

# Tokina

## LENS CATALOG



LENSES FOR **DIGITAL** SLR CAMERAS



[www.tokinalens.com](http://www.tokinalens.com)

# Digital Eyes



Floating Element Assembly



Aluminum Alloy Die-Cast Model

## **VISIONARY TECHNOLOGY MAKES A DIFFERENCE YOU CAN SEE.**

Tokina's proprietary AT-X technology has been evolving toward optical perfection for more than 20 years.

Since our mission began in 1981 we have made continuous advances. Each new model is a further refinement in a continuing legacy of excellence in design and materials. The current AT-X PRO series continues this evolution of excellence by using the most state-of-the-art technology anywhere.

### **More Quality Than Meets The Eye.**

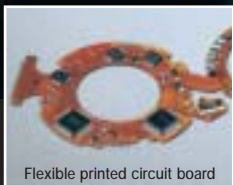
The Tokina difference comes from special material selection and assembly technology that employs micron-unit quality control. This ensures optimum consistency while maintaining the highest quality for every lens. Worldwide, both professionals and knowledgeable photography enthusiasts rely on Tokina lenses.

### **AT-X Technology**

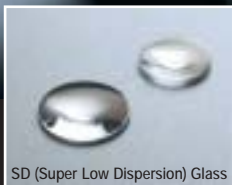
AT-X comes from our original concept of "Advanced Technology Extra." This vision encompasses a special group of lenses that are manufactured without compromise, using the most advanced design and fabrication technologies available. The use of unique and unprecedented optical systems independently pioneered by Tokina, has made advanced features, high performance, lightweight, and compact designs a reality. Of course, we have also given full attention to ergonomics and handling. To any user, AT-X means excellent performance through superior technology.

# Tokina

## DIGITAL SERIES



Flexible printed circuit board



SD (Super Low Dispersion) Glass

### Mechanisms

1. All metallic moving parts are coated with a special lubricant to improve durability.
2. Tokina's independently developed technology maintains the high precision of mechanical fittings, accurately measured in microns.
3. Micron tolerances also give smooth operation and durability to operating rollers and internal focus cams.
4. Brass is used in the lens mount to maintain high precision. Other mechanisms are plated with hard chrome for optimum durability.

### Exterior Finish

1. PRO models have a hardened Alumite (Armalite) finish to increase durability and give a top-quality feel and finish.
2. Ergonomic designs emphasize control, grip and ease of operation with textured rubber used on zoom and focus barrels. These are original Tokina materials, designed to give many years of faithful service without deterioration.

### Operation

1. Use of our special alloy Duralumin for metal parts provides excellent durability, stabilizes torque and provides better handling. It also maintains smoother operation under all conditions.
2. Our special lubricant is used on moving parts, formulated to perform even under extremes of temperature.

### Lens Coatings

Resistance to flare and ghosting, plus faithful color reproduction are all achieved by a unique coating technique – yet another reason for Tokina's reputation for incredibly sharp and clean images.

# TECHNOLOGY - MECHANICAL



## Focus Clutch Mechanism

The ability of the focus ring to be pushed forward and disengaged allows maximum autofocus speed and efficiency. The ring can be pulled back and re-engaged for manual focusing with just the right amount of resistance.



Auto Focus



Manual Focus



## One-Touch Focus Clutch Mechanism

The newly improved one-touch focus clutch allows the focus to be moved quickly and easily from the AF position back into the MF position. In Nikon and Canon mounts, the lens can be set for manual focusing without an AF/MF switch or setting the body to the AF position.



Auto Focus



Manual Focus

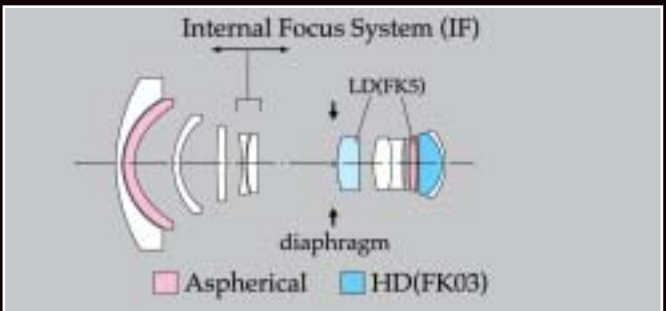


## Internal Focus System

The two main methods of lens focusing are either the complete straight forward movement of elements (used mainly with single focal length lenses), or the rotation of the entire front lens barrel group (used mainly with zoom lenses). The internal focusing system used by Tokina moves each lens group, but does not change the overall length of the lens - this is especially useful with telephoto designs.

