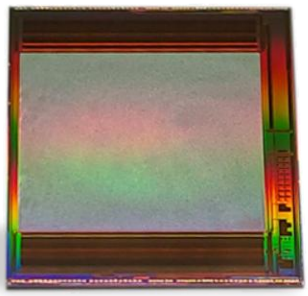
MT12810CA1

1280×1024-10µm CTIA SXGA ROIC



Features

- New Very Low Noise and High Resolution CTIA SXGA ROIC
- 1280×1024-10µm SWIR FPAs including InGaAs, CQD, T2SL, MCT, and GeSi
- 2, 4, or 8 analog outputs with analog reference
- Programmable Biasing, Timing, and Windowing
- Snapshot Operation: ITR Mode

Technical Specifications

Detector Array Format	1280×1024 (SXGA)			
Pixel Size	10µm×10µm			
Pixel Polarity	Supports both p-on-n and n-on-p detector arrays			
Input Circuit Type	Capacitive Trans Impedance Amplifier (CTIA)			
Full Well Capacity (Double Gain)	HG: 10.000 e-	LG: 300.000 e-		
Detector Biasing	12-bit programmable in 0.7mV steps			
Integration Time	Programmable from 100ns to 1s in 100ns steps			
Number of Analog Outputs	Programmable 2, 4, or 8 with reference			
Output Swing	< 2.0V with adjustable gain and offset			
Readout Modes	Snapshot Operation: ITR Mode			
Windowing	Programmable size and location			
Sub-Sampling	2:1 in Rows and Columns for faster scanning			
System Clock	Nominal 10 MHz (upto 12.5MHz)			
Frame Rate	≤ 60 Hz at full frame, upto 1000 Hz with windowing			
Power Dissipation	≤ 200 mW, 3.3V and 1.8V Supplies / 8-Output Mode			
Readout Noise	HG: < 10 e- rms	LG: < 110 e- rms		
Operating Temperature	Room Temperature (300K) and Cryogenic (77K)			
Temperature Sensor	On-chip active sensor with 1mV/K sensitivity			
Wafer and Die Sizes	Wafer: 200mm	Die: 15.4 mm × 16.2 mm	Total: 86 Die	65 A+ Grade Die (Typical)
Product Delivery	Tested wafers or singulated parts with test data			