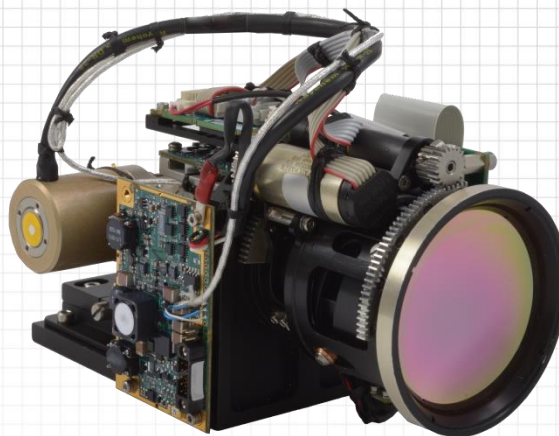


--- MWIR Continuous zoom

## 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 $\mu$ m pitch cooled focal plane array operating in the 3-5 $\mu$ 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                                    |
|------------------------------|--|--|
| <b>SYSTEM</b>                |  |  |
| 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                 | <b>860 gram</b>                                |  |
| 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                               |  |

|                       |                                  |                                       |
|-----------------------|----------------------------------|---------------------------------------|
| <b>SENSOR</b>         |                                  |                                       |
| 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                      |                                       |

|   |   |                           |
|---|---|---------------------------|
| <b>OPTICAL</b>  |   |                           |
| 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  |

