

FOculus – Always a new perspective

Technical Data - T-series CMOS image sensor

Tiny CMOS Features

All CMOS cameras of the FOculus family use the same small but robust housing like the FOculus Tiny models. 2 monochrome and 4 color cameras with pixel numbers from 360.000 to 3.100.000 offer for almost every application the best choice camera. Frame rates at full resolution reach from 8.5 fps to 60 fps. Features like progressive scan, partial scan and shutter speeds from 32 μ s to 1 sec with a signal to noise ratio better than 43dB are standard for the CMOS FOculus industrial cameras.



Tiny CMOS



	FO1224TB	FO1224TC	FO1433TB	FO1421TC	FO1520TC	FO1631TC
Image Sensor	1/3" MT9V022177ATM	1/3" MT9V022177ATC	1/2" MT9M001	1/3" MT9M131	1/3.2" MT9D131	1/2" MT9T031
Effective Pixel	752(H) x 480(V)	752(H) x 480(V)	1280(H) x 1024(V)	1280(H) x 1024(V)	1600(H) x 1200(V)	2048(H) x 1536(V)
Data Path	8 or 10bit	8 or 10bit Raw RGB/YUV422	8 or 10bit	8 or 10bit Raw RGB/YUV422	8 or 10bit Raw RGB/YUV422	8 or 10bit Raw RGB/YUV422
Pixel Size	6.0 μ m x 6.0 μ m	6.0 μ m x 6.0 μ m	5.2 μ m x 5.2 μ m	3.6 μ m x 3.6 μ m	2.8 μ m x 2.8 μ m	3.2 μ m x 3.2 μ m
Frame Rate	60 fps	60 fps	24 fps	11 fps	8.5 fps	10 fps
Scanning System	Global Shutter	Global Shutter	Rolling Shutter	tbd	tbd	Rolling Shutter
Binning	2x2	not supported	not supported	tbd	tbd	2x2
Format 7	Partial Scan (Unit: 4x4)					
Trigger	Edge	Rising Edge or Falling Edge				
	Mode	0				
	Source	External Trigger or Software Trigger				
Strobe Output	Active High, Support Normal Mode or Trigger Mode					
Memory Save/Load	16 Channels(0:factory, 1~4:feature, 5~15:mode/feature)					
SIO(RS-232)	IIDC V.1.31 version : Path through or NET Command					
Digital Interface/Transfer Rate	IEEE1394.1 port(6pin) / 400Mbps					
Gain Control	0 ~ 12dB (Manual or Auto)	0 ~ 12dB (Manual or Auto)	6 ~ 18dB (Manual or Auto)	tbd	tbd	0 ~ 63 dB (Manual or Auto)
Shutter Speed	93 μ sec ~ 100ms	93 μ sec ~ 100 ms	60 μ sec ~ 500 ms	tbd	tbd	63 μ sec ~ 1 sec
S/N Ratio	45 dB	45 dB	45 dB	tbd	tbd	43 dB
Control Function	Brightness, Sharpness, Gamma, Auto-Shutter, Pan/Tilt	Brightness, Sharpness, Gamma, Auto-Shutter, Pan/Tilt, U/B, V/R, Hue/G, White Balance	Brightness, Sharpness, Gamma, Auto-Shutter, Pan/Tilt	Brightness, Sharpness, Gamma, Auto-Shutter, Pan/Tilt, U/B, V/R, Hue/G, White Balance	Brightness, Sharpness, Gamma, Auto-Shutter, Pan/Tilt, U/B, V/R, Hue/G, White Balance	Brightness, Sharpness, Gamma, Auto-Shutter, Pan/Tilt, U/B, V/R, Hue/G, White Balance
Lens Mount	C- / CS- mount					
External Dimension	29 (W) x 29 (H) x 39 (D) mm					
Operation	-5°C to 45°C					
Camera Specification	IIDC 1394-based Digital Camera Specification v1.31					