

UltraCam-Lp

Preliminary Technical Specifications V5

Image Product Specification

Image format	Analogous to an aerial film image at a format of 23 cm x 16 cm, scanned at 20 µm
Image data formats	JPEG; TIFF with options for 8 and 16 bits, standard tiff format
Color at level 3	Full resolution R, G, B, Near-IR channels, planar or pixel-interleaved

Digital Camera Technical Data (Sensor Unit S-X)

Panchromatic image size	11704 * 7920 pixels
Panchromatic physical pixel size	6 µm
Physical format of the focal plane	67.9 mm * 47.5 mm
Panchromatic lens focal distance	70 mm
Lens aperture	f= 1/5.6
Angle-of-view from vertical, cross track (along track)	52° (37°)
Color (multi-spectral capability)	True color & NIR
Color image size	5320 * 3600 pixels
Color physical pixel size	6 µm
Color lens system focal distance	33 mm
Color lens aperture	f = 1/4.0
Color field of view from vertical, cross track (along track)	52° (37°)
Shutter speed options	1/500 to 1/32
Forward-motion compensation (FMC)	TDI controlled
Maximum FMC-capability	50 pixels
Pixel size on the ground (GSD) at flying height of 900 m (at 500m)	8 cm (4.3 cm)
Frame rate per second (minimum inter-image interval)	1 frame per 2.5 seconds
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 80 cm
Weight	~ 55 kg
Power consumption at full performance	~350 W

In Flight Data Storage SSD cartridges	Unlimited with use of multiple data units; per SSD unit 1 TB
In-flight storage capacity SSD cartridges	Unlimited with multiple SSD units; per SSD unit ~ 2500 images
In-flight capacity to collect uncompressed frames	In less than 3 minutes
Method of exchanging SSD units in-flight	Tablet PC and 4 SSD Memories
Configuration of Storage SSD and Computer	Removable SSD units; docking station (optionally mobile)
Data transfer into office environment	

Operational Specification

Data collection period at 70% & 20 % overlap, at 20 cm GSD, 140knts	~6 hours per single SSD unit
Post-processing of collected raw images	UltraMap Platform, UMP/AT, Office PC Network, Laptop
Data transfer from aircraft to office	Shipping of SSD Unit, or transfer to high capacity storage medium via Mobile Server
Mounting of the camera	Using adapter ring for all current film camera mounts (PAV-30, Z/I T-AS, GSM3000)
Flight planning support	Compatible with commercial systems (CCNS-4, Trackair, Vega,)
Exterior orientation support	Compatible with DGPS/IMU systems (IGI's Aero-Control, Applanix POS-AV)
Photogrammetric Production	TIFF-output compatible with Customer's photogrammetric production software
Image geometric accuracy	Approximately ±2 µm

