

**Canon**

# **DIGI SUPER 25** **XS**

*XJ25×6.8B IE 6.8-170mm 1:1.5*



***BREAKTHROUGH STUDIO LENS  
WITH HD PERFORMANCE AND  
DIGITAL TECHNOLOGY***



# DIGI SUPER 25 XS

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**BREAKTHROUGH STUDIO LENS  
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**HDX** The "XS" comes from "Excess" and the new generation **HDX** lens series exceeds conventional lens specifications and concepts by breakthrough technologies.

In addition to the SDTV (NTSC/PAL) broadcasting system, in excess of 180 television stations in the United States have started Digital terrestrial broadcasting since Nov. 1, 1998. Among the 18 broadcast standards for Digital Television/DTV are six formats defined as High Definition Television/HDTV, where the scanning lines are double that of SDTV. Canon introduces the "DIGISUPER 25 xs", to meet demanding performance requirements and to open the door to a new level of creativity.

**HD Optical Performance with 25x Zoom Ratio and 6.8mm Wide Angle**  
The DIGISUPER 25 xs is a graceful studio lens that utilizes Canon's new optical design concept "POWER OPTICAL SYSTEM" and "X-Element".

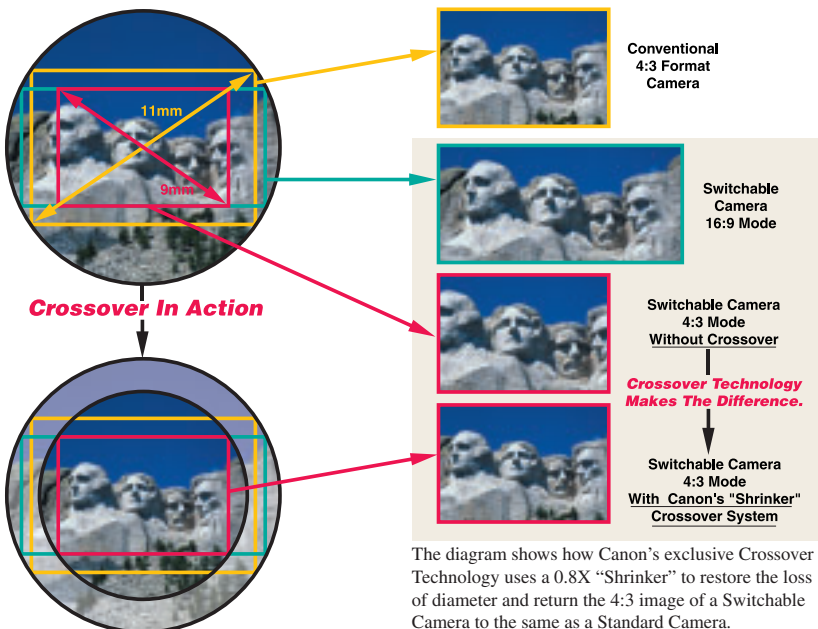
By adopting this new technology and concept, the DIGISUPER 25 xs realizes the necessary optical performance for HDTV, increased the zoom ratio to 25x, improved the wide angle to 6.8mm while still maintaining the size equivalent to that of current SDTV lenses.

**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.

**Latest Generation DIGITAL SERVO SYSTEM**  
Canon's latest generation digital servo system allows the use of many new functions such as constant angle of view while focusing "CAFS" and the selection of different servo characteristics. These functions are only possible with a digital servo system. In addition to these new functions, the upgrading of software will be possible when new functions become available in the future. This means that the DIGISUPER 25 xs has unlimited possibilities. The DIGISUPER 25 xs achieves 13 Bit zoom and focus repeatability and offers bi-directional serial data communication in order to facilitate highly accurate and smooth movements that are essential for robotics and virtual applications. The digital servo system is reliable, consistent and is not affected by electric interference.

