OBSETECH M (Micro) core series

Very reliable miniature uncooled LWIR shutter thermal imaging core with excellent impact and vibration resistance designed for multiple integrations: vehicles, UGV or UAVs, as well as many other systems. Micro core supports analog and digital video output incl. USB.

Detector	
Type	**Uncooled VOx Infrared FPA**
Pixel resolution	**640×512** or 1024x800 (optional) or 1280 x 1024 (optional)
Pixel pitch	**12μm**
Spectral range	**8～14μm**
Sensitivity (NETD)	**≤50mK @ f/1.0 / 25℃** or ≤40mK (optional)
TEC	No
Image	
Frame rate	50Hz
Digital zoom	1.0 ~ 4.0× Continuing Zooming (step 0.1), Zoom in any area
Color palettes	Support
Polarity	Black hot / White hot
Reticle	Display / Disappear / Move
Compensation	Shutter-less
Image processing	Non-uniformity correction (NUC), Digital filter noise reduction (DNR), Digital detail enhancement (DDE)
Image flip	Right-left / Up-down / Diagonal
Brightness and Contrast	Manual / Auto 0 / Auto 1
Temperature measurement	optional
Power	
Power supply range	4 – 5.5V DC, expansion board supports 3.5 – 18V DC
Typical service voltage	4V DC
Power protection	Over-voltage / Under-voltage / Reverse Connection
Typical power consumption	≦ 0.7 W (with expansion board 0.9 W)
Interface	
Serial communication protocol	RS-232, UART (3.3V)
Analog video	1 Channel PAL
Digital video	14 Bit or 8 Bit LVCMOS / BT.656 / BT.1120 / LVDS (USB optional)
Environment	
Operating temperature	-40℃～+80℃ external temp
Storage temperature	-45℃～+85℃ external temp
Humidity	5-95% non-condensing
Vibration	6.06g, Random vibration, all axial direction
Shock	80g, 4ms, Final peak sawtooth wave, 3 axial 6 direction
Physical Characteristic	
Dimension	26mm x 26mm (without lens)
Weight	< 20g (without lens)
Optional features	
Various output boards available such USB, Camlink, MIPI etc.. Multiple lenses available.	

Drawing Micro core with 9.1mm athermalized lens: