

# Zoom Lenses for Surveillance Systems 2021





# INDEX


- 30X 50-1500mm TM30Z5050HD
- 30X 25-750mm TM30Z2525HD
  - TM30Z5050HDGAIDCPN-IR 3, 4
  - TM30Z2525HDGAIDCPN-IR 3, 5
- 50X 10-500mm TM50Z1046HDGAIDCPN-IR
  - TM50Z1046HDGAIDCPN-IR 6, 7
- 33X 10-330mm TM33Z1015HD series
  - TM33Z1015HDGAIDCPN-MP-iAF 8
  - TM33Z1015HDGAIDCPN-MP 8
- 20X 12-240mm TM20Z1225HD series
  - TM20Z1225HDGAIDCPN-IR 9
  - TM20Z1225HDGAIPN-IR 9
- Full HD Compact PTZ Camera
  - APTO-111 VORTY 10
- Lens Adjustment
  - How to Adjust Shift Mount 11
  - How to Adjust Flange Focal Length 11


Kenko Tokina continues to offer technical service and support of Ricoh/Pentax H55Z series.


# ICON LIST


**Image format size**


**Zoom ratio**


**MegaPixel**


**IR lens**


**Auto Focus**


**DeFog / IR Bandpass Filter**


























# Ultra Long Range Zoom Lens

30X 50-1500mm TM30Z5050HD / 30X 25-750mm TM30Z2525HD

Optimum for border control, harbor facilities, oil plants, highway monitoring, etc.



## TM30Z5050HDG AIDCPN-IR

2/3" f = 50 - 1500mm F 5.0

2/3" Angle of View W 10.01 - T 0.34°

1/2" Angle of View W 7.31 - T 0.25°



## TM30Z2525HDG AIDCPN-IR

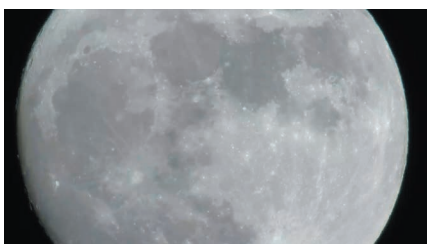
2/3" f = 25 - 750mm F 2.5

2/3" Angle of View W 19.76 - T 0.69°

1/2" Angle of View W 14.51 - T 0.50°

## FEATURE

- Super-telephoto zoom lens for long range surveillance
- Full HD (25 - 750mm), HD (50 - 1500mm)
- 2/3" for best performance in low-light conditions
- IR correction, no focus shift through day and night
- DeFog by IR pass filter
- Internal filter wheel: 4 slots
- Thermal compensator for focus
- Presets on focus and zoom
- Remote iris control / manual iris override
- Optical axis adjustment
- No rear extender for best resolution



TM30Z5050HDG AIDCPN-IR (Tele)



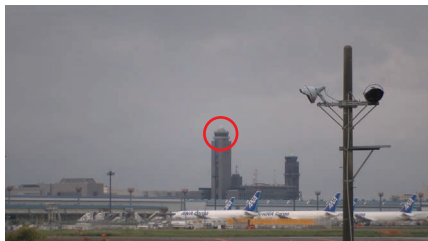
TM30Z2525HDG AIDCPN-IR (DeFog OFF)



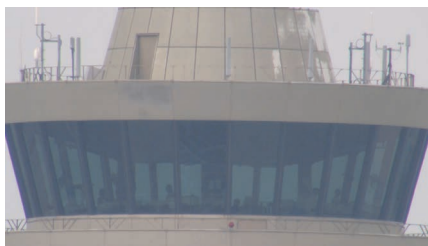
TM30Z2525HDG AIDCPN-IR (DeFog ON)

