AFTER-SALES



# INTRODUCTION

Our visually connected world relies on seamless integration across an increasingly wide variety of platforms. From studios to lecture theatres, Canon's comprehensive range of imaging and video solutions have been engineered to fit into any professional workflow – with no compromise in quality and performance.

Canon's reputation as the world leader in video and photography has been won over decades of innovation and design. Our AV ranges bristle with technology that work together to make your vision easier than ever to realise.

In the world of education, hybrid learning has become the new normal with a pandemicled shift away from traditional teaching techniques. Harnessing these new opportunities to teach, with technology offering a richer and more experiential way of learning, brings students closer to their subjects and provides a more meaningful engagement. Institutions have realised the power of PTZ and video cameras for remote learning while teachers and students have turned to stills cameras as a way of delivering engaging content.

Welcome to the Canon vision.

CANON AV AND IMAGING SOLUTIONS



# THE CANON GROUP

Canon has been a leading name in imaging for over 80 years. A truly global brand with manufacturing facilities across Japan, the Americas, Europe, Asia and Oceania and over 187,000 employees, the company's digital imaging technology reaches beyond camera hardware and software into areas such as satellite development, medical advancements, smart cities, astronomy and growing the possibilities of print and industrial equipment.

In addition to providing class-leading consumer, business and industrial imaging solutions, Canon can deploy its power and expertise as a leading global brand to deliver exceptional after-sales service, either directly or via the Canon Group companies.

# Inter Main INTH

#### CANON GROUP COMPANIES



ARCULES

BriefCam

A world-leading provider of open platform IP video management software (VMS), dedicated to deliver platform software for integration into video solutions for security and beyond.

More information: milestonesys.com

The market leader in network video and innovator in video surveillance, increasing the security of millions and meeting the need for a smarter, safer world.

More information: axis.com

Arcules (Launched 2017 as Arcus)

A video cloud IoT-as-a-service offering for enterprise businesses. Combining IoT and videodata, to reinvent the video surveillance industry thanks to cloud and AI technologies.

More information: arcules.com

The industry's leading provider of Video Synopsis® solutions. BriefCam's technology detects, tracks, extracts and identifies people, objects, their attributes and behaviour from video.

More information: briefcam.com

CANON EUROPE LTD

Milestone (Aquired 2014)

Axis (Aquired 2015)

BriefCam (Aquired 2018)

# **INTEGRATION WITH CANON**

As one of the world's leading camera manufacturers, Canon are always seeking new and intuitive ways to make their cameras seamlessly integrate with key third party products. By seamlessly integrating their cameras with key third-party products, Canon ensure that Universities and Colleges can enjoy a streamlined workflow and unparalleled convenience.

#### **XC Protocol**

Canon's XC Protocol is open and common platform of IP communication with Canon Professional Video and Cinema Products.

It offers open API for integration with any type of IP base solution that enables control of the camera such as image settings, physical Pan/Tilt/Zoom movement, and transfer of metadata.

Canon's XC protocol also allows 3rd party device and software to be controlled by Canon's range of Remote Controllers via It empowers multiple types of sectors to achieve seamless integration with Canon's pro video range – simplifying their workflow.



#### Integration examples



**SENNHEISER** 



#### SDK

The EDSDK and CCAPI are best described as Application Programming Interfaces (APIs) which open-up control of the camera functionality to authors of software to provide solutions to the companies they work for or own. The ability to integrate camera control into their software applications means that control of the camera can be managed automatically to generate imagery and transfer data instantly.

This streamlining of the end-to-end processes reduces costs and saves time. Developers can access and download detailed documentation, API information and use a special software library from Canon Developer Programme. The developer portal also provides technical support and advice.

#### Applicable Canon products



**Applicable Canon products** 

Remote PTZ Cameras



Cinema EOS Cameras

XF Camcorders



Remote Controllers





**EOS Cameras** 

**RF** Lenses

If you would like to discuss how you can integrate your solution with Canon products, please contact your local Canon office.



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#### Extron

#### Use cases



3D Photogrammetry



Machine Vision & Inspection



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#### **APPLICATIONS WITHIN THE EDUCATION SECTOR**

# **LECTURE CAPTURE AND HYBRID LEARNING**



#### INTRODUCTION

Universities and Colleges are under increasing pressure – particularly since the pandemic in 2020 - to offer students a wider array of flexible learning options. Teaching establishments now cater to three scenarios: in-person learning, remote and hybrid learning - where some students are in the lecture hall, and some are at home. The demand for video technology to stream and record lectures is growing particularly due to hybrid learning.

#### Industry challenges:

- Having easy to use technology for teachers so they can focus on teaching.
- Making students who are remote feel as if they are in the lecture.
- Having an easy platform for students to view videos of the lectures.
- Budget constrictions to implement technology.
- Uniform technology across the whole campus for a streamlined workflow.
- Finding equipment to integrate with an existing infrastructure.
- Poor lighting in lecture halls that can adversely affect image quality.

#### The Canon solution:

- Easy to use cameras and software so teachers can focus on teaching.
- Canon has over 80 years of imaging heritage – its video and photo products deliver class-leading high-definition streaming, so students feel as if they're in the lecture.
- · Canon products are compatible with a wide variety of learning platforms such as Panopto, so students can view livestreams or pre-recorded lectures.
- · Canon has a range of imaging systems - from entry level to flagship - offering a solution for all budgets.
- · Canon's imaging products such as remote PTZ systems offer in-built protocols such as NDI, SRT, RTMP/ RTMPS and more, meaning they can fit into existing University infrastructures.
- · Canon cameras have excellent low light capabilities thanks to their high-quality sensors. Canon's autofocus technology also enable the camera to quickly focus on people even when lighting conditions aren't favourable.

#### SOLUTIONS FOR LECTURE CAPTURE AND HYBRID LEARNING

#### Remote PTZ System

Canon's solution offers a remote 4K production package for all situations, bringing smooth pan and tilt functionality along with exceptional image quality and wide range of IP protocols, while our hardware controller and free of charge software controller provide the means to control and adjust from a remote location.

