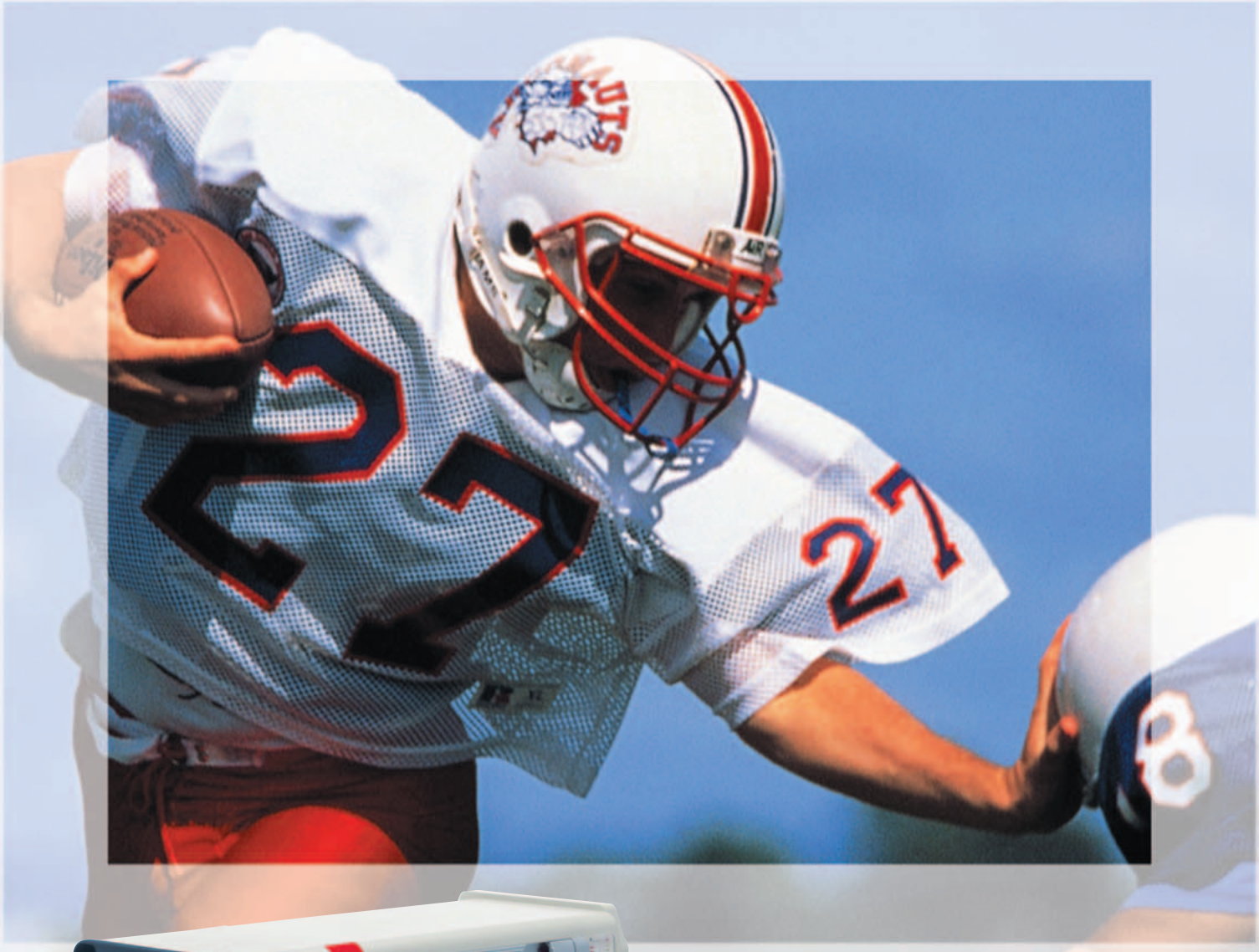
Canon

DIGISUPER 100 XS

XJ100x9.3B IE-D 9.3-930mm 1:1.7



The Most Spectacular Advancement In Field Lens Technology-with Incredible Zoom Ratio and Image Stabilizer

