

**Canon**

# **DIGI SUPER 23**

*XJ23x7B IE-D 7-161mm 1:1.6*



**ADVANCED STUDIO LENS  
OFFERING HD PERFORMANCE AND  
THE VERY LATEST DIGITAL TECHNOLOGY**



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**HD XS** The “XS” comes from “Excess” and the new generation **HD XS** lens series exceeds conventional lens specifications and concepts by breakthrough technologies.

As seen in new methods of program production such as virtual reality and computer graphics, the digitalization of the broadcast equipment has made a remarkable impact on the process of producing programs. In order to be a leader in digitalization of the market, Canon was the first to adopt digital technologies in the lens which opened up new possibilities allowing for divers camera operations and new processes of producing programs. Now, Canon proudly launches the DIGISUPER 23 xs, incorporating various Canon’s technologies such as unique HDTV Optical Design Techniques and diverse Digital Technologies developed over our long history in this field. Our remarkable aspect of the lens is, in addition to making the lens size and weight smaller, the DIGISUPER 23 xs is also equipped with an interface, enabling the lens to be compatible with virtual studio systems.

**HD Optical performance with a practical zoom ratio of 23x and a popular wide angle of 7mm in a compact size**

The DIGISUPER 23 xs is a studio lens that utilizes Canon’s unique optical design concept “POWER OPTICAL SYSTEM”.

By adopting this unique technology and concept, the DIGISUPER 23 xs realizes the necessary optical performance for HDTV, with practical zoom ratio of 23x, and popular wide angle of 7mm in compact size.

**Compatible with the virtual studio systems**

The DIGISUPER 23 xs is the first lens in the world to supply various types of position detectable signals to Virtual systems. The type of signals can be chosen from: an Encoder data signal, an Analog data signal or a Serial data signal, which are popular in existing Virtual systems.

**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 23 xs has unlimited possibilities.

The DIGISUPER 23 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 CPU calculates and controls the zoom when focusing in order to counteract these phenomena. Thus the DIGISUPER 23 xs has ZERO zooming effect of focus throughout the whole zoom range.

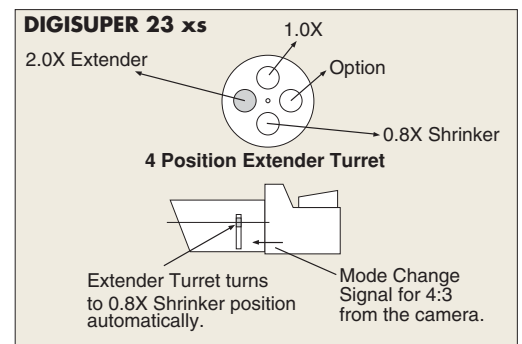
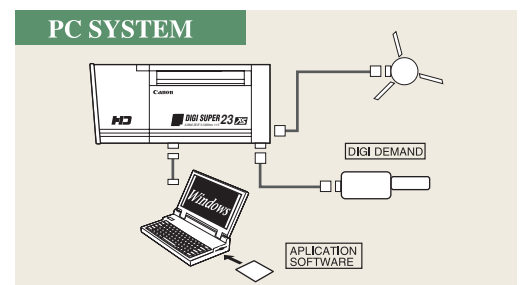
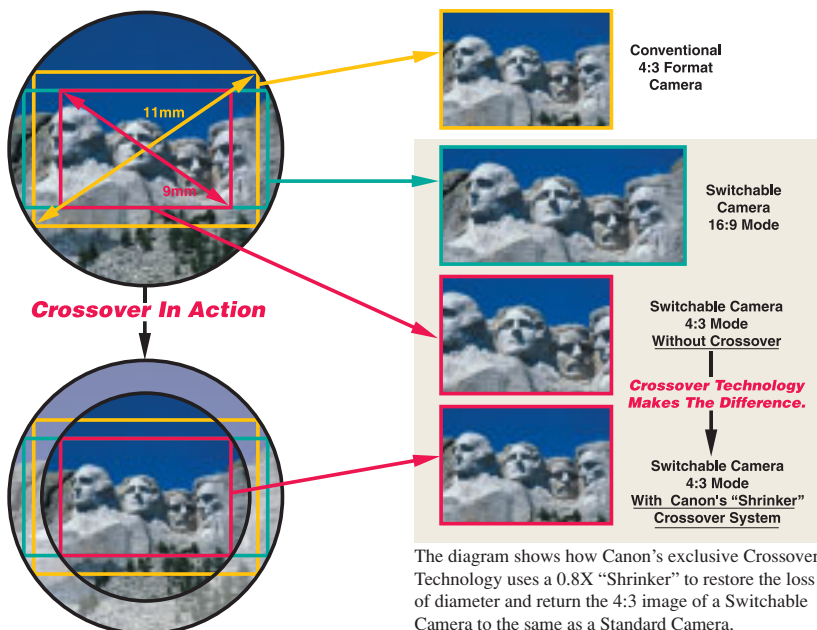
**CROSSOVER COMPATIBILITY**

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

**PC System**

PC connection for remote control or diagnostics can be accomplished via a communication interface on the lens and personal computer with optional software.

**HOW CROSSOVER SYSTEM WORKS**





### 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:23X**

### CROSSOVER COMPATIBILITY (Optional)

- For use with 16:9/4:3 switchable cameras.

### 4 - POSITION TURRET

(built in extender, master lens, crossover unit and option).



