

--- MWIR Continuous zoom

microCORE

Light & Small MWIR Continuous zoom
Cooled Thermal imaging camera core



Technical Specification

microCORE is a continuous zoom, high performance light & small thermal camera core designed for airborne platforms, handheld volume restricted mobile systems.

microCORE contains:

- 640x512 pixels, 15 or 10 μ m pitch, cooled focal plane array in the 3-5 μ m waveband.
- TVPE/V – Thermal Video Processing Engine driving electronics.
- F/3.6 or F/5.5 Continuous zoom motorized lens.

The Ethernet or RS-232/422 remote control capability permits ease of integration into any client-based security system.

RP Optical Lab provides leading-edge IR equipment to the security and surveillance sectors. RP's proprietary optical designs, state-of-the-art laboratories ensure maximum performance and dependability.

MAIN FEATURES:

- Motorized focus/zoom
- Continuous zoom
- Auto & Manual focus
- Focus maintained while zooming
- Unique zoom module with zero optical artifacts
- Optical NUC & "1 point NUC"
- Image enhancement including local DRC
- Ruggedized construction
- Digital video output – SDI /Camera link



SYSTEM SPECIFICATIONS

PARAMETER	VALUE	NOTES						
SYSTEM								
Video Format	NTSC or PAL	Additional option: SDI or CameraLink						
Communication Protocol	RS-422 Full Duplex/ Ethernet							
Power Requirements	12VDC +/- 3% regulated, 11W	Average nominal power						
Controls	Fully Remote controlled							
Electronic Zoom	X1.5 / X2 / X4							
Focus control	Manual / Automatic							
Total Weight	Not exceeding 860 grams							
External Dimensions	Not exceeding 167mm (Length) x 101mm (Width) x 92mm (Height)							
Mount / Mechanical Interface	Please refer to Mechanical ICD	Customized interfacing - available						
Operating / Storage Temp	-32°C to +65°C / -40°C to +71°C							
Shock and Vibrations	Per MIL-STD-810E							
SENSOR								
Detector FPA	640x512 pixels							
Sensitivity	≤ 30mK							
Cooler life time MTBF	8,000 hrs - standard cooler	18,000 hrs for long life.						
Detector cooling time	< 7 minutes							
OPTICAL								
F#	F/3.6 or F/5.5							
Spectral Range	3 – 5 μm							
Zoom / Focus readout	Zoom/ Focus values transmitted over the RS422 / Ethernet communication bus.							
Zoom position repeatability	To within ± 2%							
Thru zoom boresight	≤ 0.15mm Radius at focal plane							
Boresight Retention accuracy	≤ 0.09mm Radius at focal plane							
		P/N						
Horizontal FOV	15 – 115mm	3.2°(N) x 24°(W)	S115					
	25 – 170mm	2.2°(N) x 14.5°(W)	S170					
	15 - 230mm	1.6°(N) x 24°(W)	S230					
	18 – 275mm	2°(N) x 29°(W)	D275					
Focus / Zoom mechanism	Motorized, remotely controlled							
RANGE PERFORMANCE								
Model	S115		S170		S230		D275	
	Range (Km)							
Target	Human	NATO	Human	NATO	Human	NATO	Human	NATO
Detection	7.5	10.1	8.9	12.2	9.9	13.2	8.6	12.4
Recognition	1.8	4.4	2.7	6.5	3.6	8.8	2.9	7.0
Identification	0.9	2.2	1.3	3.2	1.8	4.4	1.4	3.5