

PCIM SPECIM AFX17



FEATURES

- All in one HSI solution for UAVs
- Spectral range NIR from 900 to 1700 nm
- Supports gimballed or gimballess mounting
- Multiple spectral ROI enables both hyperspectral and application-specific multispectral configurations
- Fore lens aberrations are fully characterized
- Significantly less smile and keystone
- Ability to collect more light
- Full real-time and post-mission position and orientation solution for direct georeferencing

GNSS/IMU PERFORMANCE

- Specim AFX17 system acquires GNSS/IMU data in real-time
- Position @ 10 Hz
- Attitude @ 50 Hz
- PPS synced time stamps @ 1 Hz
- Higher accuracy post-processed data with **POSPAC UAV**

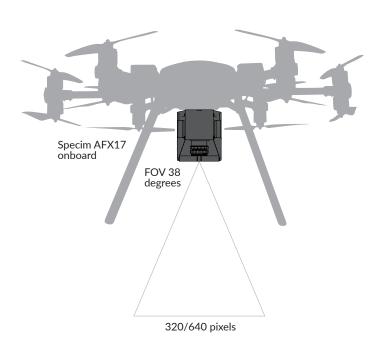
	SPS	Post-Processed
Position (m)	1.5 - 3.0	0.02 - 0.05
Velocity (m/s)	0.05	0.015
Roll & Pitch (deg)	0.04	0.025
True Heading (deg)	0.30	0.080

CaliGeo PRO can use both real-time and post-processed data.

COMPACT ALL-IN-ONE SOLUTION

Specim AFX17 is a NIR hyperspectral imaging solution with an HSI camera, a small and powerful computer and a high-end GNSS/IMU unit in one compact enclosure. It is a state-of-the-art solution weighing only 2.4 kg that can be used on multiple drone types - multirotor or fixed-wing, with or without a gimbal. Data is acquired automatically following the waypoints on a flight plan, making the Specim AFX17 easy to operate.

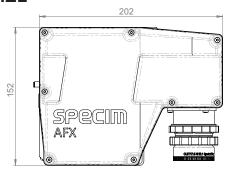
IMAGE COVERAGE AND RESOLUTION

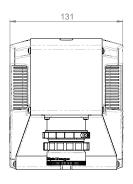


Ground coverage and sampling distance (resolution) scale with altitude

Height	Swath	GSD (when spatial binning is 1)	GSD (when spatial binning is 2)
50 m	35 m	5.5 cm	11 cm
100 m	70 m	11 cm	22 cm
150 m	105 m	16.5 cm	33 cm

