

--- MWIR Continuous zoom

microCORE-275CZ

MWIR Continuous zoom Light & Small
Cooled Thermal imaging camera core



Technical Specification

microCORE-275CZ is a continuous zoom, high performance light & small thermal camera core designed for airborne platforms, handheld volume restricted mobile systems.

microCORE-275CZ contains:

- High resolution, XBn, 640x512 pixels, 15 μ m pitch cooled focal plane array operating in the 3-5 μ m waveband.
- TVPE-15/V - Video Engine driving electronics.
- mRUBY 18-275mm 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.

SYSTEM MAIN FEATUTES:

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



SYSTEM SPECIFICATIONS

PARAMETER	VALUE	NOTES
⚙️ SYSTEM		
Video Format	NTSC or PAL	
Communication Protocol	RS-422 Full Duplex/ Ethernet	Baud rate 57,600 (other rates available)
Power Requirements	12VDC +/- 3% regulated, 11W	Average nominal power
Controls	Fully Remote controlled	
Electronic Zoom	X2 / X4 / X8	
Focus control	Manual / Automatic	
Total Weight	860 gram	
External Dimensions	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	XBn, 640x512 pixels, 15 um pitch	See ordering information below
Sensitivity	< 25mK	Please consult for better sensitivity
Cooler life time MTBF	8,000 hrs. for standard cooler	18,000 hrs for long life cooler.
Detector cooling time	< 7 minutes	

👁️ OPTICAL		
F#	F/5.5	
Spectral Range	3 – 5 μm	
Zoom / Focus readout	Zoom and focus position values are transmitted over the RS422 / Ethernet control communication bus.	
Zoom position repeatability	To within ± 2%	
Thru zoom boresight (from NFOV to WFOV and from WFOV to NFOV)	Better than 1mRad	
Boresight Retention accuracy	Better than 0.2mRad.	
mRUBY	18 – 275mm	WFOV: 30.6°(H) x 24.5°(V)
		NFOV: 2.05°(H) x 1.5°(V)
Focus / Zoom mechanism	Motorized, remotely controlled	

RANGE PERFORMANCE

Lens Model	D275	
	Range (Km)	
Target	Human	NATO
Detection	8.6	12.4
Recognition	2.9	7.0
Identification	1.4	3.5

P/N for ordering: **LRC3Z-D275/Micro**

