

SCANNER OPTION FOR AISA SYSTEMS

SPECIM provides a Spectral Scanner option for AISA Hyperspectral Systems. Spectral Scanner option employs a mirror scanner in front of the AISA sensor head to acquire spectral line images sequentially over a fixed target by scanning the field of view of the imaging spectrograph. The system provides then full spectral and spatial information for each pixel of the target.

The option makes an AISA sensor that is stationary placed for instance on top of a tripod, suitable for remote sensing in field. The system can measure hyperspectral images over two-dimensional targets, for example

- leafage
- opencast mine walls,

and save the image in data cubes with horizontal, vertical and spectral data dimensions.



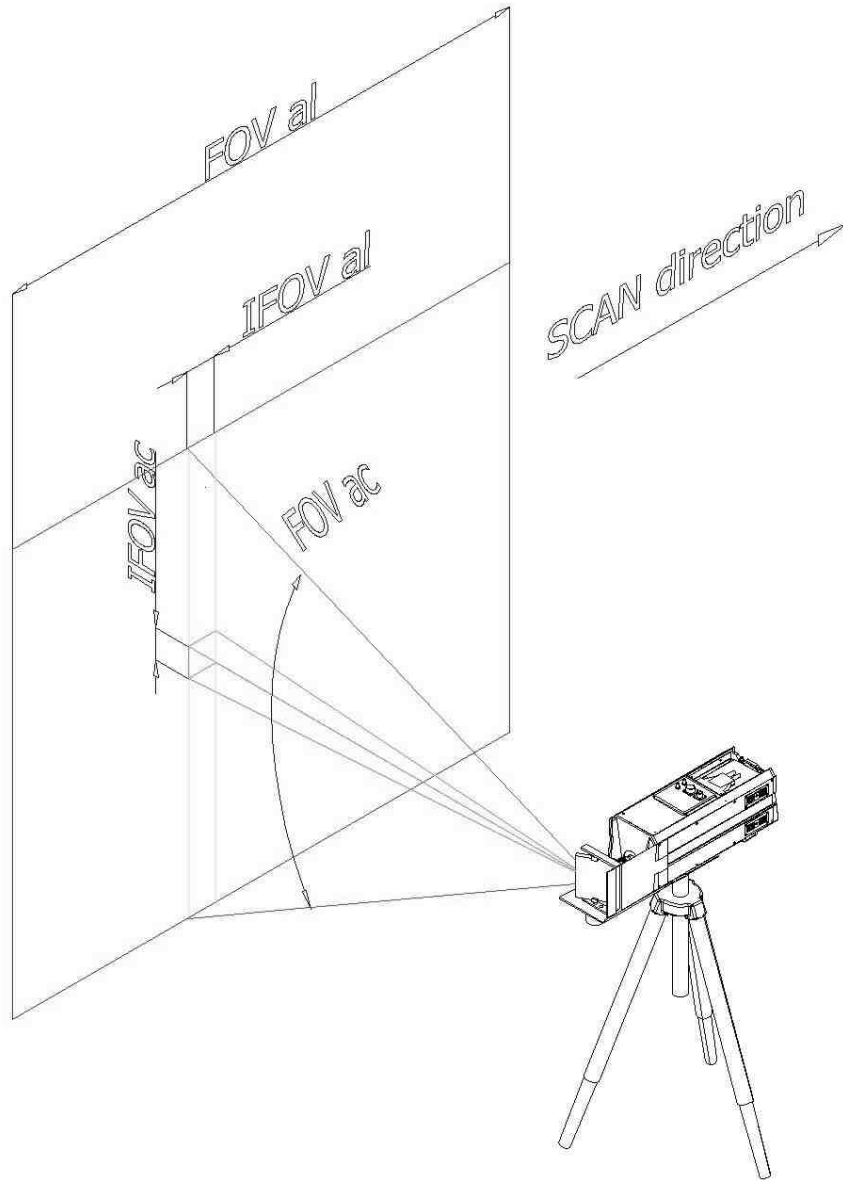
SPECIM's backyard scanned in early spring by a VNIR AISA system equipped with a mirror scanner. The image is a three-band composite visualization of a data cube of 360 (hor) x 360 (ver) x 30 (spectral) pixels.

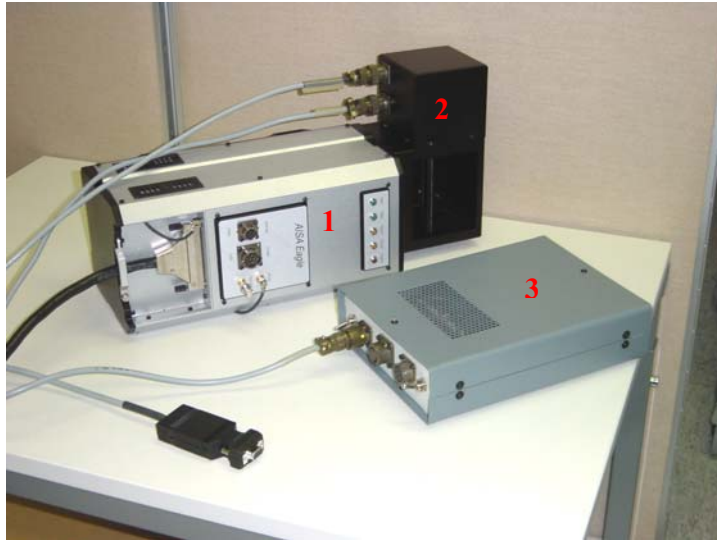
Specifications (with AISA+)

Standard fore optics:	17 mm
Field Of View across scan: (FOV ac)	39.7 degrees
Instantaneous FOV across scan: (IFOV ac)	0.078 degrees
FOV along scan: (FOV al)	Same as FOV across scan or smaller
Instantaneous FOV along scan: (IFOV al)	Same as IFOV across scan
Scan rate:	15-75 spectral line images/sec (settable)
Motor:	Stepper motor with integrated driver
Mirror:	Surface reflector mounted with two bearings
Scanner control:	Scanning rate and FOV along scan are settable through the AISA user interface.
Image data cube (typical):	512 (ver.) x 512 (hor.) x 244 (spectral) pixels

Layout

The sensor head can be mounted to scan the target horizontally (picture below) or vertically.





AISA sensor head (1) with the mirror scanner option (2).
Scanner system is powered from the standard AISA
power supply (3).