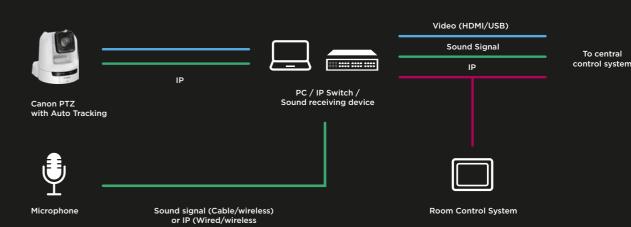


#### Auto Tracking Application

Canon's proprietary Auto Tracking Application enables lectures to take place without a camera operator. This means lectures can be started as soon as the software detects a lecturer and the PTZ camera will follow them as they move across the stage. This software requires no additional PCs as the application is built within the PTZ camera itself.



#### System Configuration Example:



#### Recommended PTZ products



#### **CR-N500**

With a 15x optical zoom, 4K UHD shooting capabilities and Dual Pixel Auto Focus. the CR-N500 allows for precise control and seamless IP streaming with engage your audience in exceptional results.



#### **CR-N300**

Equipped with 4K UHD resolution, a 20x optical zoom, Hybrid Auto Focus, numerous IP streaming and control protocols, you can new ways.



#### **CR-N100**

A high quality 4K PTZ camera with advanced autofocus. 20x optical zoom and multiple IP protocols with built-in intelligent Auto Tracking.

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#### Multi Camera Management Application

A free of charge PC application that allows multiple cameras and controllers to be set up, monitored, and managed from a single software application.



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#### CASE STUDY

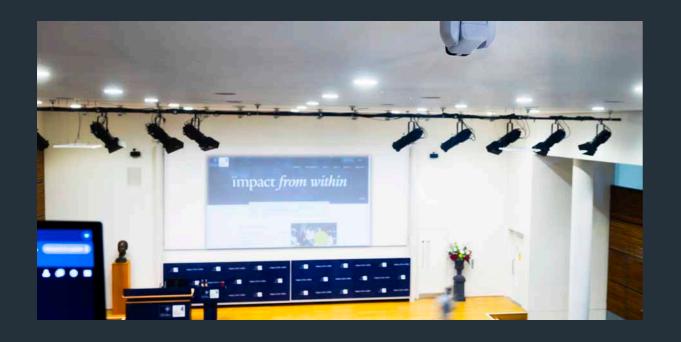
# OXFORD'S FINEST, Now in 4K

#### THE CHALLENGE

With a demanding schedule of live events, high-profile talks and daily lectures often running back-to-back, the AV team at Saïd Business School needed to capture, stream and record high-quality footage for hybrid learning. Keen to match the University of Oxford's outstanding academic reputation, the school wanted to invest in a deeper learning experience, while seeking a more scalable, easy-to-use in-house solution.

#### THE SOLUTION

After extensive research and hands-on demonstrations with Canon on site and at industry events like Integrated Systems Europe, the team selected two Canon PTZ models – the CR-N700 and CR-N300 – as well as an RC-IP1000 controller for more hands-on control at live events. Connected via SDI and powered by streamlined ethernet connectivity, the cameras integrated seamlessly into existing infrastructure and offered the ease of use the University required.





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#### APPLICATIONS WITHIN THE EDUCATION SECTOR

# SCIENTIFIC AND TECHNICAL COURSES

#### INTRODUCTION

Courses such as engineering, medical, workshop and science require a high level of practical training. As such, universities are exploring new ways of how to make this content more accessible to students, but also teach this in an engaging way, especially as the world of hybrid learning is growing.

This means those students who might not have been able to attend the practical seminar should ideally still be able to access learning material in an immersive and engaging way. This can be anything from teaching students how to do a dissection for a medical course or teaching students how to craft machinery for an engineering course.

The wider Canon portfolio can also be integrated into the learning curriculum. For example: recording experiments, developing solutions for research purposes, capturing visual data for analytics usage, and developing virtual environments.

#### Industry challenges:

- Ensuring students who missed the practical lesson can still get the same experience as those who attended the class.
- Easy workflow to capture the content and deliver it quickly.
- Capturing data as part of research and experiments.

#### The Canon solution:

- Canon video solutions include Virtual Reality systems which can give students a full immersive experience to learning.
- Canon have software available which can help easily process and digest virtual reality content so it can be outputted to a VR headset quickly.
- Canon products are used as part of the curriculum for example: rigs to do 3D photogrammetry, recording medical training and exams, or capturing visual data for analytics as part of research.

#### SOLUTIONS FOR SCIENTIFIC AND TECHNICAL COURSES

#### **EOS VR System**

From university teaching to medical training, VR transforms passive textbook learning into active, experiential education.

Canon's unique VR line-up adds innovative optical design to the award-winning EOS R Series system you already know and love. We're the first imaging brand to introduce an interchangeable lens that captures stunning 180° spatial content – from 3D stills to full immersive video in up to 8K. Whether it's your first foray or you're a VR pro, our EOS VR line-up provides the perfect platform to explore virtual reality content creation.

#### Recommended APS-C VR products





EOS R technology meets APS-C design, for a hybrid mirrorless camera that's small, fast and powerful with a 32.5MP sensor and up to 15fps continuous shooting with mechanical shutter or 30fps with the electronic shutter.



#### RF-S 7.8mm F4 STM DUAL

Welcome to a new era of spatial video and 3D VR creativity for APS-C cameras. Get ready to make your visuals pop with this lens for VR content. Outstanding.



RF-S 3.9mm F3.5 STM DUAL FISHEYE

Step into virtual reality content creation with the innovative RF-S 3.9mm F3.5 STM DUAL FISHEYE lens for APS-C cameras . Realistic, immersive 3D VR filmmaking is now within reach.

#### Recommended full frame VR products



Capture the world in stunning virtual reality with this ground-breaking L-series lens, designed to make your VR journey as seamless as possible.





#### EOS R5 Mark II

Master the moment, with a camera that mixes awesome speed with incredible resolution and superb 8K video.

#### The EOS R6 Mark II's breakneck speed, classleading performance and professional filmmaking features allows students to master their craft.



#### EOS R50

A video-first hybrid offering exceptionally detailed 8K RAW footage in a lightweight and easy-to-use body with dust and moisture resistance.



#### RF 5.2mm F2.8L DUAL FISHEYE



#### EOS R6 Mark II



#### EOS R5

Re-think what you know about mirrorless cameras. The EOS R5 uncompromising performance will revolutionise your photography and filmmaking.

