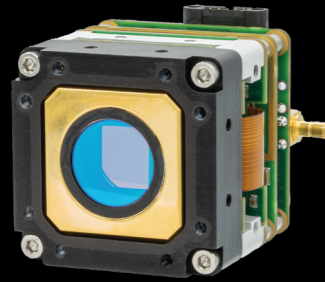


## High Performance and Quality

Raptor cameras are well designed and expertly built. We carry the latest quality accreditation BS EN ISO 9001:2015 and IPC Class 3. All our cameras are built to MIL-STD-810F and MIL-STD-704F standards, meaning our cameras are rugged and reliable.

They are designed for EMC & Environmental stress, shock & vibration, meaning Raptor cameras will work in harsh conditions. The electronics are enabled to operate from -40C to +75C. Our electronics are also conformally coated enabling them to work in high humidity or condensation environments in mission-orientated applications.

Raptor undertakes monthly audits of RMAs (returns). On a rolling 12 month basis RMAs have been <2% for the last 3 years. Our high quality manufacturing and QC testing means we rarely see cameras returned.



## Raptor Manufacturing

We design and manufacture all of our camera solutions from our state-of-the-art headquarters in Larne, United Kingdom. Our 6,000 sq ft facility holds all our enhanced processes including our cleanroom and vacuum capabilities. Our manufacturing environment operates Kanban processes which enables short lead times and effective stock management. We welcome visits from OEM customers to see our facilities and meet our engineers.

## Project Process

Every OEM project has a dedicated project manager, a lead engineer and an account manager to look after the technical, commercial and support aspects of each project. A typical project can take from a few weeks to several months depending on the complexity of the work involved. Customers sit in on regular update calls and sign off at every stage of the project.



## Quality Compliance and Sourcing

All components used in Raptor cameras are reputedly sourced from approved ISO9001:2015 suppliers offering full traceability. We appreciate that our cameras end up in mission critical equipment, in medical, industrial and surveillance applications where reliability and quality are paramount. We are 100% committed to preventing the use of any grey / counterfeit goods as components within our products. All suppliers are continuously monitored for compliance with RoHS, REACH and the Conflict Minerals rule, section 1502 of the Dodd-Frank Act (2010) using our Raptor Certified Supply Chain.

## Customer Support

We pride ourselves on our levels of customer support, knowing our customers and their needs very well.

All our standard COTS products have a two-year warranty. We also offer a range of extended warranty packages which enable additional levels of service and support, both on-site and remote.

For further information, datasheets or to schedule a demo of any of our cameras, please refer to our website, or reach out to us directly.



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# Leaders in digital camera solutions

## OEM CAMERA SOLUTIONS



# OEM 2023

## Examples of OEM projects

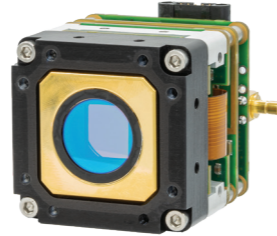
Raptor is working with many major Primes, Integrators, OEMs and instrumentation companies across the world in space, scientific, surveillance and industrial applications, who need custom designs to meet their exact imaging and detection requirements. We work collaboratively to understand their camera needs and develop robust solutions through a detailed project management system. Since our inception in 2008 we have been designing and developing core camera platforms which can then be customised / tailored to address specific requirements. Our quality, reliability, flexibility, and fast delivery make us a very attractive solution for OEMs.

### Vis-SWIR

0.6 $\mu$ m - 1.7 $\mu$ m

Raptor is the market leader in high-end SWIR and Vis-SWIR. We offer a range of OEM formats, perfect for EO integration where space is at a premium.