# 30X 50-1500mm TM30Z5050HD

## TM30Z5050HDGAIDCPN-IR

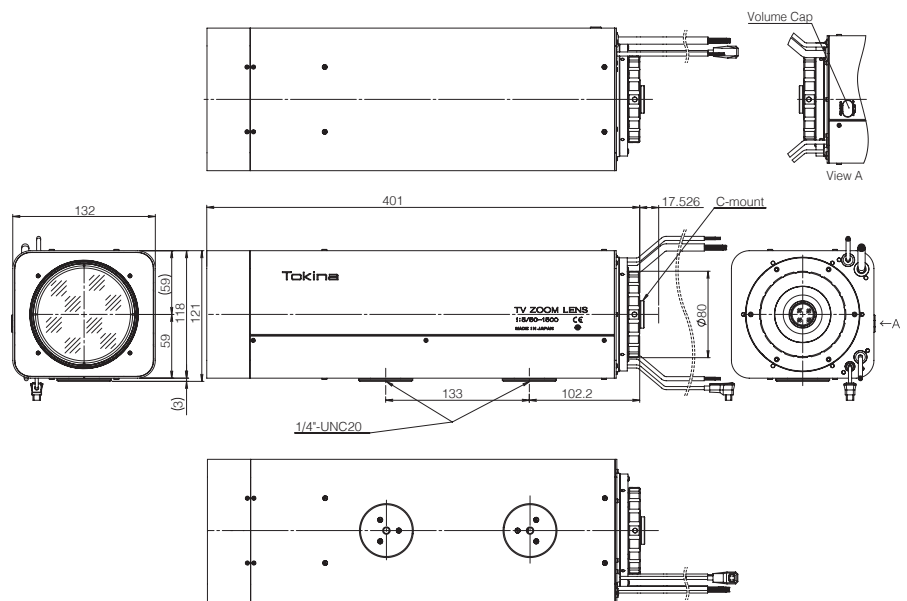


TM30Z5050HDGAIDCPN-IR (Wide)



TM30Z5050HDGAIDCPN-IR (Tele)

Distance: 2.2km



Model Name			TM30Z5050HDGAIDCPN-IR		
Image Format			2/3"		
Mount			C		
Focal Length			50 - 1500mm		
Aperture Range			F5.0 - T110 - Close		
Zoom			x30		
M.O.D.			5.0m		
Angle of View H x V	2/3"	Wide	10.01° x 7.53°		
		Tele	0.34° x 0.26°		
	1/2"	Wide	7.31° x 5.49°		
		Tele	0.25° x 0.19°		
Operating	Iris	DC Auto Iris			
	Focus	Motorized w/preset			
	Zoom	Motorized w/preset			
Iris (DC Auto)	Drive coil	190Ω ±10% (20°C)			
		Close to Open: 4.0V (20°C)			
		Open to Close: 0.5V (20°C)			
	Damp coil	1110Ω ±10% (20°C)			
Focus	Input voltage	DC+6V~12V			
	Current consumption	80mA or less			
	Controlled speed	Approx. 6 sec. (12V)			
Control			DC 6-12V		
Zoom	Input voltage	DC+12V or less			
	Current consumption	90mA or less			
	Controlled speed	Approx. 5 sec. (12V)			
Filter size			M95mm P=1.0		
Back Focal Length			34.2mm		
Operating Temperature Range			-10°C ~ +50°C		
Dimensions (W x H x L)			132 x 121 x 401mm		
Weight			6300g		
Note			IR (Day/Night), MegaPixel, DeFog, Thermal compensator		

