

Simple setup, higher reliability of data acquisition and large storage capacity

iX Controller MK6



Reliability. Easy set up.

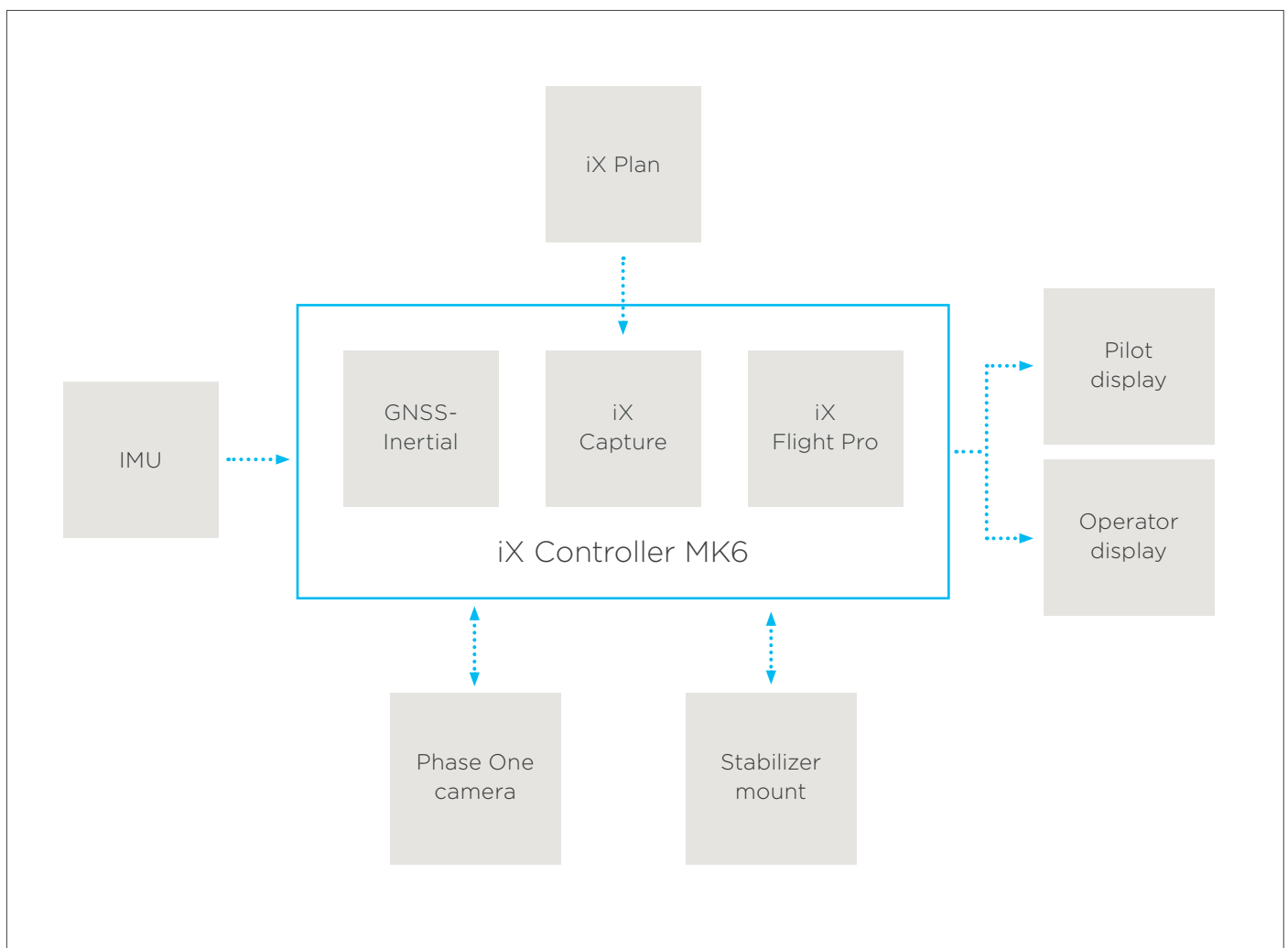
The iX Controller MK6 is specifically designed to address the challenges of imaging data acquisition, helping you improve productivity and save you time and money. iX Controller MK6 supports a range of different IMUs providing a large range of orientation accuracies.

iX Controller MK6 is streamlined for simplicity.

