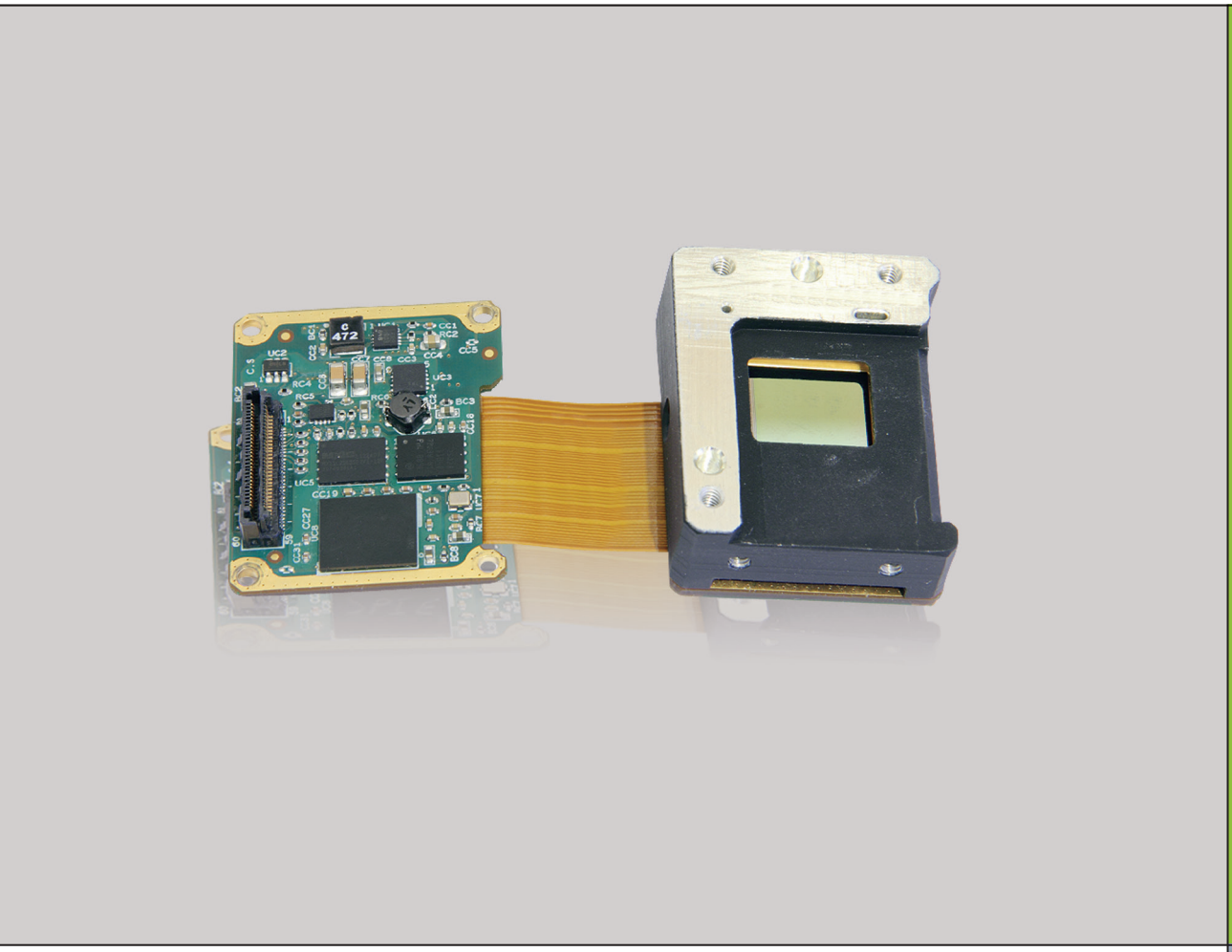
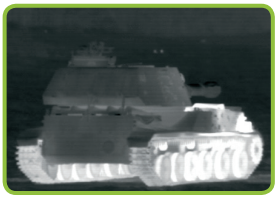
Opgal EyeR™ Core NV

Engine Applications



High End Thermal Imaging Video Engine 17µ Designed for Handheld Applications



Opgal has used its vast customer experience to answer specific application requirements, such as: ultra low power consumption, single input voltage, extremely short time to image and built in parallel & analog video outputs. Opgal's state of the art image processing capabilities have allowed the development of superior high-end algorithms including TECless and Shutterless operations. EyeR Core NV (VGA, ASi) is an advanced, versatile, modular platform that supports ASi microbolometer detector, including 17µ detectors technology.

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EyeR Core NV Specifications

Engine Applications

Key features

- Power consumption - < 1.6W
- High resolution - 640x480
- Opgal's Shutterless algorithm operation
- FPA pitch - 17µ
- FPA material - ASi
- NETD - < 50mK
- Time to image - < 2 seconds (in shuttered configuration)
- Operating temperature range - -40ºC to +75ºC

Robust Design

The EyeR Core NV robust design combines many years of military product manufacturing experience with today's cutting-edge design. The EyeR Core NV has been developed to meet strict military standards to suit extremely harsh environmental conditions typical of defense and HLS applications.

Adaptable Design

The EyeR Core NV is specifically designed for OEM thermal imaging solutions. Its design is adaptable, modular and flexible enabling easy customization. Its modular mechanical design allows maximum flexibility to fit the customer's product.

Shutterless

In thermal imaging cameras, a shutter is a electromechanical device used for periodical non uniformity correction that shuts the camera input window for a very short time, causing image interrupt and making the camera "blind" in that period. With Opgal's Shutterless technology, the EyeR Core NV works without image degradation, making corrections in real time using a highly sophisticated algorithm without using a shutter.

- No image interruption
- No acoustic noise
- No mechanical moving parts

Engine Technical Specifications

Features	Description/Performance
Resolution	640x480
FPA Pitch	17µm
FPA Material	ASi
NETD (F#1, 25°C)	<50mK
Analog Video Formats	PAL/NTSC
Digital Video	Camera link or BT656 / TTL
Full Frame Rate (window)	25/30Hz or 50/ 60Hz (100/120Hz, 200/ 240Hz)
Time to Image	<2 seconds (in shuttered configuration)
Power Consumption	1.6W (digital video output @6V input voltage)
Input Power	4 – 14VDC
TEC Operation	TECless
Shutter Operation	Opgal's shutterless operation
User Configuration	SDK & GUI
Graphics	On Screen Menu ,Text, LOGO,32 reticules, 256 colors, color pallets
Digital Zoom (steps of 0.1/1)	Continuous digital zoom : x1 to x12
Control Interface	RS232 or 5 push buttons
Video Synchronization	Optional external video synchronization
Operating Temp. Range	-40ºC to +75ºC
Video Optimization	Automatic or manual AGC, video enhancement, gamma correction
Storage Temp. Range	-40ºC to +85ºC
Dimensions in mm (w/o lens)	33(W)x41(H)x25.4(L) - pagoda shutterless
Weight	<48g (pagoda shutterless)
Environmental Standards	MIL-STD 810F SRS gunfire and mechanical shocks certified

Note: Distances are calculated based on geometrical values and do not take into account atmospheric conditions

Applications

Today's battlefield and HLS demand a micro thermal imaging solution to achieve maximum all weather vision. The EyeR Core NV gives excellent high-end thermal imaging performance and has miniature dimensions especially designed for the following applications:

- Portable TWS
- Goggles
- UAV
- UGS - Unattended Ground Systems
- Homing device platforms
- Security and mid-range surveillance

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