# 30X 25-750mm TM30Z2525HD

TM30Z2525HDGAIDCPN-IR

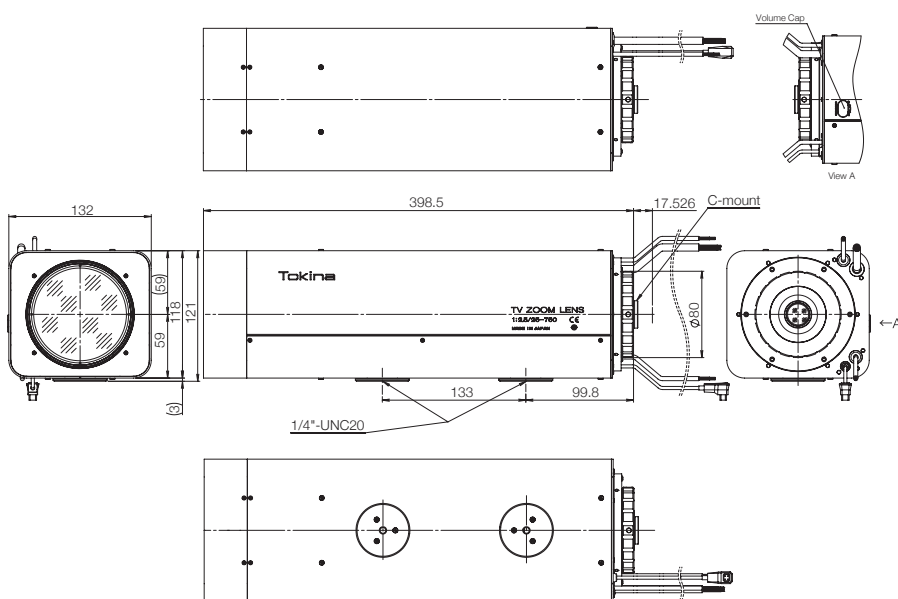


TM30Z2525HDGAIDCPN-IR (Wide)



TM30Z2525HDGAIDCPN-IR (Tele)

Distance: 7.6km



Model Name			TM30Z2525HDGAIDCPN-IR	
Image Format			2/3"	
Mount			C	
Focal Length			25 - 750mm	
Aperture Range			F2.5 - T170 - Close	
Zoom			x30	
M.O.D.			5.0m	
Angle of View H x V	2/3"	Wide	19.76° x 14.96°	
		Tele	0.69° x 0.52°	
	1/2"	Wide	14.51° x 10.94°	
		Tele	0.50° x 0.38°	
Operating	Iris	DC Auto Iris		
	Focus	Motorized w/preset		
	Zoom	Motorized w/preset		
Iris (DC Auto)	Drive coil	190Ω ±10% (20°C)		
		Close to Open: 4.0V (20°C)		
		Open to Close: 0.5V (20°C)		
	Damp coil	1110Ω ±10% (20°C)		
Focus	Input voltage	DC+12V or less		
	Current consumption	80mA or less		
	Controlled speed	Approx. 6 sec. (12V)		
Control			DC 6-12V	
Zoom	Input voltage	DC+12V or less		
	Current consumption	90mA or less		
	Controlled speed	Approx. 5 sec. (12V)		
Filter size			M95mm P=1.0	
Back Focal Length			34.2mm	
Operating Temperature Range			-10°C ~ +50°C	
Dimensions (W x H x L)			132 x 121 x 398.5mm	
Weight			6300g	
Note			IR (Day/Night), 2MegaPixel, DeFog, Thermal compensator	

# Compact & High Power 50X HD Zoom Lens

50X 10-500mm TM50Z1046HDGAIDCPN-IR

Optimum for highway, airway, vessel traffic control, border and critical area surveillance.



## TM50Z1046HDGAIDCPN-IR

1/1.8" f = 10 - 500mm F 4.6

1/1.8" Angle of View W 36.54 - T 0.83°

1/2" Angle of View W 32.71 - T 0.74°

## FEATURE

- Industry most compact 10-500mm 50x zoom lens
- Full HD resolution
- IR correction
- IR bandpass filter (other filter options on request)
- Preset on focus and zoom



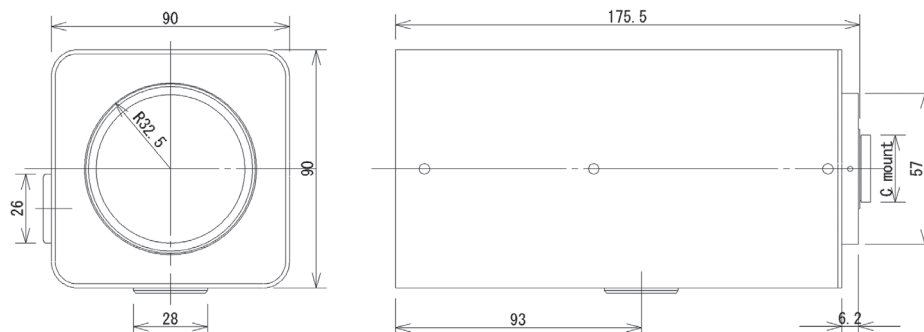
TM50Z1046HDGAIDCPN-IR (Wide)



