

ULTRA-COMPACT  
UNCOOLED THERMAL CORE

**EXOSSENS**  
REVEAL THE INVISIBLE

# MicroCube XP 640



*ULTRA-COMPACT VGA CORE WITH  
EXTREME PERFORMANCE*

## KEY FEATURES



**ULTRA-SWAP THERMAL CORE**



**ADVANCED SHUTTERLESS IMAGING  
WITH EMBEDDED CORRECTION**



**CONTOUR ENHANCEMENT: SHARPER DRI  
AND SUPERIOR OBJECT CLARITY**



**COLUMN AND TEMPORAL DENOISING:  
NETD halved from 40 mK to 20 mK**



**CONTRAST SHARPNESS CORE FOR  
AUTOFOCUS MANAGEMENT**

The MicroCube XP (Extreme Performance) 640 delivers 640×480 resolution with a 12 μm pixel pitch and exceptional thermal sensitivity (NETD <20 mK), all in an ultra-compact form.

With fast startup (<0.7s), shutterless operation, and enhanced temperature stability, it ensures rapid, reliable performance. Contour enhancement provides improved contrast, DRI, and target visibility. Optimized for defense and mission-critical applications, its compact SWaP design and versatile interfaces enable seamless integration.

# MicroCube XP 640



## KEY PERFORMANCES

|                               |  |
|-------------------------------|--|
| Sensor                        | Micro-bolometer technology   |
| Resolution / Pixel Pitch      | 640 x 480 pixels / 12 $\mu$ m  |
| Spectral Range                | 8 – 14 $\mu$ m   |
| Max NETD (F/1 ; 300K ; 30 Hz) | < 20 mK with denoising   |
| Operating temperature range   | -40°C to +70°C   |
| Power consumption (DF40)      | < 1.2 W  |
| Qualification                 | MIL-STD-810G – Method 514 Vibration:<br>10Hz - 2kHz 13.95g per axis 10h per axis |

## FUNCTIONS & INTERFACES

|                               |  |
|-------------------------------|--|
| Image processing              | BPC (Bad Pixel Correction), NUC (Non Uniformity Correction), Shutterless NUC |
| Image optimisation            | AGC (Automatic Gain Control)   |
| Output options                | MIPI-CSI, DF40   |
| Dimensions (L x W x H) (DF40) | 22.0 x 22.0 x 26.8 mm <sup>3</sup>   |
| Weight (DF40)                 | < 25 gr  |

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