IMAGE STABILIZER

AFS Digital Servo System

HDxs

CROSSOVER

DIGISUPER 100 XS

XJ100x9.3B IE-D 9.3-930mm 1:1.7

Canon has always been the pioneer in the history of broadcast lens design. And now, Canon launches the first broadcast 100x zoom lens, named the DIGISUPER 100xs, the world's first triple digit zoom lens. Triple digit zoom lens performance was a barrier that was never expected to be broken, and it took Canon's unique technology to make it happen.
The DIGISUPER 100xs is the highest quality DIGISUPER series lens produced to date. With the advancement of Digital terrestrial broadcasting and satellite broadcasting, the market is requiring a dramatic increase in sports and large event programming. In order to acquire the largest audiences possible in this diversifying industry, it will be necessary to create more realistic and powerful pictures and the DIGISUPER 100xs will surely meet all your demands.

HDxs : The letters "xs" come from the word "Excess", an indication that the new generation of HDxs lenses exceeds all conventional lens specifications and concepts by using breakthrough technologies. HDxs allows for higher specification lenses in smaller and lighter packages. Knowing the requirements for HDTV, Canon has developed the DIGISUPER 100xs to meet and exceed those demanding performance specifications. Further enhancing the DIGISUPER 100xs series is Canon's latest built-in stabilization method, Shift-IS, a standard feature of both lenses.

HD Optical Performance with a 100x Zoom Ratio

The DIGISUPER 100xs is a powerful field lens that utilizes Canon's unique optical design concept, the "Power Optical System" with "X-Element". By adopting this concept and advanced technology, The DIGISUPER 100xs has improved the range of focal length from 9.3mm-930mm and also has succeeded in compensating the chromatic aberration to a very high accuracy.
The superior optical capacity also allows the lens to offer a maximum relative aperture of 1.7 and a minimum object distance of 3.0 meters. Moreover, the DIGISUPER100xs is almost the same size and weight as the DIGISUPER 86xs. Canon considers that, no matter how prominent the specifications, if the lens is huge and massive, it is meaningless as a production tool.

X-Element & POWER OPTICAL SYSTEM

Canon has developed this breakthrough optical design concept using a newly developed optical element in the most effective way.
We have named the new design concept the "Power Optical System" which achieves higher specifications and quality using the new optical "**X-Element**" which virtually eliminates aberrations.

"CAFS" Constant Angle Focusing System

The zooming effect of focus is the phenomena where the picture size (angle of view) changes when focusing (breathing). However, a 32bit CPU calculates and controls the zoom when focusing in order to counteract these phenomena. Thus the DIGISUPER 100xs have ZERO zooming effect of focus throughout the whole zoom range.

CROSSOVER COMPATIBILITY

Available optionally is the dual aspect ratio switching system, "CROSSOVER", for switchable 16:9/4:3 cameras.

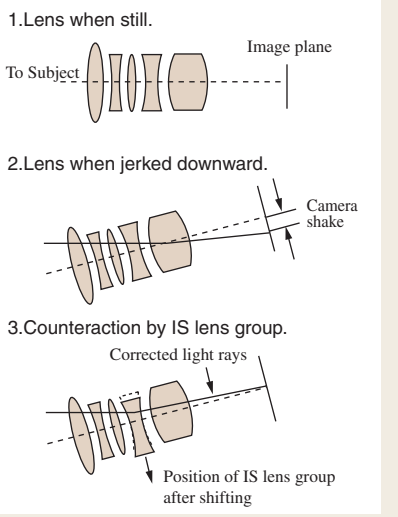
Superior Image Stabilizer

The history of field lenses is a history of zoom ratio/focal length extension. It came to a point where the industry thought it would be impossible to push the envelope any further. The telephoto focal lengths of the lens got so long that even the slightest amount of wind or operator movement would cause image shake and viewing the picture became intolerable, this was before Canon announced the incredible magnification DIGISUPER 86xs zoom lens in 2000. Canon, renowned for its optical image stabilization technologies, developed another new superior stabilization solution for the broadcast field lens, a built-in Optical Shift Image Stabilizer (Shift-IS) to overcome image shaking at telephoto focal length. Now the Shift-IS is employed in the DIGISUPER 100xs.

