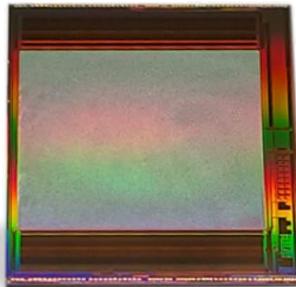


MT12810CA

1280×1024-10µm CTIA SXGA ROIC



Features

- New Low-Noise and High Resolution CTIA SXGA ROIC
- 1280×1024-10µm SWIR FPAs including InGaAs, MCT, T2SL, and CQD
- 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 Dice
Product Delivery	Tested wafers or singulated parts with test data		