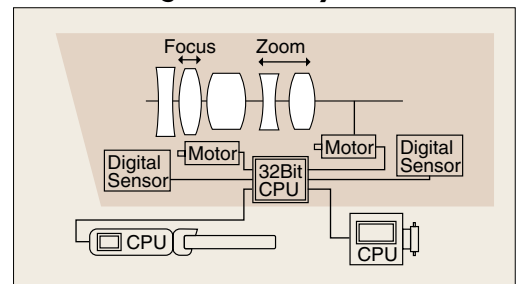
**"CAFS" Constant Angle Focusing System**  
The zooming effect of focus is the phenomena where the picture size (angle of view) changes when focusing (breathing). However, a 32bit CPU calculates and controls the zoom when focusing in order to counteract these phenomena. Thus the DIGISUPER 25 xs has ZERO 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.

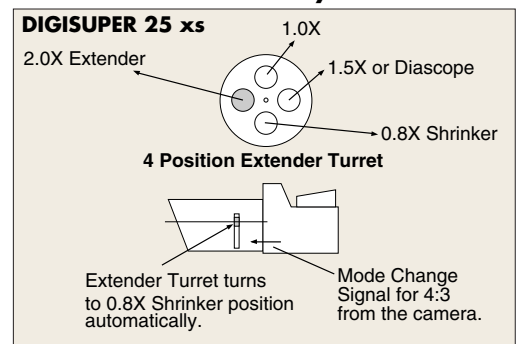


The diagram shows how Canon's exclusive Crossover Technology uses a 0.8X "Shrinker" to restore the loss of diameter and return the 4:3 image of a Switchable Camera to the same as a Standard Camera.

## Digital Servo System



## CROSSOVER System



**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.

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

**ZOOM RATIO:25X**

**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.

**MACRO FUNCTION**  
M.O.D=0.1M

**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.

**WIDE ANGLE OF 6.8mm WITH REDUCED DISTORTION**

**COUNTERMEASURES AGAINST "GHOSTING" AND "FLARES"**  
•New coatings and anti-reflection paint achieve the elimination of "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.