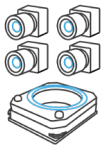
The controller provides maximum simplicity in terms of setup. With the fully integrated AP+ board from Applanix it provides a plug and play solution to simply connect our Phase One Aerial Systems, reducing significantly installation time, with no need of manual synchronization.

The 10 G Ethernet connection, the unlimited cable length and the active cooling ensure acquisition of reliable data and reduce risk of data loss.

Configurations



Features



Controls up to 4 cameras and gyro-stabilizing mount



Easy integration with any aircraft



Rapid data transfer



Compact, low-power, lightweight and rugged construction



High capacity storage with robust removable dual protective SSD trays



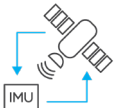
Meets airborne environmental operational requirements



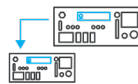
Internal integration of GNSS-Inertial unit enabling a simple setup of aerial solutions



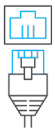
Pre-installed software: Phase One Capture and iX Flight Pro



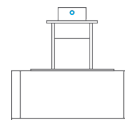
Connects directly with the Applanix IMU series with multiple upgrade options to higher accuracy models



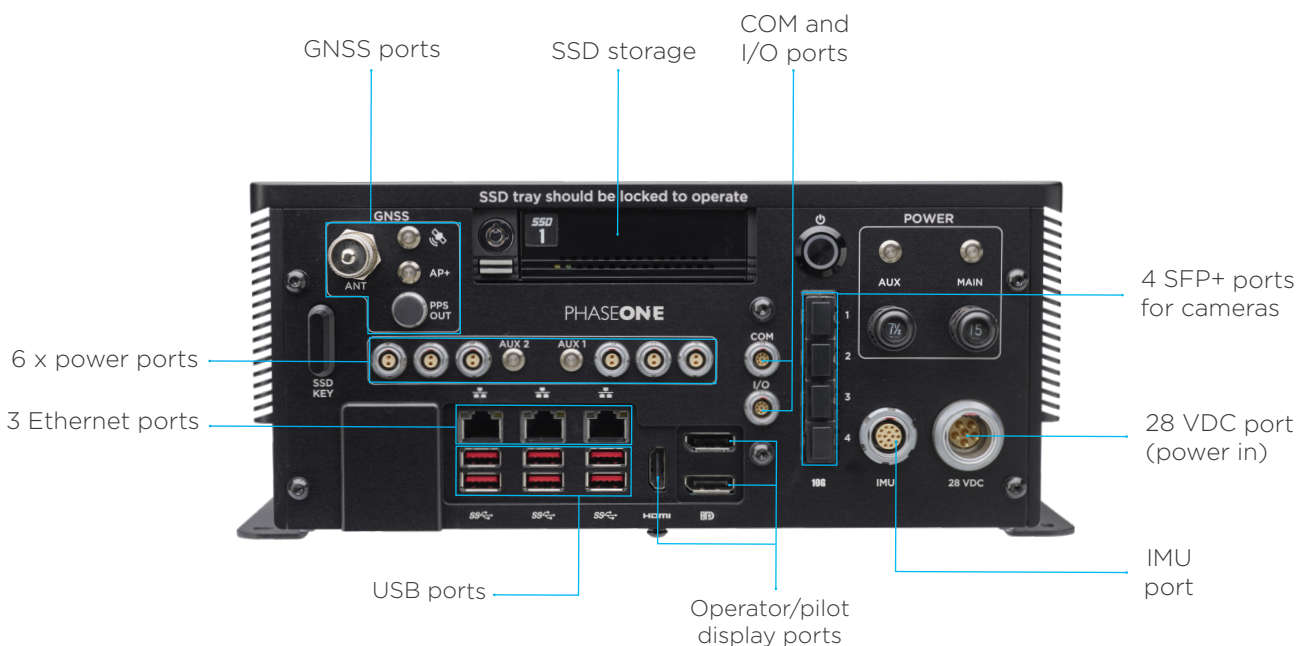
Backward compatibility with previous iX Controller setups



10 G Ethernet connection for higher data rate and unlimited cable length between camera and controller



The iX Controller MK6 is an integral part of Phase One Aerial Systems PAS 280 and PAS 150