CANON AV AND IMAGING SOLUTIONS

#### Remote PTZ System

Canon's solution offers a remote 4K production package for all situations, bringing smooth pan and tilt functionality along with exceptional image quality and wide range of IP protocols, while our hardware controller and free of charge software controller provide the means to control and adjust from a remote location.

#### Recommended PTZ products



#### CR-N700

An exceptional 4K60P professional PTZ camera with 12G-SDI connectivity and class-leading auto focus with built-in intelligent Auto Tracking.



#### CR-N300

Equipped with 4K UHD resolution, a 20x optical zoom, Hybrid Auto Focus, numerous IP streaming and control protocols, you can engage your audience in new ways.



#### CR-N500

With a 15x optical zoom, 4K UHD shooting capabilities and Dual Pixel Auto Focus, the CR-N500 allows for precise control and seamless IP streaming with exceptional results.

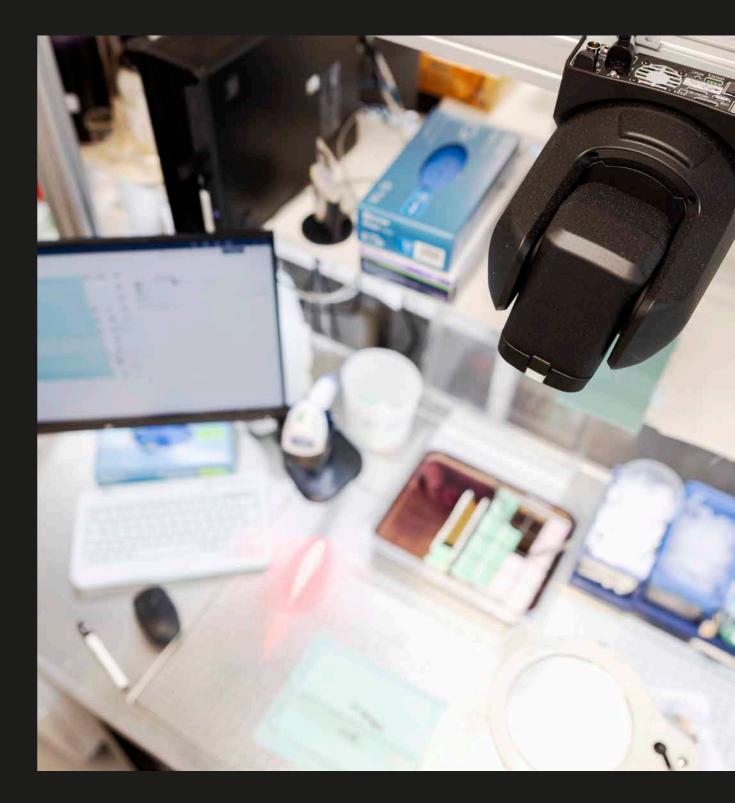


#### CR-N100

A high quality 4K PTZ camera with advanced autofocus, 20x optical zoom and multiple IP protocols with built-in intelligent Auto Tracking.

#### Auto Tracking Application

Canon's proprietary Auto Tracking Application enables lectures to take place without a camera operator. This means lectures can be started as soon as the software detects a lecturer and the PTZ camera will follow them as they move across the stage. This software requires no additional PCs as the application is built within the PTZ camera itself.



#### **EOS Mirrorless Cameras**

Compact, light, and small, Canon's interchangeable lens mirrorless cameras deliver superb quality photos and movies. They range from APS-C models with smaller lenses, to fullframe powerhouses where creativity is at the core. This product line is ideal for those seeking high quality still photography with the ability to switch to video.

#### Recommended full frame camera products



#### EOS R5 Mark II

Master the moment, with a camera that mixes awesome speed with incredible resolution and superb 8K video.



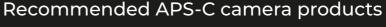
#### EOS R6 Mark II

The EOS R6 Mark II's breakneck speed, classleading performance and professional filmmaking features allows students to master their craft.



#### EOS R8

The EOS R8 opens up a new dimension of full-frame photography, with outstanding autofocus and low-light performance, pro video features including 4K 60p oversampled resolution, and more.





EOS R10

#### EOS R7

EOS R technology meets APS-C design, for a hybrid mirrorless camera that's small, fast and powerful with a 32.5MP sensor and up to 15fps continuous shooting with mechanical shutter or 30fps with the electronic shutter.

The EOS R10's impressive 24.2MP resolution, compact design and creative photography and video features make it the perfect hybrid content creation tool.





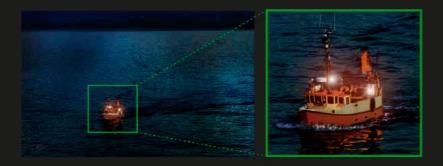


#### **EOS R50**

Compact, portable design delivers sharp stills and 4K films and live streams with a large 24.2MP APS-C sized sensor.

#### High Sensitivity Cameras

Offering exceptional low-light performance, professional connectivity, remote control compatibility, and lens mount options to support EF, M58 and B4 mount lenses, these ultra-low-light video cameras are perfect for short or long-range monitoring applications.



#### Recommended high sensitivity camera products



#### MS-500

With a 1-inch type Single-Photon Avalanche Diode (SPAD) sensor, designed and made by Canon, it outputs full-colour, Full HD footage with low noise in a wide variety of low-light environments.



#### ME20F-SHN

A professional Full HD network camera offering superb low light performance from a 2.26MP CMOS sensor and an ISO in excess of 4 million.



#### ML-105 EF

Acquire Full HD footage anywhere, at any time, in any conditions with the ML-105 EF; the ultimate surveillance solution and low light capturing camera.



#### CASE STUDY

# TRANSFORMING ULTRASOUND LEARNING

#### THE CHALLENGE

#### THE SOLUTION

How do you deliver complex medical information in a simple yet meaningful way for medical students? The shift to remote learning due to the pandemic highlighted shortcomings of existing old-fashioned teaching methods. Currently, students in Italy have to wait until their third year to gain practical hospital experience. This sparked a conversation about how Canon's VR lens could revolutionise textbook ultrasound training and instead bring it to life virtually. The hope was that this would accelerate the learning curve, as well as drive interest among young doctors. To achieve this, Canon Italy suggested a ground-breaking EOS VR solution, consisting of the EOS R5 C and the worldfirst RF 5.2mm F2.8L Dual Fisheye Lens. Featuring 8K video, this system created a powerful end-to-end single-camera virtual reality solution that was quick and easy to set up. In this way, the client was able to capture stereoscopic 180° content of the doctor's perspective – seeing both the ultrasound scanner and the patient at the same time – for a fully immersive learning experience.