The internal focusing system has a number of advantages, including:

1. Faster focusing
2. Improved handling due to fewer movements near the center of gravity
3. More compact lens designs
4. Superior use of filters as the front filter thread does not rotate



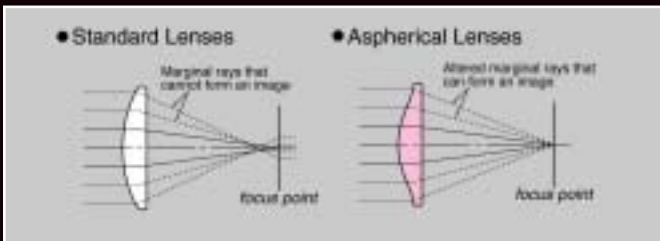


## Aspherical Optics

Standard lenses are made from a combination of spherical lens elements. However, there can be problems with such lenses when light entering at the edges of the lens may not be perfectly focused at the same point as light entering at the center. That presents limits to performance in wide aperture and super wide-angle lenses.

Tokina uses aspherical glass elements in many of its lenses. In addition to correcting spherical aberration, these lenses fully correct light quantity and distortion at the edge of the image and provide excellent results when used in combination with floating elements.

Through technical cooperation with Hoya, Tokina has succeeded in producing high quality molded glass elements with a greater aspherical shape than any other lens so far. This technique is unparalleled in its technological sophistication and excellence.



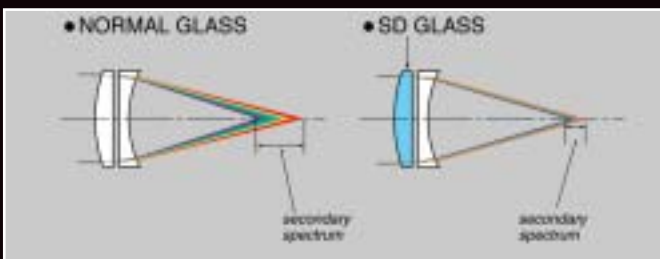
## F&R Aspherical

This lens encompasses Tokina's new large diameter F&R Aspherical molded glass elements of 50mm diameter at the front and 20mm at the rear. These give outstanding performance with even illumination in the corners and correction of distortion and aberration.



## SD (Super Low Dispersion) Glass

Lenses with the SD mark use Super-low Dispersion glass which minimizes the secondary spectrum caused by chromatic aberration. Basically, these lenses use FK01 and FK02 optical materials which gives them SD (APO) qualities. This provides excellent image quality in telephoto lenses of 200mm or more by correcting color aberration across the entire picture and bringing all colors into focus accurately at the film plane.







# AT-X Series

## AF10-17mm f/3.5-4.5 AT-X 107 DX Fish Eye

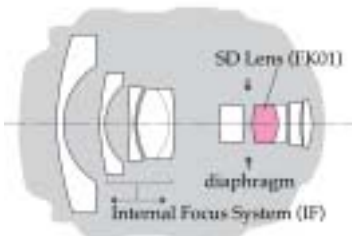
TO FIT CANON • NIKON-D APS-C Sized Sensor Model Only



Capture it all or create images with more impact. The NEW TOKINA AT-X 107 DX is Fish-eye zoom lens that gives the photographer a 180° field of view with dramatic curvature of field or "fish-eye" effect. That's wider than the human eye can see! The AT-X 107 DX creates an entirely new view on everything from street scenes to nature's beautiful vistas. This lens will open a new dimension to your photography.

The front element of the AT-X 107 DX has a newly formulated WP or "Water Proof" optical coating on the glass. This new coating makes marks such as spots left by water or finger-prints much easier to clean than standard multi-coating.

The rear optical group of the lens contains 1 SD (Super-Low Dispersion) glass element to reduce the number of elements (pieces of glass) in the optical design in order to make the lens more compact, light-weight and faster focusing.



- 10 Elements in 8 Groups
- Minimum Focus Distance: 14 cm
- Angle of view: 180° ~ 100°
- Lens Hood: Built-in

**SD**  
Super Low Dispersion

**WP**  
Optical Coating







Picture Comparison A - Tokina AT-X 107 DX Fish-Eye



Picture Comparison A - Standard Wide angle (10mm)



Picture Comparison B - Tokina AT-X 107 DX Fish-Eye



Picture Comparison B - Standard Wide angle (10mm)



# AT-X PRO Series

for APS-C Format  
Digital SLR  
AUTO FOCUS

## AF16-50mm f/2.8

## AT-X 165 PRO DX

TO FIT CANON • NIKON-D

APS-C Sized Sensor Model Only



The NEW TOKINA AT-X 165 PRO DX lens is a wide-angle to moderate telephoto lens that gives the digital photographer a wide range of options. This zoom lens is equivalent to a 24-75mm zoom on a 35mm film camera.

