

# SWIFT 640

The SWIFT 640 is SCD's compact video module designed for low SWaP-C within the SWIR detector family. It is built on a 10 $\mu$ m VGA, a highly sensitive InGaAs detector, paired with a digital ROIC, all enclosed in a ceramic package with TEC. This module is also equipped with a proximity electronics board. The SWIFT 640 boasts specialized features that facilitate its integration into EO/IR systems for diverse applications, including high-quality long-range daylight SWIR imaging and low light level (LLL) imaging.

## Main Features

- Standard daylight imaging with dual gain levels.
- Enhanced performance in low light levels.
- Supports active imaging techniques.
- Features a low-power Base Camera Link interface for efficient data transfer.



## Applications

- High quality long range daylight SWIR imaging
- Low light level imaging
- Active imaging
- Airborne EVS
- Airborne and ground payloads
- Driving Vision Enhancement (DVE)
- Non-Destructive Testing
- Covert surveillance with 24/7 day operation

Format & pitch	640x512, 10µm
Spectral range	0.6-1.7 (VIS-SWIR)
Quantum efficiency	> 80% at 1550nm
Dark current	~ 1fA @ 280K
NEP	< 0.5fW @ High Gain, 27msec integration time
Modes of operation (typical well field and electronic noise)	High gain - 10Ke, 40e with CDS Medium gain - 500Ke, 170e (ALPD) Low gain - 1Me, 350e
Frame rate	25, 50 F/s
Power dissipation	< 1.7W @ 50Hz, 25c environment temperature (without TEC)
Cooling capability	TEC
Video output	Camera link
Size	34x33x34 mm
Weight	~ 100 gr