TM50Z1046HDGAIDCPN-IR (Tele)  
Distance: 3.5km

# 50X 10-500mm TM50Z1046HDGAIDCPN-IR

TM50Z1046HDGAIDCPN-IR

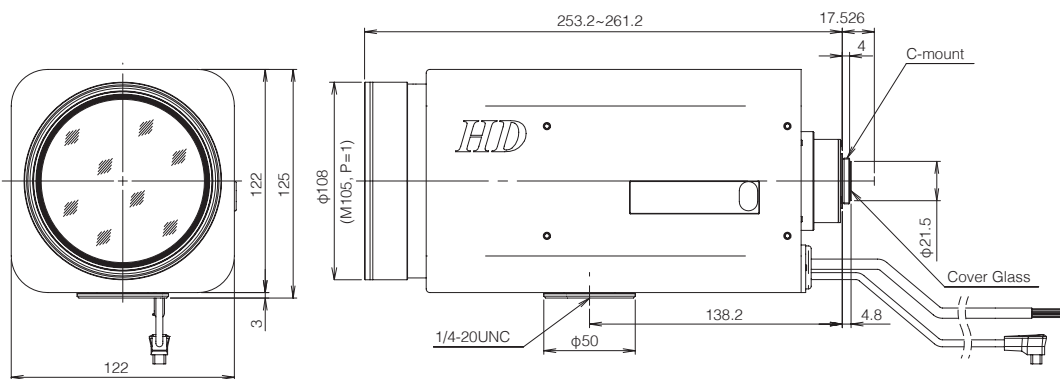


Model Name			TM50Z1046HDGAIDCPN-IR
Image Format			1/1.8"
Mount			C
Focal Length			10 - 500mm
Aperture Range			F4.6 - 360
Zoom			x50
M.O.D.			5.0m
Angle of View H x V	1/1.8"	Wide	36.54° x 27.82°
		Tele	0.83° x 0.63°
	1/2"	Wide	32.71° x 24.82°
		Tele	0.74° x 0.56°
Operating	Iris		DC Auto Iris
	Focus		Motorized w/preset
	Zoom		Motorized w/preset
Iris (DC Auto)	Drive coil	190Ω ±10% (20°C)	
		Close to Open: 4.0V (20°C) Open to Close: 0.5V (20°C)	
	Damp coil	1150Ω ±10% (20°C)	
Focus	Input voltage		DC6V~DC12V
	Current consumption		30mA or less
	Controlled speed		Approx. 8 sec. (6V)
Zoom	Input voltage		DC6V~DC12V
	Current consumption		35mA or less
	Controlled speed		Approx. 6 sec. (6V)
Filter size			M65mm P=0.75
Back Focal Length			36.5mm
Operating Temperature Range			-10°C ~ +50°C
Dimensions (W x H x L)			90 x 90 x 175.5mm
Weight			Approx. 1640g
Note			IR (Day/Night), 2MegaPixel, IR bandpass filter