Image Stabilizer

How the Optical Shift Image Stabilizer (Shift-IS) Works

When the lens moves, the light rays from the subject are bent relative to the optical axis, resulting in an unsteady image because the light rays are deflected. By shifting the IS lens group on a plane perpendicular to the optical axis to counter the degree of image shake, the light rays reaching the image plane can be steadied. Since image shake occurs in both horizontal and vertical directions, two shake-detecting sensors for yaw and pitch, detect the angle and speed of movement and send this information to a high-speed 32-bit microcomputer, which converts the information into drive signals for the IS lens group. Then the actuator moves the IS lens group horizontally and vertically thus counteracting the image shake and maintaining the stable picture. The Shift-IS component is located within the lens groups and is most effective for lower frequency movements caused by platform vibration or wind effect without increasing the overall size and weight of the master lens.



HDxs

POWER OPTICAL SYSTEM
Featuring X-Element

4:3 16:9 CROSSOVER
CANON TV ZOOM LENS

INTERNAL FOCUSING SYSTEM
(Advanced 3 group IF system)
- Realization of wide-angle with reduced distortion.
- Minimized variation of chromatic aberration while focusing.
- Anti-Dust, Anti-Fog, thanks to a perfectly airtight Internal Focusing System.
- Minimized variation of the centre of gravity through focus movement.

Image Stabilizer (SHIFT-IS)

"CAFS"
-Constant Angle Focusing System-
- When focus is operated, the angle of view is maintained by synchronizing zoom movement.

ZOOM RATIO:100X

CROSSOVER COMPATIBILITY (Optional)
- For use with 16:9/4:3 switchable cameras.

4 - POSITION TURRET
(built in extender, master lens, crossover unit).
- Micro Computer Controlled Turret.

VERSATILE ZOOM/FOCUS CONTROLLERS
(See figure on the next page)
- New ergonomic design.
- Countermeasures against dust, rain, and radio interference.

HD OPTICAL PERFORMANCE
- Computer aided design in order to meet the higher level demanded by HDTV

TELE ANGLE OF
- DIGISUPER100xs: 930mm, 1,860mm (2x Extender)

WIDE ANGLE OF
- DIGISUPER 100xs: 9.3mm

COUNTERMEASURES AGAINST "GHOSTING" AND "FLARES"

NEW GENERATION DIGITAL SERVO SYSTEM

SERVO SYSTEM MATCHING ROBOTIC REQUIREMENTS
- High resolution zoom and focus servo 13 bit repeatability.

10 BIT IRIS COMPATIBILITY
- High resolution iris control.

WIDE DYNAMIC RANGE OF ZOOM AND FOCUS SERVO SPEED
- From ultra slow to high speed. Max. speed: Zoom 0.6 sec, Focus 0.8sec.

XJ72x9.3

675mm

XJ86x9.3

800mm

NEW!