From natural scenery to urban photojournalism, everyone will appreciate the bright, constant aperture of f/2.8. SD Glass and an Aspherical lens element yield excellent sharpness, making the AT-X 165 PRO DX a new standard for today's digital photographer.



- 15 Elements in 12 Groups
- Filter size:  $\varnothing 77\text{mm}$
- Minimum Focus Distance: 0.3m

### Lens Hood BH-777

The large BH-777 wide-angle hood with "click-lock" to stay in place.

**SD**  
Super Low Dispersion

**As**  
Aspherical

**IF**  
Internal Focus

**WP**  
Optical Coating



# AT-X PRO Series

for APS-C Format  
Digital SLR  
AUTO FOCUS

## AF50-135mm f/2.8

## AT-X 535 PRO DX

TO FIT CANON • NIKON-D APS-C Sized Sensor Model Only

The new Tokina AT-X 535 PRO DX lens is a 50-135 with a fast constant aperture of f/2.8. This lens gives digital photographers the similar to the industry standard 80-210 telephoto zoom lens in 35mm camera terms but is much more compact and lightweight.

The lens features SD glass lens elements to correct for chromatic aberrations and focuses all colors accurately at the film plane, making the AT-X 535 PRO DX an APO lens.

The front element has a newly formulated WP or "Water Proof" optical coating on the glass. This new coating makes marks such as spots left by water or finger-prints much easier to clean than standard multi-coating.

Other features include a built-in tripod collar and One-touch focus clutch mechanism for fast switching between auto focus and manual focus modes.



- 18 Elements in 14 Groups
- Filter size: ø67mm
- Minimum Focus Distance: 1.0m

**SD**  
Super Low Dispersion

**One Touch**  
**FC**  
Focus Clutch

**IF**  
Internal Focus

**WP**  
Optical Coating





for APS & 35mm Full  
Format Digital SLR  
AUTO FOCUS

## AT-X Series

AF80-400mm f/4.5-5.6

AT-X 840 D

TO FIT CANON • NIKON-D

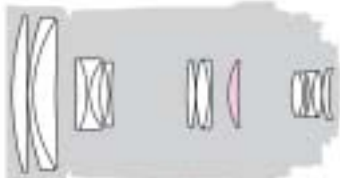


Tokina created the first 80-400mm AF lens in 1996 and when it did, it created a whole new class of telephoto lenses. The latest lens, the AT-X 840 D is still the smallest lens to zoom to 400mm with a bright f/5.6 aperture. Perfect for traveling, the New AT-X 840 D has an internal focusing system which increases AF speed and responsiveness. Further updates make this lens an excellent traveling companion for a Canon or Nikon DIGITAL or FILM SLR camera.

The optics incorporate SD (APO) glass to give clear sharp images and an internal flare cutting design removes unnecessary light (flare). To further eliminate unwanted stray light and flare, Tokina always recommends using the included lens hood for best results.



- 16 Elements in 10 Groups
- Filter size:  $\varnothing 72\text{mm}$
- Minimum Focus Distance: 2.5m



**As** Spherical  
**SD** Super Low Dispersion

SD Lens (FK01)



Lens Hood BH-725

Equipped with a newly developed lens hood (PL assist hood).



# AT-X PRO Series

for APS-C Format  
Digital SLR  
AUTO FOCUS

## AF12-24mm f/4

## AT-X 124 PRO DX

TO FIT CANON • NIKON-D APS-C Sized Sensor Model Only

Designed exclusively for digital SLR cameras with an APS-C sized sensor, the AT-X 124 PRO DX's incredible 12 to 24mm zoom range gives the digital photographer a super wide-angle zoom lens at a light, affordable price. But the AT-X 124 PRO DX is no lightweight where it counts, optical quality. HOYA SD glass, aspherical elements, the latest optical multi-coating technology are combined in a lens that professionals and photo magazines the world over are praising.

When used on a digital SLR camera with an APS-C sized sensor the corresponding angle of view is equal to an 18-36mm zoom lens on a film camera. New multi-coating technology reduces internal reflections and ghosting. Aspherical elements eliminate spherical aberrations and SD glass corrects chromatic aberrations yielding an unparalleled sharpness.