# 33X 10-330mm TM33Z1015HD series

TM30Z1015HDGAIDCPN-MP-iAF

TM30Z1015HDGAIDCPN-MP

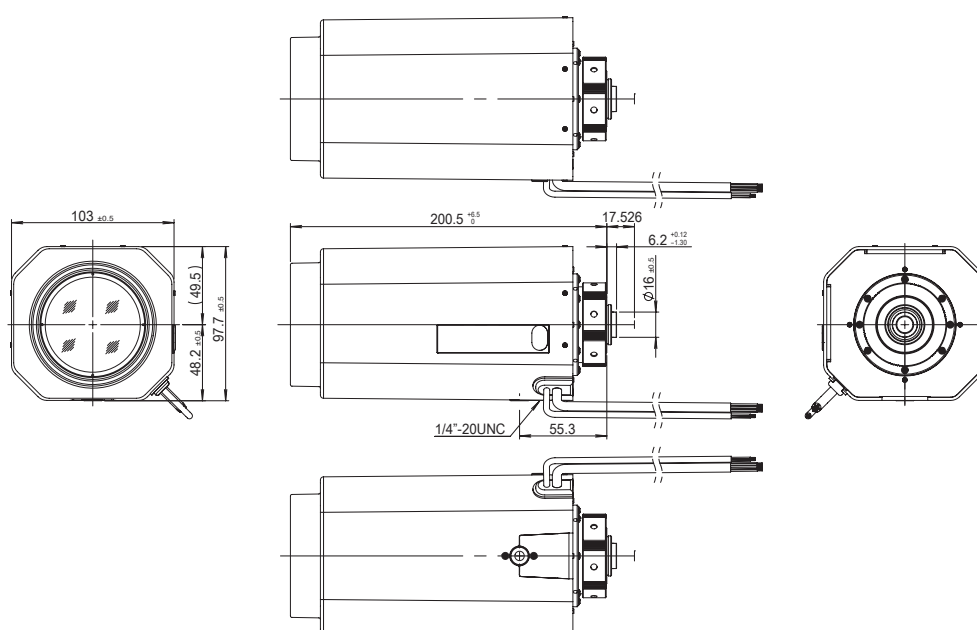


Auto Focus					
Model Name			TM33Z1015HDGAIDCPN-MP-iAF(CONT)	TM33Z1015HDGAIDCPN-MP-iAF(232C)	TM33Z1015HDGAIDCPN-MP
Image Format			1/2"		
Mount			C		
Focal Length			10 - 330mm		
Aperture Range			F1.5 - 360		F1.5 - 560
Zoom			x33		
M.O.D.			2.9m		
Angle of View H x V	1/2"	Wide	34.99° x 26.44°		
		Tele	1.13° x 0.85°		
	1/3"	Wide	26.44° x 19.91°		
		Tele	0.85° x 0.64°		
Operating	Iris		DC Auto Iris		
	Focus		Motorized w/preset		
	Zoom		Motorized w/preset		
Iris (DC Auto)	Drive coil	190Ω ±10% (20°C)			
		Close to Open: 4.0V (20°C)			
	Damp coil	Open to Close: 0.5V (20°C)			
		500Ω ±10% (20°C)			
Focus	Input voltage		DC8V		
	Current consumption		60mA or less		
	Controlled speed		Approx. 9.5 sec.		
Auto Focus	Input voltage		DC 12±0.5V		-
	Input signal		VBS or CVBS SIGNAL (NTSC or PAL)		-
	Current consumption		300mA or less (Standby), 140mA or less (Zoom or Focus on)		-
Control	Controller		RS-232C		-
Zoom	Input voltage		DC8V		
	Current consumption		80mA or less		
	Controlled speed		Approx. 5 sec.		
Filter size			M105mm P=1.0		
Back Focal Length			11.0mm		
Operating Temperature Range			-5°C ~ +45°C		-10°C ~ +50°C
Dimensions (W x H x L)			122 x 125 x 260.5mm		
Weight			3000g		2900g
Note			MegaPixel		