XJ100x9.3

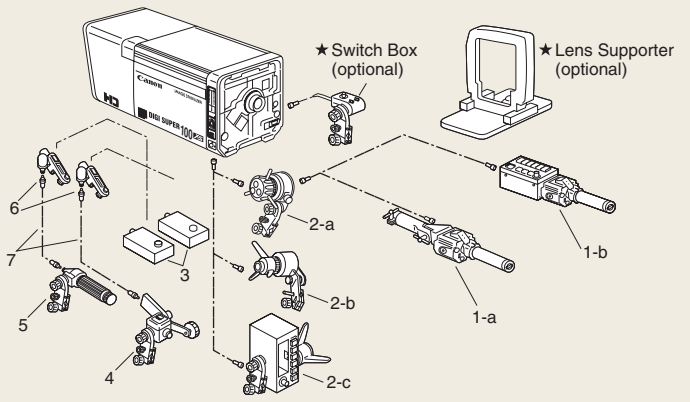
930mm

SPECIFICATIONS

DIGISUPER 100xs

	NORMAL4:3		16:9		SWITCHABLE 4:3		
Built-in extender	1.0X	2.0X	1.0X	2.0X	1.0X	1.2X	2.4X
Zoom Ratio	100X						
Range of Focal Length	9.3-930mm	18.6-1860mm	9.3-930mm	18.6-1860mm	7.65-765mm	9.3-930mm	18.6-1860mm
Maximum Relative Aperture	1:1.7 at 9.3~296mm 1:4.7 at 930mm	1:3.4 at 18.6~592mm 1:9.4 at 1860mm	1:1.7 at 9.3~296mm 1:4.7 at 930mm	1:3.4 at 18.6~592mm 1:9.4 at 1860mm	1:1.7 at 7.65~296mm 1:3.85 at 765mm	1:17 at 9.3~296mm 1:4.7 at 930mm	1:3.4 at 18.6~592mm 1:9.4 at 1860mm
Angular Field of View	50.6°x39.1° 0.54°x0.41°	26.6°x20.1° 0.27°x0.20°	54.6°x32.4° 0.59°x0.33°	28.9°x16.5° 0.30°x0.17°	50.6°x39.1° 0.54°x0.41°	42.3°x32.4° 0.44°x0.33°	21.9°x16.5° 0.22°x0.17°
Minimum object Distance(M.O.D.)	3.0m from front lens vertex						
Object Dimensions at M.O.D.	253.9x190.4cm at 9.3mm 2.54x1.90cm at 930mm	127.0x95.2cm at 18.6mm 1.27x0.95cm at 1860mm	276.4x155.5cm at 9.3mm 2.76x1.56cm at 930mm	138.2x77.8cm at 18.6mm 1.38x0.78cm at 1860mm	253.9x190.4cm at 7.65mm 2.54x1.90cm at 765mm	207.4.2x155.5cm at 9.3mm 2.07x1.56cm at 930mm	105.9x77.8cm at 18.6mm 1.06x0.78cm at 1860mm
Size	250.6x255.5x591.5mm						
Mass	23.5kg (51.8lbs)						

RECOMMENDED LENS SYSTEM

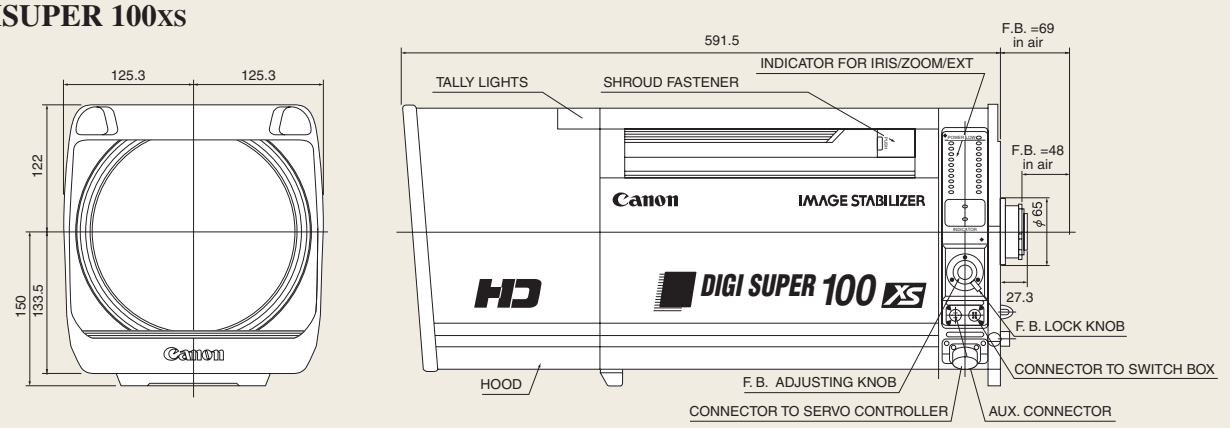


■Compatibility of Accesories for DIGI SUPER 75XS

No.	DESCRIPTION		CODE
1-a	Digital Zoom Demand	ZDJ-D02	1822A066
1-b	Digital Zoom Demand W/Pre-set Box	ZPJ-D02	
2-a	Digital Focus Demand	FDJ-D02	1822A065
2-b	Digital Focus Demand Propeller Type	FDJ-D12	0024T320
2-c	Digital Focus Demand W/Pre-set-Box	FPJ-D12	
3	Digital Servo Module	SMJ-D02	1822A070
4	Flexible Zoom Controller	FZP-T61	1822A005
5	Flexible Focus Controller	FFP-T61	1822A007
6	Flexible Module	FMJ-702	0028T275
7	Flexible Cable 30"	—	1822A018

DIMENSIONS

DIGISUPER 100xs



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Specifications subject to change without notice

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