Fast internal focusing coupled with Tokina's One-Touch Focus Clutch Mechanism makes switching between auto and manual focus as easy as snapping the focus ring back and forth.

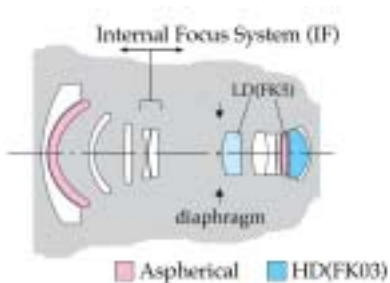
A bright, constant f/4 aperture allows plenty of light to enter the camera for shooting in a wide variety of photographic situations.



Tokina recommends using HOYA PRO 1 Digital filters with the AT-X 124 PRO DX, and low profile circular polarizing filters like the HOYA PRO 1 Digital Wide Band Circular Polarizer or the Super HMC low profile Circular Polarizer.

Notes:

1. The AT-X 124 PRO DX will not yield full coverage on a 35mm film camera.



### Lens Hood BH-779

The large BH-779 wide-angle hood with "click-lock" to stay in place.









for APS & 35mm Full  
Format Digital SLR  
AUTO FOCUS

## AT-X PRO Series

**AF100mm f/2.8**

**AT-X 100 AF PRO D**

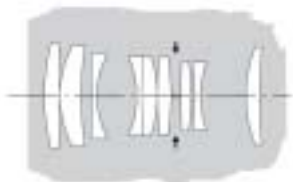
TO FIT CANON • NIKON-D

A new Macro lens to bridge the gap between film and digital, the Tokina AT-X 100 PRO D has full coverage on 35mm while also possessing the latest optical multi-coating technology engineered to match the silicon based CCD or CMOS sensors.

The AT-X 100 PRO D macro closest focusing distance is an incredible 11.8 inches (0.3m) that yields an incredible 1:1 reproduction ratio. Imagine filling the picture frame with a single quarter, key or insect! This lens opens up a new world of photography while maintaining the highest possible image quality. Other features include Tokina's One-Touch Focus Clutch Mechanism, Focus Limiter Switch, and convenient bayonet mounted lens hood.



- 9 Elements in 8 Groups
- Filter size:  $\varnothing$ 55mm
- Minimum Focus Distance: 0.3m



### Lens Hood BH-551

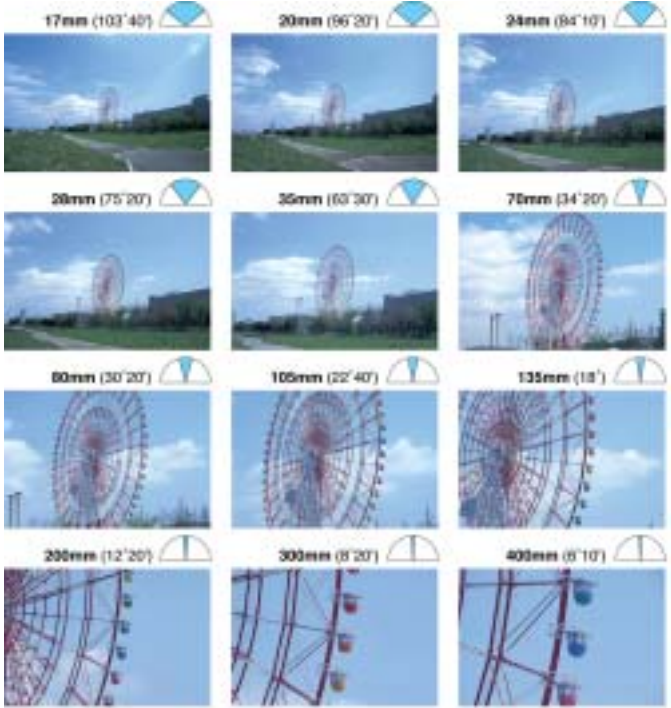
The large BH-551 telephoto hood with "click-lock" to stay in place.

One Touch  
**FC**  
Focus Clutch

# TOKINA'S LENS TECHNOLOGY

## Angle of View

The range across the film surface onto which the subject is exposed is expressed as an angle, called the angle of view. Wide-angle lenses with their short focal lengths have a wide angle of view, which means the exposure range is wide. Conversely, telephoto lenses, which have long focal lengths, have a narrow angle of view, making the exposure range narrow. So a wide-angle lens is used to take a wide area of a subject nearby whereas a telephoto lens is used to take only part of a subject located further away. A single zoom lens, meanwhile, can function as a number of lenses with different focal lengths, enabling you to smoothly alter the angle of view and quickly frame the shot. You can select your lens to create the effect of distance or depth of field, or to suit the location and surrounding conditions.



