OUTCOME DRIVEN INNOVATION

# Low Cost Thermal Scope Modules for OEMs

Description

ODI has created the next generation of low cost thermal and fusion modules for deployments into scopes and binoculars. The image quality is algorithmically corrected for non-uniformities and thermal drift (NUC). Each pixel is corrected every 2 milli-seconds resulting is a completely shutter-less system with no noise and virtually no image degradation over 4 hours of continuous use.

ODI has been in the imaging business for over 28 years and has applied that experience to thermal and fusion image processing, allowing a smaller pixel array to easily outperform much larger pixel count devices, with sharper and clearer images.

ODI has also spent several years in development of single chip solutions that incorporate most of the typical functions of a scope or binoculars into on-chip, thus reducing cost, size and improving battery life. The end result is a module that is half the cost of other typical designs with much better image quality and no noisy and image interrupting shutters.

The module offerings:

ODI is offering customized modules that can be fitted into any scope of binocular enclosures. The process involves the customer selecting the features needed and creating their own 3D mechanical design, or ODI can take input from the customer and create the ID and 3D design. ODI then adjusts the PCBA and internal module parts to fit. ODI also interfaces with the customer to create the User Interface and writes/adjusts the firmware to include the features selected. There is a customization fee and ODI provides the modules at a fixed price to the customer. Modules are pre-scanned for FCC and CE. If required, ODI can handle the final certs as well.
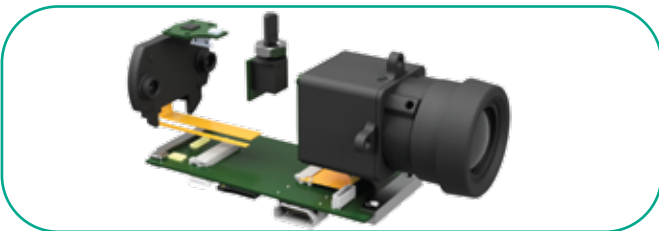
WHO WE ARE
Transforming ideas into products. Since 1993, ODI has done just that for client companies.
From initial sketch, to prototype, to final shipping product, our team is your virtual product development team.

- **Available Imager Resolutions**: 80x80, 160x120, QVGA, VGA
- **Available Displays**: 320x320 AMOLED, 1024x768 Micro-OLED
- Diopter designs and full turnkey of the diopter available upon request.
- **Frame Rates**: 30Hz or 50Hz.
- Architecture –one processor, System on a chip (SOC).
- Size and shape can be adjusted based on application and scope physical design.
- **Lensing**: standard lenses (HFOV): 15 standard lenses are available, but HFOV varies by imager, but generally between 3 and 120 degrees, with 2-3 degrees steps, are available. Most scopes use 8 through 16 degrees. Please inquire for specific HFOV for sensor selected.

Standard on all modules:
- State of the art NUC, Shutter-less NUC algorithm
- Dead pixel masking
- Multipoint calibration
- AGC
- False Color based on temperature
- Standard color Mappings
- Lens systems in range of FOV's from 8 to 60 degrees
- Field firmware update capable
- Digitial zoom (# of steps depend on native resolution of the sensor)
- Display, AMOLED or Micro-OLED based on requirements
- On board Image interpolation
- SD card, MPEG4, 720P HD out
- USB streaming
- Ultra low power tilt power saving mode
- FCC/CE compliant
- 30fps

Customer selectable options:
- Weapon profiles/ retain user settings (Std on Riflescopes)
- Centering of reticle- Freeze mode (Std on riflescopes)
- Added reticles (some std with riflescopes)
- Auto video record by recoil – 5 second pre-event + 10 second post
- Custom Color mapping –by greyscale/temperature – eg. animal hot mode
- Field FW update capable
- BT Ballistics input and reticle adjustment
- Cross platform Apps
- Built in mini Laser range finder with integration
- Feature recognition
- WiFi, point to point
- HDMI out
- Dual Image Fusion with near IR
- Ethernet
- 50fps

What can we make for you?