

HyperScan Configuration & Selection Options.

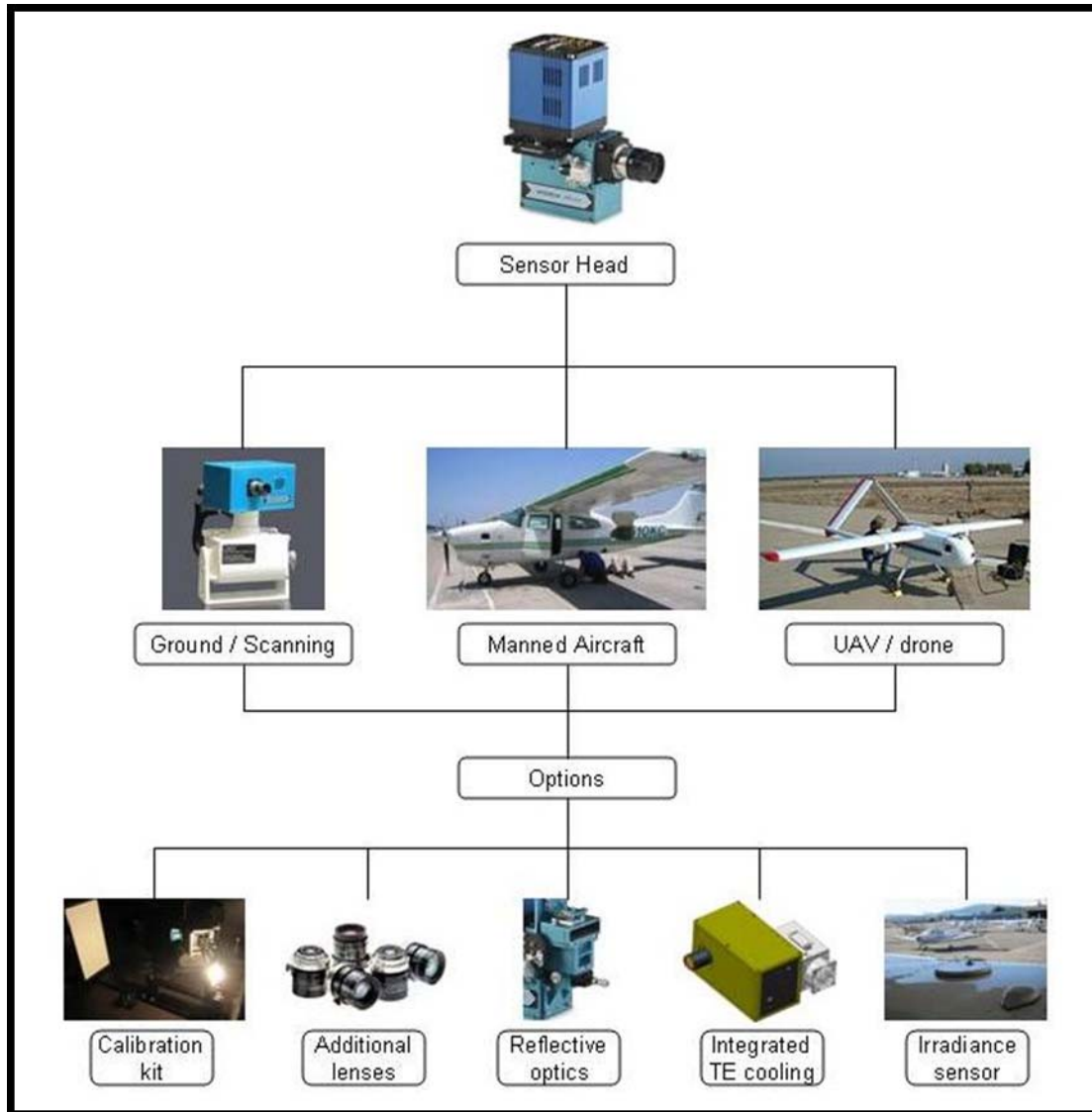


Table 1. Basic Sensor Head Specifications.

HyperScan_VNIR: BASIC SENSOR in compact enclosure
Excellent NESR performance system
Offner type design Micro spectrometer
16 bits sensor
400 spectral channels
400 to 1000 nm nominal
Dispersion 1.5 nm /pixel
90% peak grating efficiency
Optics: C-mount, interchangeable
Slit: interchangeable (10 to 25 μm)
Exposure time: 10 μs to 100 ms
HyperVision software for data capture with waterfall display
Rugged field-portable computer for data capture & control, bright screen
Full specifications at www.OptoKnowledge.com
Data captured in ENVI format with header
Custom ENVI tools for sensor calibration and data processing (requires purchase of ENVI)
High SNR system as above but 12 bits, very high dynamic range

Table 2. Ground /Lab based Configuration.

Ground based typical configuration (other variations available)
Ground based pan/tilt high-resolution stage synchronized with sensor
Hi-precision stage
HyperVision stage control (pan/tilt)
Interchangeable lenses (8 mm, 12, 17, 23, 35, 70 mm)
TE cooler for very hot environments
Heating provisions for cold environment
Expanded Hard Drive
Context bore-sighted video camera + DVR

Table 3. Manned Airborne Configuration.

Manned aircraft typical configuration (other variations available)
Aerial carrier fits into standard Leica mount
Aircraft power inverter
Uninterrupted power supply (UPS)
Down-welling Irradiance sensor
Cooling and/or heating provisions (high altitude open cabin flying)
Expanded Hard Drive
Context video camera + DVR
IMU/GPS
Precision GPS timing card
Time stamped Hyperspectral + GPS/IMU + Irradiance Sensor



Table 4. Unmanned Airborne Configuration.

Unmanned aircraft typical configuration (other variations available)
Custom retrofit of all components into UAV space/volume
Custom power distribution system for UAV
Custom miniaturized computer for UAV
Transceivers for ground and UAV for remote control
Ground Station for sensor control
Down-welling irradiance sensor
Expanded Hard Drive
Context video camera + DVR
IMU/GPS

Table 5. Other Options.

Equipment and other tools for hyperspectral imaging applications
Calibration kit for spectral & radiometric calibration with
Diffused reflectance standard
NIST calibrated QTH source stable power supply
Hg, Ar, Xe, etc. spectral lamps
Additional interchangeable lenses
ENVI/IDL software for Hyperspectral analysis
All reflective optics (TMA design) for any of the above
Training (sensor operations, installation, data processing, ENVI use, etc.)