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CLIENT: Canon Medical Systems

Location: Rome, Italy

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#### **APPLICATIONS WITHIN THE EDUCATION SECTOR**

# MEDIA AND FILM DEPARTMENTS



The next generation of photographers, filmmakers, journalists and broadcasters are constantly being challenged to show their creativity and express themselves. Many Universities and Colleges across the world offer dedicated courses that enable their students to get hands-on with industry-standard cameras and equipment offering them valuable user-experiences that are relevant and useful, so they can take the next step in their career.

#### Industry challenges:

- · Procuring equipment which is constantly evolving based on what the industry is using.
- Having to purchase a large volume of equipment to enable each student to get hands on with the products.
- Selecting one brand which have the breadth of imaging products to cover different aspects of the course.
- Needing servicing and warranty claims to be handled quickly and effectively.

#### The Canon solution:

- · Canon invests a substantial amount of money into R&D to ensure their solutions are in line with industry standards and deliver the most up to date results.
- Canon produces multiple product lines from cinema cameras, camcorders, mirrorless cameras and lenses to ensure demand can be met across the education sector.
- · Canon caters to all aspects of imaging from still photography and video and even products which are a hybrid of both. Within that Canon have Mirrorless photo cameras, cinema cameras, broadcast Lenses, cinema Lenses, camcorders and industry leading EF and RF lenses.
- Canon has service and support centres across EMEA regions which can help turn around technical issues quickly.

#### SOLUTIONS FOR MEDIA AND FILM DEPARTMENTS

#### **EOS Mirrorless Cameras**

Compact, light, and small, Canon's interchangeable lens mirrorless cameras deliver superb quality photos and movies. They range from APS-C models with smaller lenses, to fullframe powerhouses where creativity is at the core. This product line is ideal for those seeking high quality still photography with the ability to switch to video.

#### Recommended full frame camera products





#### EOS R5 Mark II

Master the moment, with a camera that mixes awesome speed with incredible resolution and superb 8K video.



The EOS R6 Mark II's breakneck speed, classleading performance and professional filmmaking features allows students to master their craft.



#### EOS R8

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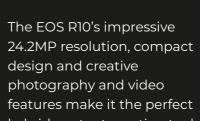
#### Recommended APS-C camera products



**EOS R10** 

#### EOS R7

EOS R technology meets APS-C design, for a hybrid mirrorless camera that's small, fast and powerful with a 32.5MP sensor and up to 15fps continuous shooting with mechanical shutter or 30fps with the electronic shutter.









#### **EOS R50**

hybrid content creation tool.

Compact, portable design delivers sharp stills and 4K films and live streams with a large 24.2MP APS-C sized sensor.

#### **RF/RF-S** Lenses

The ever-growing Canon RF and RF-S lens range offers higher quality, speed and operation thanks to outstanding optical technology and design. Designed for the future with improved video capabilities, they also offer clever touches like the control ring and a more compact size. Next generation mirrorless for the next decades of photography and video.

With 50+ lenses available in the RF line-up, there is a wide variety to choose from whatever your needs.



RF 15-35mm F2.8L IS USM

Capture more, even in low light, with this fast f/2.8 angle 15-35mm zoom with 5-stops of image stabilisation.



RF 24-70mm F2.8L IS USM

Give your full frame mirrorless photography an L-series RF-series ultra-wide edge with a 24-70mm zoom built to exceed expectations. Superb optical engineering, a fast f/2.8 maximum aperture and 5-stop image stabilisation.



RF 70-200mm F2.8L IS USM

This high-performance F2.8 telephoto zoom is the third in the Canon trinity of essential RF lenses offering exceptional image quality in a compact body, designed to work in all conditions.



#### Integrate and expand

The EOS R System adapters offer full compatibility with Canon EF and EF-S lenses giving Canon EOS R System camera owners who also own other EOS cameras complete integration with their existing lenses.





RF 50mm F1.8 STM

The RF 50mm F1.8 STM is a A versatile high-quality small, light and affordable lens with a fast f/1.8 aperture, ideal in low light and great for creative depth-of-field.



RF 35mm F1.8 MACRO IS STM

35mm lens.

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#### **RF Hybrid lenses**

Canon's Hybrid RF lenses are based on Canons standard RF lens design, but incorporate additional features and functions, taken from Canon's Cinema/video lens range, that will appeal particularly to those that also shoot video. These include things like, a smooth action IRIS ring, 11-blade circular aperture, optically designed focus breathing suppression, smooth and near silent AF, internal zoom mechanism (zooms), same dimensions with same ring/button layout for the zooms and for the primes, electronic parfocal performance (zooms) and optional Power Zoom Adapters for the zooms, enabling smooth, professional zooming and remote control options.



RF 24-105mm F2.8L IS USM Z

A highly versatile professional 24-105mm standard zoom lens combining uncompromised hybrid engineering and features with exceptional sharpness, ideal for video or stills.



RF 70-200mm F2.8L IS USM Z

A professional 70-200mm telephoto lens for filmmaking and stills, with a fast and bright f/2.8 aperture and additional reach for diverse shooting scenarios.



RF 20mm F1.4L VCM

An ultra-wide full-frame lens for creative freedom in video and stills. A 20mm focal length and f/1.4 aperture make this hybrid prime ideal for wide-open spaces or tight corners.



RF 24mm F1.4L VCM

This 24mm wide-angle prime – with a fast f/1.4 aperture, super-sharp optics and helpful filmmaking features – is ideal for immersive landscapes, architecture and more.



RF 35mm F1.4L VCM

The natural wide-angle of view and a fast f/1.4 aperture make this lens an inspired choice for creative storytelling.



#### RF 50mm F1.4L VCM

This 50mm prime – with a fast f/1.4 aperture, supersharp optics and helpful filmmaking features – makes an inspired choice for portraits, video and creative storytelling.

CANON AV AND IMAGING SOLUTIONS



#### Cinema EOS Cameras

For the last decade, filmmakers have been discovering and enjoying the amazing quality and creative control offered by Cinema EOS cameras. From high-end Hollywood blockbusters to independent productions and documentaries, there is no area of moviemaking where Canon hasn't made an impact.