# 20X 12-240mm TM20Z1225HD series

TM20Z1225HDGAIDCPN-IR

TM20Z1225HDGAIPN-IR



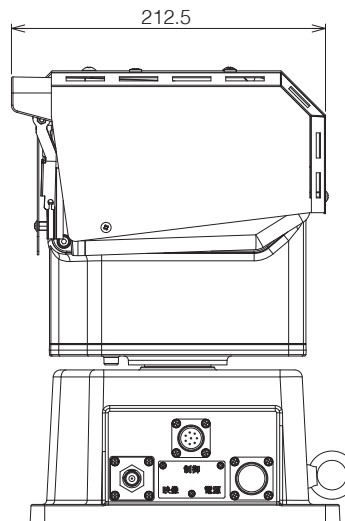
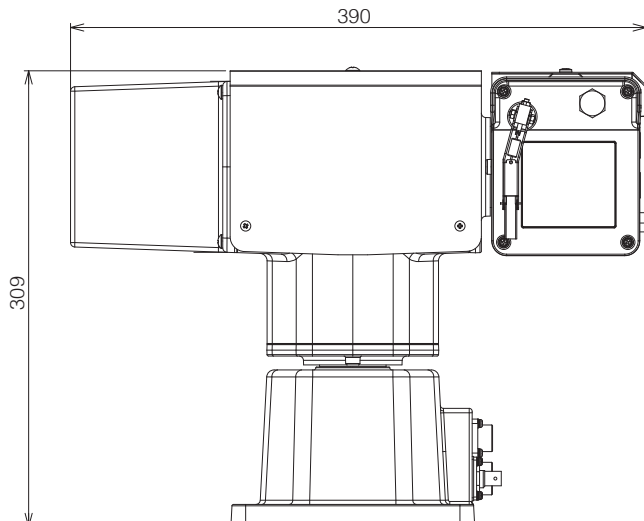
Model Name			TM20Z1225HDGAIDCPN-IR	TM20Z1225HDGAIPN-IR
Image Format				1/2"
Mount				C
Focal Length				12 - 240mm
Aperture Range				F2.5 - 540 - Close
Zoom				x20
M.O.D.				2.0m
Angle of View H x V	1/2"	Wide		29.16°x 22.07°
		Tele		1.56°x 1.17°
	1/3"	Wide		22.62°x 17.06°
		Tele		1.15°x 0.86°
Operating	Iris		DC Auto Iris	Video Auto Iris / Manual Override
	Focus			Motorized w/preset
	Zoom			Motorized w/preset
Iris (Video Auto/Manual Override)	Input voltage		-	DC6V-12V
	Current consumption		-	50mA or less
	Input signal		-	VS or V Signal
	Accuracy		-	±5% at Video Signal Level
	Sensitivity		-	0.5 ~ 1.0Vp-p
Iris (DC Auto)	Response speed		-	Approx. 5 sec.
	Drive coil		190Ω ±10% (20°C) Close to Open: 4.0V (20°C) Open to Close: 0.5V (20°C)	-
	Damp coil		1150Ω ±10% (20°C)	-
Focus	Input voltage			DC6V-12V
	Current consumption			50mA or less
	Controlled speed			Approx. 6 sec. (6V)
Zoom	Input voltage			DC6V-12V
	Current consumption			50mA or less
	Controlled speed			Approx. 7 sec. (6V)
Filter size				M67mm P=0.75
Back Focal Length				13.029mm
Operating Temperature Range				-10°C ~ +50°C
Dimensions (W x H x L)				103 x 97.5 x 200.5mm
Weight				1600g
Note				IR (Day/Night), 2MegaPixel

# Full HD Compact PTZ Camera

## APTO-111 VORTY



- 360° Endless Panning
- High-Definition HD-SDI Output
- Near IR corrected (Day/Night)
- Auto Focus
- High Speed Pan-Tilt
  - Max Speed: Horizontal 180°/sec
  - Vertical 90°/sec
- Variety of protocols applicable



Specification : [PT: APTO-111 VORTY]	
Installation	Outdoor Upright
Comm. IF/Protocol	RS-422 (RS-485) / Pelco D and others
Housing Equipments	Wiper: Remote
	Defroster / fan / heater: Auto Control
	Optical 30x AF module
Water Proof	JIS C0920 Jet proof type compliant IP66
Wind Resistance	Normal ~ 20m/s
	Operation ~ 40m/s (Manual Control)
	Non-Dest. ~ 60m/s
Temperature	-10 ~ +50°C (with power, not frozen)
Humidity	30 ~ 90%RH (Relative, no condensation)
Color	N7 (Polyurethane paint) *option available
Power	AC100V, 50Hz / 60Hz
Weight	Approx. 13kg
Option	<ul style="list-style-type: none"> <li>• Communication I/F, Salt Resistance etc.</li> <li>• LED Illuminator</li> <li>• Visible and Near IR</li> </ul>

