

## AisaFENIX hyperspectral sensor



FOR THE MOST DEMANDING  
GEOLOGICAL, LAW ENFORCEMENT AND  
ENVIRONMENTAL APPLICATIONS

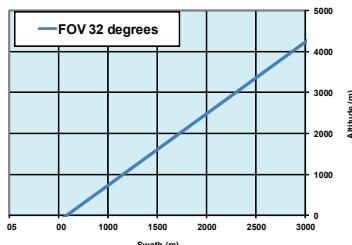
# AisaFENIX hyperspectral sensor

|                                      | VNIR   | SWIR                |        |        |
|--------------------------------------|--|---------------------|--------|--------|
| <b>Camera specifications</b>         |  |                     |        |        |
| Spectrograph                         | High efficiency transmissive imaging spectrograph  |                     |        |        |
| Spectral range                       | 380 - 970 nm                                       | 970 - 2 500 nm      |        |        |
| Spectral resolution                  | 3.5 nm   | 12 nm               |        |        |
| F/#                                  | F/2.4  |                     |        |        |
| Smile / Keystone                     | < 0.2 pixels                                       |                     |        |        |
| Polarization sensitivity             | Throughput practically independent of polarization |                     |        |        |
| Signal-to-noise ratio (peak)         | 600 - 1 000:1 *                                    | 1 050:1             |        |        |
| Spatial resolution                   | 384 pixels   |                     |        |        |
| Frame rate                           | Up to 100 Hz                                       |                     |        |        |
| Integration time                     | Adjustable within frame period                     |                     |        |        |
| FOV                                  | 32.3°  |                     |        |        |
| IFOV                                 | 0.084°   |                     |        |        |
| Swath width                          | 0.58 x altitude                                    |                     |        |        |
| Altitude for 1m pixel size           | 660 m  |                     |        |        |
| Electro mechanical shutter           | Yes  |                     |        |        |
| Detector                             | CMOS   | Stirling cooled MCT |        |        |
| Spectral binning options             | 2x   | 4x                  | 8x     | -      |
| Number of spectral bands             | 348  | 174                 | 87     | 274    |
| Spectral sampling / band             | 1.7 nm   | 3.4 nm              | 6.8 nm | 5.7 nm |
| Data interface                       | CameraLink 12-bit                                  | CameraLink 16-bit   |        |        |
| Typical power consumption **         | 150 W  |                     |        |        |
| Maximum power consumption **         | 500 W  |                     |        |        |
| <b>Environmental characteristics</b> |  |                     |        |        |
| Storage temperature                  | - 20 ... +50 °C                                    |                     |        |        |
| Operating temperature                | + 5 ... +40 °C, non-condensing                     |                     |        |        |

\* ) Depends on spectral binning

\*\*) Complete system with DPU

Swath width vs altitude from the ground



Ground pixel vs. altitude from the ground

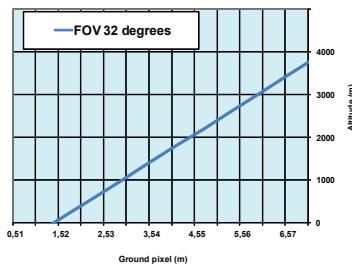


Image rate for square ground pixel  
@ aircraft speed 60 m/s (120 knots)