#### EOS C500 Mark II

The 5.9K full-frame CMOS sensor provides immersive cinematic rendering and skin tones, as well as a faithful reproduction of colours with Canon colour science. The sensor also offers a latitude of more than 15 stops and a wide colour space, ideal for dynamic range productions (HDR).



#### EOS C300 Mark III

Equipped with a 4K S35mm sensor and DIGIC DV7 image processor, the EOS C300 Mark III delivers an exceptional highresolution image with 16+ stops of latitude. It also has impressive low light capability of up to ISO 102,400, where the human eye cannot easily see.





The Canon EOS C400 delivers uncompromising performance in cinema, live broadcast, and virtual production. Unleash your creativity with a mighty 6K full frame BSI sensor and 16 stops of dynamic range.



#### EOS C80

Stay nimble with the compact and ergonomic EOS C80, with its mighty 6K full frame BSI sensor, plus RF mount and Dual Pixel CMOS AF II technology to deliver outstanding imaging and flexibility in your cinema, live and virtual productions.



#### EOS C70

The EOS C70 is a lightweight RF Mount Cinema EOS System camera featuring Canon's 4K Super 35mm DGO sensor. Features 4K 120P Slow Motion, High Dynamic Range and fast Dual Pixel CMOS autofocus in a compact carbon fibre polycarbonate body.





#### EOS R50

A video-first hybrid offering exceptionally detailed 8K RAW footage in a lightweight and easy-to-use body with dust and moisture resistance. Compatibility with RF and (via adapter) EF lenses makes it a versatile tool for observation and reconnaissance, and the superb levels of detail in its footage enables the grabbing of high-quality individual frames after shooting.

#### Cinema Lenses

Engineered Canon cine lenses that meet the high standards of cinematographers. The Canon range of Cinema lenses have been designed with feedback from a wide range of industry professionals. It's thanks to this close co-operation that they can be integrated into a wide range of production environments.





#### Cine primes

Capture more, even in low light, with this fast f/2.8 L-series RF-series ultra-wide angle 15-35mm zoom with 5-stops of image stabilisation.



#### Cine Servo

Blending stunning 4K optical quality with broadcast-friendly features, Canon Cine Servo lenses offer a versatile choice for broadcast and handheld applications where servo control is required.

#### Flex zooms

Premium zoom lenses with a constant fast aperture of T2.4 (FF) and T1.7 (S35) across the entire zoom range. Adaptable for Full Frame and Super35 cameras, designed for cinema and virtual productions.



#### Compact Cine Servo

Designed for 4K Super 35mm cameras and featuring built-in servo control, auto focus, and image stabilisation. These EF mount workhorse lenses are perfect for handheld or shoulder-mounted use.

#### **Broadcast Lenses**

Canon is a pioneer in the design of broadcast lenses. It was more than 60 years ago that it introduced the first BCTV lens – the "Field Zoom IF-1" with a 6.7x zoom range, which was the highest in the industry at the time. Since then, Canon has energetically advanced the art of high-end optical design on many fronts – working in close collaboration with international broadcasters and producers to develop innovative products and enhance customer satisfaction. Today Canon offers an exciting range of innovative high-end imaging products that stimulate creativity and deliver superb quality results, as we continue our pioneering pursuit of excellence into the 21st century.



#### CASE STUDY

# FROM CLASSROOM TO CAREER

#### THE CHALLENGE

To aid their transition from education to a professional career, Middlesex University wanted their students to always be using a portfolio of cine cameras that was contemporaneous with the industry standard. They also wanted to create experiential opportunities for their students to work with and learn from the industry.

#### THE SOLUTION

Middlesex University worked alongside Canon to ensure that the equipment they offered their students was never more than three years old – regularly updating their equipment to meet their high internal standards. Most recently they upgraded their C-series cameras and lenses – including eight units of EOS C300 Mk III, professional camcorders and a range of CN-E and EF Lenses. They regularly upgrade their equipment to meet their high internal standards.





CLIENT: Middlesex University

Location: London, UK

70-200

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#### APPLICATIONS WITHIN THE EDUCATION SECTOR

# **LIVE EVENTS**



#### INTRODUCTION

Live events and productions are a crucial component to helping Universities connect with their students and alumni. This can be anything from awards ceremonies, alumni meetings, panel discussions and much more. As a result, educational establishments need to have the right video equipment in place to ensure that this content is available as a recorded production, but also potentially as a livestream. Canon has a host of systems in place which can help universities produce professional looking content whilst still being easy to use.

#### Industry challenges:

- may not be stable.
- High quality products which cater to budget constraints.
- Selecting one brand which have the breadth of imaging products to cover different aspects of live events.
- Running hybrid events and ensuring everyone has the same experience.

#### The Canon solution:

- Live streaming events where the network
  Canon cameras have intelligent industry standard protocols such as SRT and NDI which can help deliver incredible image quality, even if the network is unstable, as well as protocols such as RTMP/RTMPS which deliver seamless streaming to YouTube and Facebook Live.
  - Canon have a range of video and photo products which are all at different price points. No matter what the product is you can be assured Canon build all their solutions with quality in mind.
  - Canon cater to all aspects of imaging from still photography and video and even products which are a hybrid of both. Within that Canon have Mirrorless photo cameras, cinema cameras, broadcast Lenses, cinema Lenses, camcorders and industry leading EF and RF lenses.
  - Canon have a range of video options to provide you with different look and feels from cinematic to broadcast. Canon equipment can also easily be integrated with switchers, mixers and a range of software to enable maximum interaction.

#### SOLUTIONS FOR LIVE EVENTS

#### Remote PTZ System

Canon's solution offers a remote 4K production package for all situations, bringing smooth pan and tilt functionality along with exceptional image quality and wide range of IP protocols, while our hardware controller and free of charge software controller provide the means to control and adjust from a remote location.

#### Recommended PTZ products



#### CR-N700

An exceptional 4K60P professional PTZ camera with 12G-SDI connectivity and class-leading auto focus with built-in intelligent Auto Tracking.





#### CR-N500

With a 15x optical zoom, 4K UHD shooting capabilities and Dual Pixel Auto Focus, the CR-N500 allows for precise control and seamless IP streaming with exceptional results.



#### CR-N300

Equipped with 4K UHD resolution, a 20x optical zoom, Hybrid Auto Focus, numerous IP streaming and control protocols, you can engage your audience in new ways.