SIZE







TECHNICAL SPECIFICATIONS

Spectral Range 900-1700 nm Image: Common to the standard of the stand			
Spectral resolution 8.0 nm Image: Comment of Comment	Spectral Range	900 – 1700 nm	
Fore lens focal length 18 mm Incident of view 38 deg Incident of view 38 deg Incident of view 38 deg Incident of view Incident of view 38 deg Incident of view	Spectral sampling	3.5 nm	
Field of view 38 deg Incompany F/a 1.7 Incompany Spectral bands 224 Binned by 2 Spatial pixels 640 Incompany Spectral binning options 1, 2, 4, 8 Incompany Multiple ROI User-selectable Incompany Frame rate Max, 150 fps Recommended 100 fps Full frame SNR 1200-1 Binned by 1 spectrally, 1 spatially Power input 10-30 VDC Use the supplied battery or drone/gimbal power Power consumption 24 W Typical Connectors ANT, DCIN, ETH GPS Antenna, Power In, Web UI / Data download Storage temperature -20 +50C Power input Belative hunidity 5 - 90% Non-condensing Brone options Multirotor with gimbal	Spectral resolution	8.0 nm	
F/# 1.7 Image: Comment of March 19 (2) Binned by 2 Spectral bands 224 Binned by 2 Spettal binning options 1, 2, 4, 8 Image: Commend of March 19 (2) Spatial pinning options 1, 2 Image: Commend of March 19 (2) Multiple ROI User-selectable Image: Commend of March 19 (2) Frame rate Max. 150 (ps Recommended 100 (ps Recomme	Fore lens focal length	18 mm	
Spectral bands 224 Binned by 2 Spatial pixels 640 ————————————————————————————————————	Field of view	38 deg	
Spatial pixels 640 Image: Company of the company of t	F/#	1.7	
Spectral binning options 1, 2, 4, 8 Image: Comment of the properties of the prope	Spectral bands	224	Binned by 2
Spatial binning options 1, 2 Image: Commended or Com	Spatial pixels	640	
Multiple ROI User-selectable Max. 150 fps Recommended 100 fps Full frame Dynamic range 3400 Elimend by 1 spectrally, 1 spatially SNR 1200:1 Binned by 1 spectrally, 1 spatially Power input 10-30 VDC Use the supplied battery or drone/gimbal power Power consumption 24 W Typical Connectors ANT, DC IN, ETH GPS Antenna, Power In, Web UI / Data download Storage temperature 45 +40C Image: Power of the control of	Spectral binning options	1, 2, 4, 8	
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Storage temperature -20 +50C Operating temperature +5 +40C Relative humidity 5 - 90 % Non-condensing Multirotor with gimbal Multirotor, no gimbal Fixed Wing UAV Gimbal Optimized for MoVI pro Other suitable gimbals may also be used Gimbal weight 2.2 - 2.7 kg Typical gimbal solution Operating height 50 - 150 m Typical, local limitations apply GNSS/IMU Trimble APX-15 GPS Antenna Trimble AV 14 Internal Memory 512GB SSD Dimensions (W x H x L) 131 x 152 x 202 mm Weight (without gimbal) 2.4 kg	Power consumption	24 W	Typical
Operating temperature +5 +40C Non-condensing Relative humidity 5 - 90 % Non-condensing Drone options Multirotor with gimbal Multirotor, no gimbal Fixed Wing UAV Any drone with adequate payload capacity can be used Gimbal Optimized for MoVI pro Other suitable gimbals may also be used Gimbal weight 2.2 - 2.7 kg Typical gimbal solution Operating height 50 - 150 m Typical, local limitations apply GNSS/IMU Trimble APX-15 Internal Memory GPS Antenna Trimble AV 14 Internal Memory 512GB SSD Dimensions (W x H x L) 131 x 152 x 202 mm Internal Memory Weight (without gimbal) 2.4 kg	Connectors	ANT, DC IN, ETH	GPS Antenna, Power In, Web UI / Data download
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Gimbal weight2.2 - 2.7 kgTypical gimbal solutionOperating height50 - 150 mTypical, local limitations applyGNSS/IMUTrimble APX-15Trimble APX-15GPS AntennaTrimble AV 14Trimble AV 14Internal Memory512GB SSDTrimble AV 14Dimensions (W x H x L)131 x 152 x 202 mmTrimble AV 14Weight (without gimbal)2.4 kgTrimble AV 14	Drone options	Multirotor, no gimbal	Any drone with adequate payload capacity can be used
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GPS Antenna Trimble AV 14 Internal Memory 512GB SSD Dimensions (W x H x L) 131 x 152 x 202 mm Weight (without gimbal) 2.4 kg	Operating height	50 – 150 m	Typical, local limitations apply
Internal Memory 512GB SSD Dimensions (W x H x L) 131 x 152 x 202 mm Weight (without gimbal) 2.4 kg	GNSS/IMU	Trimble APX-15	
Dimensions (W x H x L) 131 x 152 x 202 mm Weight (without gimbal) 2.4 kg	GPS Antenna	Trimble AV 14	
Weight (without gimbal) 2.4 kg	Internal Memory	512GB SSD	
	Dimensions (W x H x L)	131 x 152 x 202 mm	
Weight (with gimbal) 5.1 kg Typical gimbal solution	Weight (without gimbal)	2.4 kg	
17 proc. 5 miles - 17 proc. 5 mi	Weight (with gimbal)	5.1 kg	Typical gimbal solution

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