SPECIFICATIONS

CPU	Intel® Xeon® E-2278GE / 3.3 GHz processor			
Operating system	Windows 10 64 bit			
Memory	64 GB RAM			
Cooling	Active, with fans			
Build	Rugged metal construction with external cooling fins			
Software pre-installed	iX Capture (iX Flight Pro only for Aerial Systems)			
GNSS receiver	Trimble Applanix AP+			
Data storage	Dual 2 TB and 4 TB 2.5" SSD drives with ultrafast write capability (up to 500 MB/sec) - Expandable			
USB 3.0	4 ports for camera communication 2 ports for peripheral			
Ethernet	3 RJ45 ports			
Display	2 DP, 1 HDMI			
Power terminals	4 ports for camera power supply 2 ports for peripherals			
Power connection	Secured connectors			
Fuse (A)	1 x 15 and 1 x 7.5 circuit breakers			
Power input (V DC)	24 - 30			
Maximum power consumption (W)	Single Camera - 140 Multiple Cameras (up to 4) - 180			
Dimensions (mm) (W x H x D)	310 x 130 x 230			
Weight (kg)	5.4			
Approvals	FCC (Class A), CE, RoHS			

OPERATING
CONDITIONS

Temperature (C°/F°)	-10 to 40/ 14 to 104			
Humidity (%)	5 to 95 (non-condensing)			

IMAGE STORAGE
CAPACITY

Camera	4 TB		8 TB	
	IIQ-L	IIQ-S	IIQ-L	IIQ-S
280 MP	14000	21000	28000	42000
150 MP	26500	39750	53250	79875
100 MP	40000	60000	80000	120000
50 MP	76500	114750	153000	229500

GNSS-Inertial Features

- High-performance, survey-grade multi-frequency integrated GNSS-Inertial receiver.
- Lower field costs: When direct geo-referencing is used, the number of ground control points established by the survey crew is significantly reduced and as a result, field costs decrease.
- Faster completion: For many photo projects, the aerotriangulation (AT) step is eliminated, reducing processing time significantly which is a major factor in rapid response applications.
- Seamless workflows: Data workflow and quality control is streamlined and automated, which allows tight project deadlines to be met with a smaller ground survey and in less time.
- POSPac MMS post-processing software bundle includes Carrier Phase DGPS processing, Integrated GNSS-Inertial processing, and optional photogrammetry tool set for EO generation, IMU boresight calibration and quality control.

GNSS-Inertial Unit Summary

- Applanix IN-Fusion™ GNSS-Inertial integration technology.
- Supports external and internal IMU with solid-state MEMS inertial sensors and Applanix SmartCal™ compensation technology.
- Advanced Trimble Maxwell custom GNSS-Inertial survey technology with 2x336 tracking channels.
- Primary antenna:
 - GPS: L1 C/A, L2C, L2E, L5
 - GLONASS: L1 C/A, L2 C/A, L3 CDMA
 - Galileo: E1, E5A, E5B, E5AltBOC, E6
 - BeiDou: B1, B2, B3
 - IRNSS: L5
 - QZSS: L1 C/A, L1S, L1C, L2C, L5, LEX
 - SBAS: L1 C/A, L5
 - MSS L-Band: Trimble RTX
- High precision multiple correlator for GNSS-Inertial pseudorange measurements.
- Unfiltered, unsmoothed pseudorange measurements data with low noise, low multipath error, low time domain and high dynamic response.
- Very low noise GNSS-Inertial carrier phase measurements with < 1 mm precision in a 1 Hz bandwidth. Proven Trimble low elevation tracking technology.
- Real-Time GNSS-Inertial L1, SBAS positioning mode.
- Real-Time 100 Hz position, attitude output, dual IMU 200 Hz data rate logging.
- Navigation output format: ASCII (NMEA-0183), Binary (Trimble GSOF).
- RTK license support for Reference Inputs CMR, CMR+, sCMRx, RTCM 2.1, 2.2, 3.0, 3.1, 3.2 sold separately.

GNSS-Inertial Configurations

Below are the different GNSS-Inertial configurations. The choice of the configuration is based on the intended application and accuracy requirements. High-altitude flying for direct georeferencing applications will usually require the iX Controller MK6-AP610 configuration while low-altitude flying for aero triangulation applications will usually use the iX Controller MK6-AP310 configuration.