#### Auto Tracking Application

Canon's proprietary Auto Tracking Application enables lectures to take place without a camera operator. This means lectures can be started as soon as the software detects a lecturer and the PTZ camera will follow them as they move across the stage. This software requires no additional PCs as the application is built within the PTZ camera itself.





#### CR-N100

A high quality 4K PTZ camera with advanced autofocus, 20x optical zoom and multiple IP protocols with built-in intelligent Auto Tracking.

#### Auto Loop Application

Programme repeated camera pan, tilt, and zoom movements to track repeated live action, consistently and accurately. Capture footage of live events and musical performances with style without the need of a camera operator constantly moving between shots.

#### Cinema EOS Cameras

For the last decade, filmmakers have been discovering and enjoying the amazing quality and creative control offered by Cinema EOS cameras. From high-end Hollywood blockbusters to independent productions and documentaries, there is no area of moviemaking where Canon hasn't made an impact.



#### EOS C400

The Canon EOS C400 delivers uncompromising performance in cinema, live broadcast, and virtual production. Unleash your creativity with a mighty 6K full frame BSI sensor and 16 stops of dynamic range.



#### **EOS** C80

Stay nimble with the compact and ergonomic EOS C80, with its mighty 6K full frame BSI sensor, plus RF mount and Dual Pixel CMOS AF II technology to deliver outstanding imaging and flexibility in your cinema, live and virtual productions.





#### EOS C70

The EOS C70 is a lightweight RF Mount Cinema EOS System camera featuring Canon's 4K Super 35mm DGO sensor. Features 4K 120P Slow Motion, High Dynamic Range and fast Dual Pixel CMOS autofocus in a compact carbon fibre polycarbonate body.

#### Cinema Lenses

Engineered Canon cine lenses that meet the high standards of cinematographers.

The Canon range of Cinema lenses have been designed with feedback from a wide range of industry professionals. It's thanks to this close co-operation that they are able to be integrated into a wide range of production environments.



#### EOS R50

A video-first hybrid offering exceptionally detailed 8K RAW footage in a lightweight and easy-to-use body with dust and moisture resistance. Compatibility with RF and (via adapter) EF lenses makes it a versatile tool for observation and reconnaissance, and the superb levels of detail in its footage enables the grabbing of high-quality individual frames after shooting.



#### **Professional Camcorders**

Canon has a whole host of professional camcorders which can capture high quality video without the need for interchangeable lenses. Canon also has a range of camcorders which have UVC streaming, enabling higher education establishments to connect their camcorder to their PC so video streaming can begin instantaneously. With industry leading autofocus and up to 20x Optical zoom, these camcorders are an ideal tool for universities to bring their remote students closer to the classroom.

#### Recommended professional camcorder products



#### XF605

A versatile broadcast quality 4K camcorder, offering advanced AF, connectivity and streaming plus 5-axis stabilisation, for demanding productions.



#### XA75 / XA70

A 1.0-inch Type CMOS 4K pro camcorder. With Dual Pixel CMOS AF, 15x optical zoom HDMI out and UVC streaming.



#### XA65 / XA60

A 1/2.3-Type CMOS 4K pro camcorder. With advanced autofocus, 20x optical zoom plus 5-axis stabilisation, HDMI out and UVC streaming.



#### **EOS Mirrorless Cameras**

Compact, light, and small, Canon's interchangeable lens mirrorless cameras deliver superb quality photos and movies. They range from APS-C models with smaller lenses, to fullframe powerhouses where creativity is at the core. This product line is ideal for those seeking high quality still photography with the ability to switch to video.

#### Recommended full frame camera products



#### EOS R5 Mark II

Master the moment, with a camera that mixes awesome speed with incredible resolution and superb 8K video.



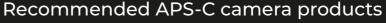
#### EOS R6 Mark II

The EOS R6 Mark II's breakneck speed, classleading performance and professional filmmaking features allows students to master their craft.



#### EOS R8

The EOS R8 opens up a new dimension of full-frame photography, with outstanding autofocus and low-light performance, pro video features including 4K 60p oversampled resolution, and more.



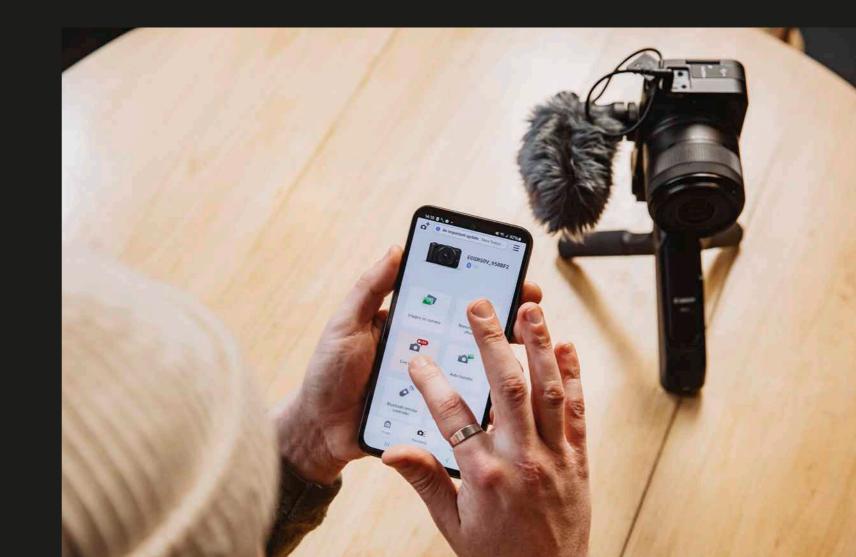


#### EOS R7

EOS R technology meets APS-C design, for a hybrid mirrorless camera that's small, fast and powerful with a 32.5MP sensor and up to 15fps continuous shooting with mechanical shutter or 30fps with the electronic shutter.

The EOS R10's impressive 24.2MP resolution, compact design and creative photography and video features make it the perfect hybrid content creation tool.

EOS R10







#### EOS R50₽

Get creative with a video-first interchangeable lens camera, packed with advanced filmmaking features to elevate your content.

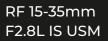
#### **RF/RF-S** Lenses

The ever-growing Canon RF and RF-S lens range offers higher quality, speed and operation thanks to outstanding optical technology and design. Designed for the future with improved video capabilities, they also offer clever touches like the control ring and a more compact size. Next generation mirrorless for the next decades of photography and video.