- Range of resolutions: 320 x 256, 640 x 512, 1280 x 1024 pixels
- Range of pixel pitches: 30 $\mu$ m, 15 $\mu$ m and 10 $\mu$ m
- SWIR and Vis-SWIR options, with low noise options (18e- typical)
- Cooling options including: TECless, Stabilized and Deep Cooled
- Extended operational temperature from -40°C to +75°C
- Firmware features including 3-point NUC, ALPD functionality, image flip, crosshair, edge & contrast enhancement
- Modified COTS with space heritage



### OEM Hyperspectral Engine

0.6 $\mu$ m - 1.7 $\mu$ m

With high measurement rates, exceptional spectral and spatial resolution, and a flexibly adjustable field of view, the HIS 320 enables real-time in-line monitoring – even on fast moving objects. It is the perfect system for OEMs, with easy integration into in-house software. IT offers excellent optical imaging performance and no moving mechanical parts.

- Highly adaptable transmissive spectrograph
- Low f/# optical design for exceptional throughput, SNR, and superior imaging
- 600-1700 nm wavelength range
- Superior low light sensitivity
- 349fps @ 320 x 256 pixels (max. sensor resolution)
- CameraLink or GigE Vision interface
- SWaP optimised – rugged and compact design to (IP65) to operate in harsh environments
- Software agnostic – SDK provided to integrate with OEM's own software



### CMOS

0.3 $\mu$ m - 1.1 $\mu$ m

Raptor offers a range of next generation digital CMOS mono cores, enabling ultimate sensitivity similar to Image Intensifier (II) or EMCCD, for passive digital night vision. These global shutter cameras are ultra-compact, rugged and low power making them ideal for a range of Electro Optic systems.

- Range of resolutions: 816 x 264, 1920 x 1080, 4096 x 3008 pixels
- Monochrome and RGB options available
- Range of pixel pitches: 9 $\mu$ m, 4.5 $\mu$ m and 2.74 $\mu$ m
- Range of interfaces including Camera Link, HD-SDI, etc
- Other custom options available including sensors, mechanics, electronics and optics
- Modified COTS with space heritage



### Intensified CCD

0.2 $\mu$ m – 0.85 $\mu$ m

Raptor designs and builds custom Intensified CCD cameras including:

- Gen II intensifier tubes
- 1024 x 1024 resolution
- 13 $\mu$ m pixels
- Nanosecond gating
- Custom interface
- 50% of the size and weight of competitors



### Spectroscopy CCD

0.2 $\mu$ m – 1.1 $\mu$ m

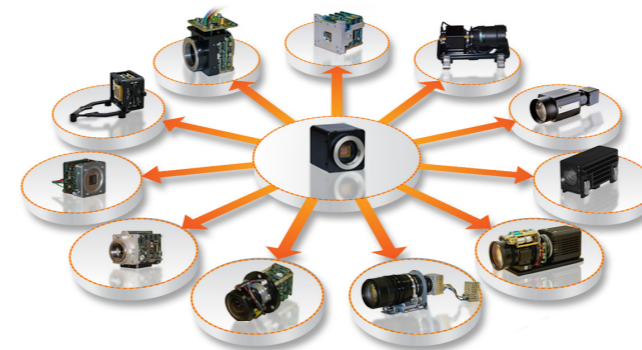
Raptor offers a range of CCD based cooled detectors to meet OEM requirements across a range of spectroscopy applications.

- FI/BI (DD) and OE options
- TE cooling to -40°C / -70°C
- Range of resolutions and pixel sizes: 1024 x 256, 2048 x 264, 2048 x 512
- Choice of interfaces



## Electronic Design, Mechanical layout and Cooling

Raptor offers lots of design layout options to ensure the fit and performance of the camera meets the product requirements. Our R&D Engineers have a wealth of experience in firmware and application development, as well as mechanical layouts. Our proprietary low noise electronics ensure the highest quality images. Raptor offers a host of cooling and stabilising options using heat sinks, TECs, fans, liquid cooling and controlled chambers. We offer everything from uncooled board level solutions right through to vacuum cooled to -100°C.



## Interface

Most of Raptor's off the shelf products use Camera Link to communicate with the processor. However, we appreciate that OEMs need a range of options so we can also deliver in HD-SDI, GigE, USB2/3 as well as custom digital output options, including Raptor's direct bus, enabling direct data from our camera to your system.

Raptor provides either COTS or fully customized camera solutions

