Technical Specifications

Image Product Specification

Image format	Comparable to an aerial film image at a format of 23 cm x 15 cm
Image data formats	JPEG; TIFF with options for 8 and 16 bits, scan-line, stripped or tiled
Image format (Level 2)	Full resolution panchromatic, separate color channels at color resolution
Image format (Level 3)	Full resolution (fused) R, G, B, Near-IR channels, planar or pixel-interleaved

Digital Camera Sensor Unit (SU)

Panchromatic image size	11500 * 7500 pixels
Panchromatic physical pixel (detector) size	9 µm
Physical format of the focal plane	103.5 mm * 67.5 mm
Panchromatic lens focal distance	~ 100 mm
Max. lens aperture	f = 1/5.6
Angle-of-view from vertical, cross-track (along-track)	55° (37°)
Color (multi-spectral capability)	4 channels -- RGB & NIR
Color image size (Level 2)	3680 * 2400 pixels (co-registered with panchromatic level-2)
Color physical pixel (detector) size	9 µm
Color lens focal distance	28 mm
Max. color lens aperture	f = 1/4.0
Color field of view from vertical, cross-track (along-track)	55° (37°)
Shutter speed options	1/500 to 1/30 second
Forward-motion compensation (FMC)	TDI-controlled
Maximum FMC-capability	50 pixels
Smallest ground sampling distance at flying height of 300 m (1000 feet)	~ 3 cm (1.1 inch)
Frame rate per second (minimum inter-image interval)	> 1 frame per second
Analog-to-digital conversion at	14 bits
Radiometric resolution in each color channel	> 12 bit
Physical dimensions of the camera unit	45cm x 45cm x 60 cm
Weight	~ 45 kg
Power consumption at full performance	150 W

Storage and Computing Unit (SCU)

In-flight storage capacity	1.5 TB (including mirrored data)
Capacity to collect in-flight uncompressed frames	2692
Storage and computing configuration	Parallel arrangement with multiple CPUs and disks
Data redundancy	Dual disk sets on-board containing mirror images
Data transfer into office environment	Removable, dual use as office post-processor
Physical dimensions	40cm x 55cm x 65 cm
Weight	~ 65 kg
Power consumption at full performance	700 W

Operational Specification

Max. image collection period: 70% forward overlap, 20 cm GSD (film scale 1:10,000)	~ 5 hours
Data download from aircraft (for 2692 images)	< 55 minutes (using Mobile Storage Unit)
Data transfer to office	By Mobile Storage Unit (MSU), external disk, or physical transfer of SCU
Post-processing system	Using the SCU or in office network environment
Mounting of the camera	Using adapter ring for current film camera mount, or manual mount
Flight planning support	Compatible with IGI's CCNS, TrackAir and similar systems
Exposure triggering	Manually, automatically, or from external flight management system
Exterior orientation support	Compatible with IGI's Aero-Control, Applanix POS and similar systems
Photogrammetric Production	Compatible with major photogrammetry software suppliers
Image geometric accuracy	< ± 2 µm RMS