

# NET News

**Topic focus:**  
**New Releases**  
**FOculus**  
 - FO432TB/TC  
 - FO531TB/TC



## T i n y



4T-models more - **FO124TB/TC, FO323TB/TC, FO432TB/TC and FO531TB/TC** - complete the tiny-version of **FOculus** IEEE1394 camera line. The new **FOculus** models offer the advantage of a user-friendly small body (29x29x39mm) to meet the demands of any application that provides a minimum of space along with other additional features.

All models are available in monochrome and color and equipped with SONY CCD Matrix image sensors from 1/3", 1/2" to 1/1.8". The cameras achieve resolutions from VGA (640x480) with up to 60fps (**FO124TB/TC**), XGA (1024x768) with up to 30fps (**FO323TB/TC**), SXGA (1280x1024) with 20fps (**FO432TB/TC**) and UXGA (1600x1200) with up to 16fps (**FO531TB/TC**).

T-series provides interchangeable filter to be changed depending on the application.

The LED status indicator has been integrated and the cameras are assembled with a lockable IEEE1394 connector for cable that ensures data transfer compliant to IIDC 1.31 standard while intense vibrations of engines. Higher frame rates can be achieved by setting a ROI (Region of Interest) under Format 7 (e.g. selecting a window of 60 x 60 Pixel to obtain 300 fps). Binning modes are also available (2x2 and 1x2). Binning is a useful option to obtain noise reduction or explicit light sensitivity. Furthermore the camera runs 2- or 4-times faster in fact of the reduced resolution.

All known characteristics of the **FOculus** series like C-mount, progressive scan, external trigger, low smear, excellent anti-blooming, high sensitivity, variable shutter speed, as well as an adjustable low frame rate, sub-sampling and electronic shutter are still effective.

Beside the included Viewer Software a complete SDK (Software Development Kit) is available to download from Website [www.net-gmbh.com](http://www.net-gmbh.com).

The **FOculus** series runs with WDM and CMU driver.

The Application Programming Interface (**API**) is compatible to the following software libraries - - MVTec's Halcon & Active Vision Tools, Matrox's MIL & MIL-Lite und National Instrument's LabView - and allows the flexible integration into various applications.

After completing the **FOculus** Series NET is able to offer the ideal camera for nearly every application according casing, imagesensor size, resolution and frame rate.

Main field of application are machine vision, positioning, microscopy, semi con inspection, Barcode, Matrix code, OCR, OVC and much more.

	FO124TB (B/W)	FO124TC (Color)	FO323TB (B/W)	FO323TC (Color)	FO432TB (B/W)	FO432TC (Color)	FO531TB (B/W)	FO531TC (Color)
Image Sensor	1/3" IT CCD ICX424AL/AQ		1/3" IT CCD ICX204AL/AK		1/2" IT CCD ICX267AL/AK		1/1.8" IT CCD ICX274AL/AQ	
Effective pixel	659 (H) x 494 (V) VGA		1024 (H) x 768 (V) XGA		1392 (H) x 1040 (V) SXGA		1628 (H) x 1236 (V) UXGA	
Data Path	8bit or 12bit BW/Raw RGB + YUV422		8bit or 12bit Raw BW/RGB + YUV422		8bit or 12bit BW/Raw RGB + YUV422		8bit or 12bit Raw BW/RGB + YUV422	
Pixel Size	7.40 (H) x 7.40 (V) µm		4.65 (H) x 4.65 (V) µm		4.65 (H) x 4.65 (V) µm		4.40 (H) x 4.40 (V) µm	
Scanning System	Progressive Scan				Progressive Scan			
Frame Rate	60fps (format7) 60 / 30 / 15 / 7.5 / 3.75 / 1.875 fps		30fps (format7) 30 / 15 / 7.5 / 3.75 / 1.875 fps		20fps (format7) 15 / 7.5 / 3.75 / 1.875 fps		16fps (format7) 15 / 7.5 / 3.75 / 1.875 fps	
Synchronization	Internal				Internal			
Digital Interface	IEEE1394a				IEEE1394a			
Software Interf.	Acc. IIDC v. 1.31				Acc. IIDC v. 1.31			
Gain Control	Manual: 0 ~ 25 dB; Auto Gain				Manual: 0 ~ 25 dB; Auto Gain			
Gamma	0.4 ~ 2.5				0.4 ~ 2.5			
Strobe Output	Yes				Yes			
S/N Ratio	56 dB or better				56 dB or better			
Power Supply	+ 8 VDC to + 30 VDC via the IEEE1394 cable				+ 8 VDC to + 30 VDC via the IEEE1394 cable			
Transfer Rate	400 Mbps				400 Mbps			
Trigger Mode	Software or External Trigger / Mode 0 ~ 5; 14, 15				Software or External Trigger / Mode 0 ~ 5; 14; 15			
Shutter Speed	Manual: tbd; Auto Shutter				Manual: tbd; Auto Shutter			
Advanced Features	Pixel Binning (B/W only); RS232 (SIO/Pass through); ROI; One Shot & Multi Shot; Multi Camera Auto Sync; High Speed Up Trigger Framerate				Pixel Binning (B/W only); RS232 (SIO/Pass through); ROI; One Shot & Multi Shot; Multi Camera Auto Sync; High Speed Up Trigger Framerate			
Operating Temp.	- 5°C to + 45°C				- 5°C to + 45°C			
Regulations	FCC, CE, RoHS				FCC, CE, RoHS			
Lens Mount	C/CS-mount				C/CS-mount			
Dimension	29 (W) x 29 (H) x 39 (D)mm				29 (W) x 29 (H) x 39 (D)mm			