With 50+ lenses available in the RF line-up, there is a wide variety to choose from whatever you needs.



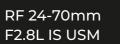




Capture more, even in low light, with this fast f/2.8 angle 15-35mm

zoom with 5-stops of

image stabilisation.



Give your full frame mirrorless photography an L-series RF-series ultra-wide edge with a 24-70mm zoom built to exceed expectations. Superb optical engineering, a fast f/2.8 maximum aperture and 5-stop image stabilisation.



#### RF 70-200mm F2.8L IS USM

This high-performance F2.8 telephoto zoom is the third in the Canon trinity of essential RF lenses offering exceptional image quality in a compact body, designed to work in all conditions.



RF 50mm F1.8 STM

The RF 50mm F1.8 STM is a A versatile high-quality small, light and affordable lens with a fast f/1.8 aperture, ideal in low light and great for creative depth-of-field.



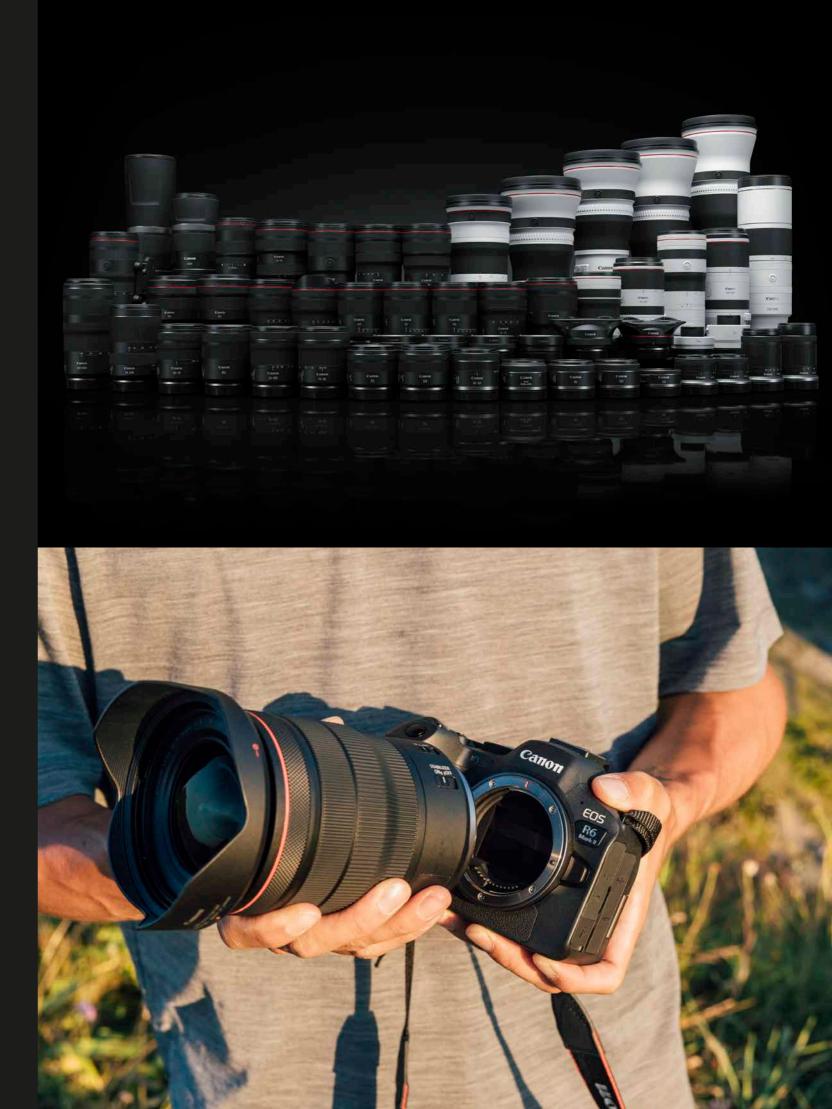
#### RF 35mm F1.8 MACRO IS STM

35mm lens.



#### RF 24mm F1.8 MACRO IS STM

This compact and lightweight 24mm lens combines a wide-angle field-of-view with a fast aperture for shooting creatively, even in low light.



#### CASE STUDY

# ADJUSTING TO THE **NEW NORMAL**

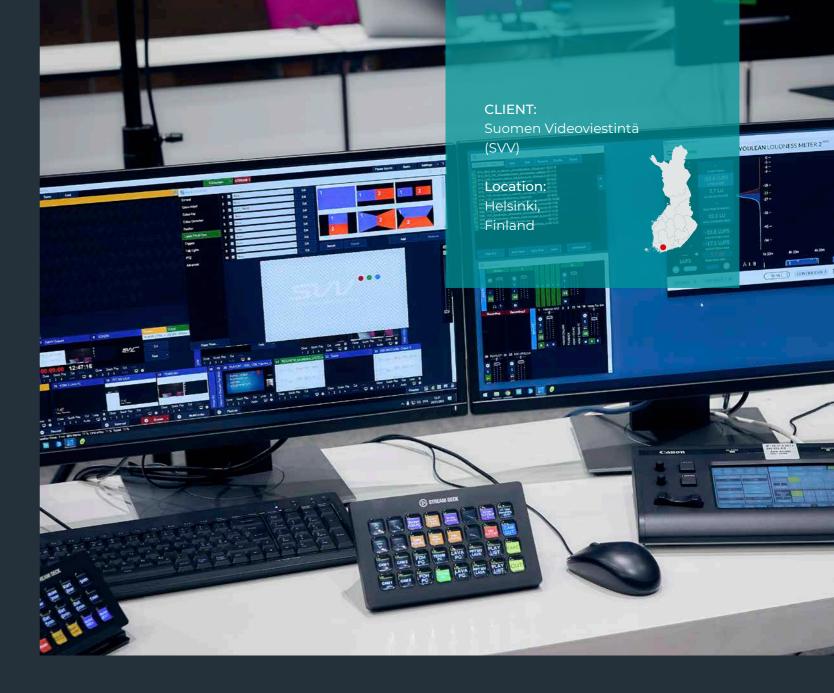
#### THE CHALLENGE

In 2021, only two of their live events were given the green light, resulting in a loss of around €10 million. Going back to the initial outbreak in 2020, that amount rises to about €30 million, with nearly half the staff laid off. Whereas live-event production was the business's bread and butter work before, now Mika and his team had to pivot quickly. They've since expanded into streaming hybrid events. This shift to online broadcasting has in turn led to an increased demand for remote camera systems with excellent image quality.