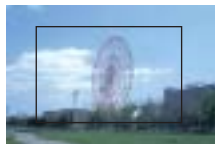
## Effective Focal Length in Relation to Sensor Size



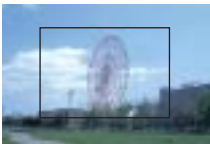
Sensor Size:36x24mm  
(Full Frame Sensor)  
Canon EOS 1Ds Mark II  
Canon EOS 5D



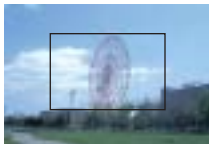
Sensor Size:28.7x19.1mm  
(1.3x= Full Frame Sensor)  
Canon EOS 1D Mark II N



Sensor Size:23x15mm  
(1.5x= Full Frame Sensor)  
Nikon D50  
Nikon D70  
Nikon D100  
Nikon D200  
Nikon D2H  
Nikon D2X  
Minolta Dynax 7D  
Fujifilm FinePixS3 Pro  
Pentax\*1s DS



Sensor Size:22.5x15mm  
(1.6x= Full Frame Sensor)  
Canon EOS 20D,30D  
Canon EOS 350D / Rebel XT



Sensor Size:18x13.5mm  
(2x= Full Frame Sensor)  
Olympus E1  
Olympus E300

## Depth of Field

When you focus on a subject, there is part of the subject that is in focus and parts in front and behind which are not in focus. This range in which the object is seen to be sharply in focus is called the depth of field. If the focal length is kept the same, the depth of field gets deeper (the range in which the subject is sharp gets wider) as the aperture is stopped down, and it gets shallower (the range in which the subject is sharp gets narrower) as the aperture is opened. Even when the aperture stop is the same, the depth of field gets shallower as the subject distance gets shorter, and deeper as the subject gets further away. Furthermore the depth of field is deeper with a short focal length wide angle lens, and shallower with a long focal length telephoto lens.



80mm F2.8



80mm F22

## Perspective

Perspective is the visual effect of moving a subject which is in the foreground closer to or further from the background. If you take photographs with lenses of different focal length while keeping the size of the subject in the foreground constant, the background appears to be further away and the sense of perspective is exaggerated with a short focal length wide angle lens. With a long focal length telephoto lens, the background appears to be closer to the subject and the sense of perspective is lessened. You can greatly change the feeling of presence even with the same subject by using this sense of perspective.



20mm



40mm



100mm



200mm

# TECHNICAL SPECIFICATIONS

LENS	Mount	Optical Construction Elements / Groups	Diagonal Angle of View
AT-X 107 AF DX 10~17mm f/3.5-4.5	C, N/D	10/8	180° - 100°
AT-X 165 PRO DX 16~50mm f/2.8	C, N/D	15/12	82° 4' ~ 31° 3'
AT-X 535 PRO DX 50~135mm f/2.8	C, N/D	18/14	31° 3' ~ 11° 8'
AT-X 840 D 80~400mm f/4.5-5.6	C, N/D	16/10	29°50' ~ 6°13'
AT-X 124 PRO DX 12~24mm f/4	C, N/D	13/11	99°~61°
AT-X 100 AF PRO D 100mm f/2.8	C, N/D	9/8	24°30'

■ The external appearance and specifications shown in this catalog may be changed without any advance notice.

■ Auto Focus Lenses  
 C: CANON AF  
 N/D: NIKON AF-D

■ 1g = 0.03527 oz  
 ■ 10mm = 0.39370 inch  
 ■ 1m = 3.28084 feet



Closest Focus Distance from Film Plane (in Macro Mode)	Magnification Ratio in Macro Mode	Aperture Range	Filter Size (mm)	Dimensions (mm) Diameter	Dimensions (mm) Length	Weight (gram)	Lens Hood
14cm	1:2.56	f/3.5-f/22	N/A	70	71	350	Built-in
30cm	1:4.88	f/2.8-f/22	77	84	97	610	BH-777
1.0m	1:5.89	f/2.8-f/32	67	78.2	135.2	845	BH-671
2.5m	1:5.4	f/4.5-f/32	72	79	136.5	1020	BH-725
30cm	1:08	f/4-f/22	77	84	89.5	570	BH-779
30cm	1:01	f/2.8-f/32	55	73.9	5.1	540	BH-551

Lens: AT-X 107 AF DX 10-17mm f/3.5-4.5





# Tokina

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