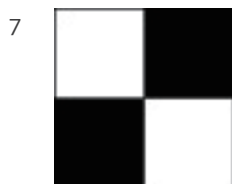
Specification : [Camera]	
Image Sensor	1/3" CMOS 2MegaPixel
	1,920(H)x1,080(V) 30p/60i/59.94i
Video Output	HD-SDI(SMPTE292M)
Lens	f = 4.4 - 132mm F1.4 - 4.6 Optical 30x
Angle of View	H: 63.4° ~ 2.3° V: 37.3° ~ 1.3°
Min. Illumination	0.4Lux color 1/30sec F1.4 50IRE
	0.01Lux BW 1/8sec F1.4 50IRE
Other Function	Image Stabilizer, DeFog, HLC (Halation Control)

Specification : [Pan-Tilt]	
Pan-Tilt Range	H: 360° Continuous V: ±90°
PT Speed	H Max. 180°/sec
	V Max. 90°/sec
Precision	H+V: less than ±0.3°
No. of presets	Max. 255 (including home position)

# Lens Adjustment

## ■ How to Adjust Shift Mount (Match Optical Axis to the Sensor Center)\*

- 1 Place the shift mount adjustment target 13m from the front of the lens.
- 2 Loosen slightly the lock screws (check lens specifications for details).
- 3 Rotate the camera until the image is straight on the monitor.
- 4 With the lens set at wide adjust the tripod head until the centre of the cross hairs lines up with the centre of the target.
- 5 Zoom the lens to telephoto position and refocus the lens if it has gone out of focus. Once again adjust the tripod head until the centre of the cross hairs lines up with the centre of the target.
- 6 Zoom wide. The centre of the cross hairs will no longer be on the centre of the target. Place 2 Drivers in opposite Keys and rotate them in different directions. A clockwise rotation of a Driver will cause the cross hairs to move in the direction that Driver is pointing. The opposing Driver must move in an anti-clockwise direction to allow the cross hairs to move. When correctly aligned the box at the centre of the cross hairs should have alternating black/white boxes as below.



- 8 Zoom the lens to Telephoto. The centre of the cross hairs will no longer be at the centre of the target. Adjust the tripod to correctly centre the cross hairs on the target.
- 9 Zoom wide. If the centre of the cross hairs is not at the centre of the target adjust the shift mount with the Drivers.
- 10 Repeat steps 5 and 6 until the deviation of the centre of the cross hairs from the centre of the target is minimal.
- 11 When satisfied that the shift mount is correctly adjusted confirm that the Mount Setting Ring is tight and tighten the 4 lock screws (see N2) with 30N·cm torque driver.
- 12 Loosen the Mount Setting Ring slightly and confirm that the camera rotates smoothly.
- 13 Tighten the Mount Setting Ring and once again confirm that the cross hairs stay on the centre of the target whilst zooming from Telephoto to Wide.

## ■ How to Adjust Flange Focal Length / Back-Focus Adjustment

- 1 Open iris to its maximum. (It makes the depth of field shallow.)
- 2 Zoom to wide angle position and focus on the object in the infinity.
- 3 Focus on the object using flange focal distance adjustment of camera.
- 4 In case of defocusing at telephoto, focus on the object again.
- 5 Then, zoom to wide angle position and focus on the object again.
- 6 Repeat 4 and 5 until focusing correctly through the entire range. If it dose not work, please check the following points.
  - A. Is the lens mount correct?
  - B. Is any extension tube attached?

For more technical information, please, visit our website <https://kenkotokina-cctv.com/service/>



\*This function is available on selected lenses only.

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