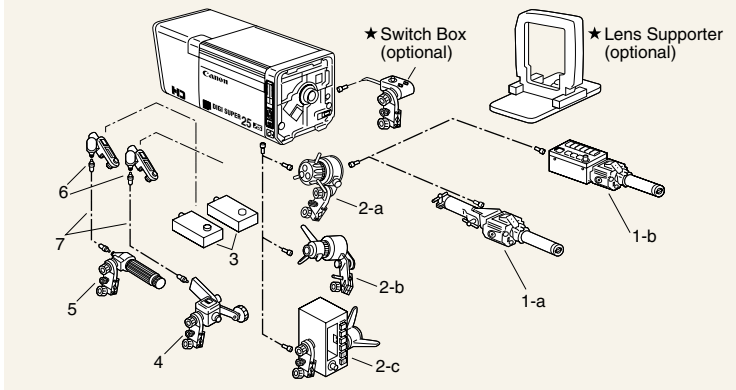
**COUNTERMEASURES AGAINST RADIO FREQUENCY NOISE(INTERFERENCE)**

**PC SYSTEM (OPTION)**

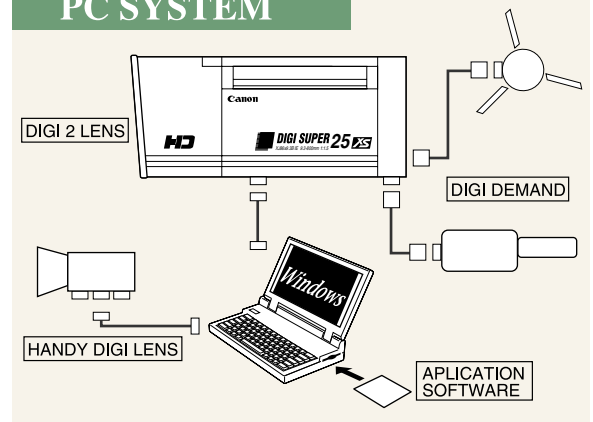
## SPECIFICATIONS

	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	25X						
Range of Focal Length	6.8-170mm	13.6-340mm	6.8-170mm	13.6-340mm	5.6-140mm	6.8-170mm	13.6-340mm
Maximum Relative Aperture	1:1.5 at 6.8~122mm 1:2.1 at 170mm	1:3.0 at 13.6~244mm 1:4.2 at 340mm	1:1.5 at 6.8~122mm 1:2.1 at 170mm	1:3.0 at 13.6~244mm 1:4.2 at 340mm	1:1.5 at 5.6~120mm 1:1.75 at 140mm	1:1.5 at 6.8~122mm 1:2.1 at 170mm	1:3.0 at 13.6~244mm 1:4.2 at 340mm
Angular Field of View	65.8°x51.8° 2.97°x2.22°	35.9°x27.3° 1.48°x1.11°	70.4°x43.3° 3.23°x1.82°	38.9°x22.5° 1.62°x0.91°	65.8°x51.8° 2.97°x2.22°	55.8°x43.3° 2.43°x1.82°	29.7°x22.5° 1.21°x0.91°
Minimum object Distance(M.O.D.)	0.6m from front lens vertex (with macro ; M.O.D.:0.1m)						
Object Dimensions at M.O.D.	93.3x70.0cm at 6.8mm 3.6x2.7cm at 170mm	46.1x34.6cm at 13.6mm 1.8x1.4cm at 340mm	102.2x57.5cm at 6.8mm 3.9x2.2cm at 170mm	50.4x28.4cm at 13.6mm 2.1x1.2cm at 340mm	93.3x70.0cm at 5.6mm 3.6x2.7cm at 140mm	75.5x56.6cm at 6.8mm 2.9x2.2cm at 170mm	37.5x28.1cm at 13.6mm 1.5x1.1cm at 340mm
Size	250.6(W)x255.5(H)x557.8(L)mm						
Mass	21.5kg (47lbs)						
Built-in Pattern Projector	Option						

## RECOMMENDED LENS SYSTEM



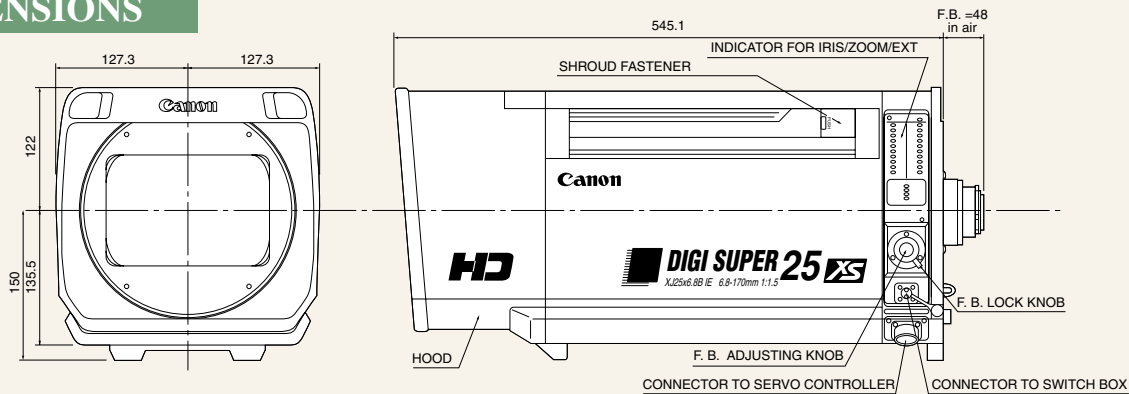
## PC SYSTEM



### Compatibility of Accessories for DIGI SUPER 25XS

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

## DIMENSIONS



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Specifications subject to change without notice