#### THE SOLUTION

Canon provided two sets of new CR-N500 PTZ cameras alongside RC-IP100 remote controllers that together provided the optimum price point versus tech spec for the client.





#### Case Study Schematic (Large Event)

- Larger multi-cam events output via SDI through vision mixer before streaming
- Control of cameras via XC protocol and power via POE++
- May use laptop for control instead if necessary

Total:

8 X CR-N500 2 X RC-IP100



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CANON AV AND IMAGING SOLUTIONS

#### APPLICATIONS WITHIN THE EDUCATION SECTOR

# MARKETING AND INTERNAL COMMUNICATIONS

#### INTRODUCTION

When higher education establishments need to entice students to come to their university or college, a useful tool for them to do so is through marketing, using either video or still images. Likewise, universities and colleges need to keep enrolled students updated with all the latest news happening on campus. This again can be done through video and photography. Today's students prefer visual content especially when shared on social media channels – this is where Canon solutions can help educational establishments broaden their reach.

#### Industry challenges:

- Quick turnaround times.
- Capture both stills and video.
- Selecting one brand which have the breadth of imaging products to cover different aspects of live events.
- Recording formats which are easy for social media upload.

#### The Canon solution:

- Canon photo and video products have multiple tools which can help speed up productions. Whether those are applications which can help wirelessly transfer photos and video to a PC, or a range of picture profiles which mean no post-production is required.
- Canon has a range of cameras which achieve both high quality stills photography and video.
- Canon caters to all aspects of imaging from still photography and video and even products which are a hybrid of both. Within that Canon has mirrorless photo cameras, cinema cameras, broadcast lenses, cinema lenses, camcorders and industry leading EF and RF lenses.
- Canon has a range of video options to provide you with different look and feels from cinematic to broadcast. Canon equipment can also easily be integrated with switchers, mixers and a range of software to enable maximum interaction.
- Canon cameras can shoot in a wide variety of aspect ratios including those optimal for social media platforms such as Instagram and TikTok.

#### SOLUTIONS FOR MARKETING AND INTERNAL COMMUNICATIONS

Canon has a whole host of professional camcorders which can capture high quality video without the need for interchangeable lenses. Canon also has a range of camcorders which have UVC streaming, enabling higher education establishments to connect their camcorder to their PC so video streaming can begin instantaneously. With industry leading autofocus and up to 20x Optical zoom, these camcorders are an ideal tool for universities to bring their remote students closer to the classroom.

#### Recommended professional camcorder products



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#### EOS R8

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#### Recommended APS-C camera products



#### EOS R7

EOS R technology meets APS-C design, for a hybrid mirrorless camera that's small, fast and powerful with a 32.5MP sensor and up to 15fps continuous shooting with mechanical shutter or 30fps with the electronic shutter.

The EOS R10's impressive 24.2MP resolution, compact design and creative photography and video features make it the perfect hybrid content creation tool.

EOS R10







#### **EOS R50**

Compact, portable design delivers sharp stills and 4K films and live streams with a large 24.2MP APS-C sized sensor.

#### **RF/RF-S** Lenses

The ever-growing Canon RF and RF-S lens range offers higher quality, speed and operation thanks to outstanding optical technology and design. Designed for the future with improved video capabilities, they also offer clever touches like the control ring and a more compact size. Next generation mirrorless for the next decades of photography and video.

With 50+ lenses available in the RF line-up, there is a wide variety to choose from whatever you needs.



RF 15-35mm F2.8L IS USM

Capture more, even in low light, with this fast f/2.8 angle 15-35mm zoom with 5-stops of image stabilisation.



RF 70-200mm F2.8L IS USM

telephoto zoom is the third your EOS R-series APS-C in the Canon trinity of essential RF lenses offering exceptional image quality in a compact body, designed to work in all conditions.



RF 24-70mm F2.8L IS USM

Give your full frame mirrorless photography an L-series RF-series ultra-wide edge with a 24-70mm zoom built to exceed expectations. Superb optical engineering, a fast f/2.8 maximum aperture and 5-stop image stabilisation.



RF 24-105mm F4-7.1L IS USM

Enjoy all the benefits of the full frame EOS R range with a versatile, all-purpose 24-105mm lens with in-built optical Image Stabilizer that keeps your images and movies steady.



#### RF-S 18-150mm F3.5-6.3 IS STM

This high-performance F2.8 Go beyond the everyday with With a useful zoom range camera and fit a lens that packs a punch. Compact, lightweight and quiet, its 4.5-stop optical Image Stabilizer adds extra versatility to help overcome camera shake, even in lowlight.

#### RF-S 18-45mm F4.5-6.3 IS STM

and close focusing this APS-C lens for the EOS R-series is ideal for lifestyle situations. Compact, lightweight and quiet, its 4-stop optical Image Stabilizer adds extra versatility to help overcome camera shake.



#### Integrate and expand

The EOS R System adapters offer full compatibility with Canon EF and EF-S lenses giving Canon EOS R System camera owners who also own other EOS cameras complete integration with their existing lenses.



#### Cinema EOS Cameras

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#### **EOS** C80

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#### EOS R5<sup>©</sup>

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The EOS C70 is a lightweight RF Mount camera featuring Canon's 4K Super 35mm DGO sensor. Features 4K 120P Slow Motion, High Dynamic CMOS autofocus in a compact carbon fibre polycarbonate body.

**EOS** C70



#### TRAINING AND AFTER SALESEDUCATION

# TRAINING, AFTER-SALES SUPPORT, WARRANTY

#### TRAINING

Ensuring every user knows the full capability of the camera, lenses and other equipment they're using means you get the most out of your investment.

We offer full training in the use of our equipment and software. Canon can train a department's instructors and teachers or instruct users directly if required.

#### AFTER-SALES SERVICE

Canon offers a comprehensive repair, maintenance and replacement service through its Canon Professional Service Centres located in various regions across Europe, the Middle East and Africa. As well as fast technical support via dedicated phone lines and fast-track repairs (with free backup loans if necessary), our after-sales service contract includes a full annual service for all equipment and regular maintenance (cleaning, checking and adjustment) to prevent avoidable issues arising.

For more information, please visit: canon-europe.com/pro/services

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