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iX Controller MK6 – AP180 (IMU - 69)

GNSS-Inertial Performance Specifications Absolute Accuracy Specifications¹ (RMS)

	SPS	SBAS ⁸	RTX ³	Post-Processed RTX ⁵	Post-Processed ⁴
Position (m)	1.5 H 3 V	0.50 H 0.85 V	0.04 H 0.08 V	0.03 H 0.06 V	0.02 H 0.05 V
Velocity (m/s)	0.050	0.050	0.050	0.015	0.015
Roll & Pitch (deg)	0.040	0.035	0.030	0.025	0.025
True Heading ² (deg)	0.150	0.130	0.100	0.080	0.080

iX Controller MK6 – AP310 (IMU - 93)

GNSS-Inertial Performance Specifications Absolute Accuracy Specifications¹ (RMS)

	SPS	SBAS ⁸	RTX ³	Post-Processed RTX ⁵	Post-Processed ⁴
Position (m)	1.5 H 3 V	0.50 H 0.85 V	0.01 H 0.08 V	0.03 H 0.06 V	0.02 H 0.05 V
Velocity (m/s)	0.050	0.050	0.020	0.010	0.010
Roll & Pitch (deg)	0.020	0.015	0.010	0.010	0.010
True Heading ² (deg)	0.100	0.080	0.050	0.025	0.025

iX Controller MK6 – AP510 (IMU - 95)

GNSS-Inertial Performance Specifications
Absolute Accuracy Specifications¹ (RMS)

	SPS	SBAS ⁸	RTX ³	Post-Processed RTX ⁵	Post-Processed ⁴
Position (m)	1.5 H 3 V	0.50 H 0.85 V	0.04 H 0.08 V	0.03 H 0.06 V	0.02 H 0.05 V
Velocity (m/s)	0.050	0.050	0.010	0.005	0.005
Roll & Pitch (deg)	0.120	0.008	0.005	0.005	0.005
True Heading ² (deg)	0.070	0.050	0.020	0.010	0.010

iX Controller MK6 – AP610 (IMU - 57)

GNSS-Inertial Performance Specifications
Absolute Accuracy Specifications¹ (RMS)

	SPS	SBAS ⁸	RTX ³	Post-Processed RTX ⁵	Post-Processed ⁴
Position (m)	1.5 H 3 V	0.50 H 0.85 V	0.04 H 0.08 V	0.03 H 0.06 V	0.02 H 0.05 V
Velocity (m/s)	0.030	0.030	0.030	0.005	0.005
Roll & Pitch (deg)	0.005	0.005	0.003	0.0025	0.0025
True Heading ² (deg)	0.030	0.025	0.010	0.005	0.005

¹ Typical performance. Actual results are dependent upon satellite configuration, atmospheric conditions and other environmental effects.

² Typical mission profile, max RMS error, (requires GAMS with 1 m baseline separation for low speed or stationary applications).

³ Real Time Trimble CenterPoint® RTX™ correction service, typical airborne results, subject to regional coverage.
Subscription sold separately, requires RTK license.

⁴ POSPacMMS Single Base station or SmartBase.

⁵ POSPac MMS, Post-processed Trimble CenterPoint® RTX™, typical mission performance subscription sold separately.
The accuracy is subject to quality of GNSS, data set duration, and regional coverage.

⁶ Typical mission profile, max RMS error (GAMS not required).

⁷ May require local gravity model to achieve full accuracy.

⁸ Subject to regional coverage.

About Phase One

Phase One is a global leader in digital imaging technology. Our commitment to imaging quality spans a wide spectrum of applications, from professional photography to heritage digitization, industrial inspections, aerial mapping, security and space.

With over three decades of innovation, Phase One has pioneered core imaging technologies and a range of digital cameras and imaging modules, setting new standards for image quality in terms of resolution, dynamic range, color fidelity and geometric accuracy. Together with its customers, technology partners and its global network of distributors, Phase One drives the imaging industry forward.

We deliver Imaging Beyond Imagination.

www.phaseone.com



Contact your Phase One representative regarding availability of Phase One products in your region.

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