### 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 7mm 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 AND VIRTUAL 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)

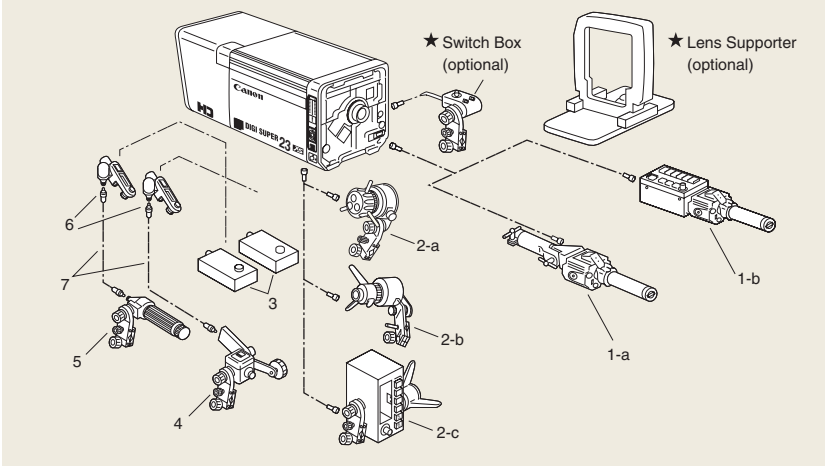
## SPECIFICATIONS

	NORMAL 4:3		16:9		SWITCHABLE 4:3		
	1.0X	2.0X	1.0X	2.0X	1.0X	1.2X	2.4X
Built-in Extender							
Zoom Ratio	23X						
Range of Focal Length	7 - 161mm	14 - 322mm	7 - 161mm	14 - 322mm	5.7 - 131mm	7 - 161mm	14 - 322mm
Maximum Relative Aperture	1:1.6 at 7~132.1mm 1:1.95 at 161mm	1:3.2 at 14~264.2mm 1:3.9 at 322mm	1:1.6 at 7~132.1mm 1:1.95 at 161mm	1:3.2 at 14~264.2mm 1:3.9 at 322mm	1:1.6 at 5.7~131mm	1:1.6 at 7~132.1mm 1:1.95 at 161mm	1:3.2 at 14~264.2mm 1:3.9 at 322mm
Angular Field of View	64.3° x 50.5° 3.1° x 2.3°	34.9° x 26.5° 1.6° x 1.2°	68.8° x 42.1° 3.4° x 1.9°	37.8° x 21.8° 1.7° x 1.0°	64.3° x 50.5° 3.1° x 2.3°	54.3° x 42.1° 2.5° x 1.9°	27.9° x 21.1° 1.3° x 1.0°
Minimum object Distance(M.O.D.)	0.6m from front lens vertex						
Object Dimensions at M.O.D.	90.6 x 68.0cm at 7mm 3.8 x 2.9cm at 161mm	45.3 x 34.0cm at 14mm 1.9 x 1.5cm at 322mm	99.0 x 55.7cm at 7mm 4.2 x 2.4cm at 161mm	49.5 x 27.9cm at 14mm 2.1 x 1.2cm at 322mm	90.6 x 68.0cm at 5.7mm 3.8 x 2.9cm at 131mm	70.3 x 55.7cm at 7mm 3.2 x 2.4cm at 161mm	36.6 x 27.9cm at 14mm 1.6 x 1.2cm at 322mm
Size	254.6(W) x 272(H) x 525(L) mm *1						
Mass	19.5kg(43lbs)						

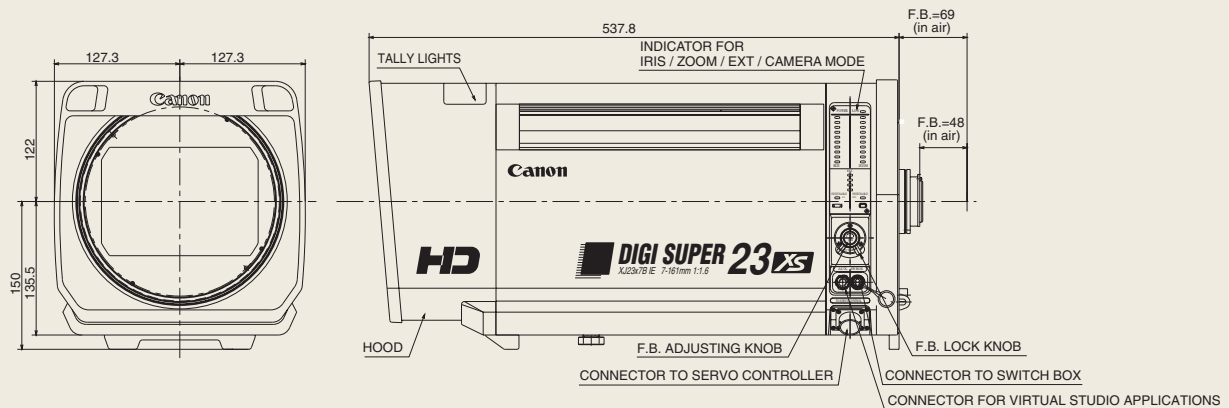
## RECOMMENDED LENS SYSTEM

## Compatibility of Accessories for DIGI SUPER 23 xs

No.	DESCRIPTION	
1-a	Digital Zoom Demand	ZDJ-P01
1-b	Digital Zoom Demand W/Pre-set Box	ZPJ-D02
2-a	Digital Focus Demand	FDJ-P01
2-b	Digital Focus Demand Propeller Type	FDJ-D12
2-c	Digital Focus Demand W/Pre-set Box	FPJ-D12
3	Digital Servo Module	SMJ-E01
4	Flexible Zoom Controller	FZP-T61
5	Flexible Focus Controller	FFP-T61
6	Flexible Module	FMJ-702
7	Flexible Cable 30"	—



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