JENOPTIK

NYXUS BIRD

Thermal imager for day & night target acquisition

Reconnaissance = Observation + Measurement

NYXUS BIRD is a multifunctional, handheld optronic observation system for reconnaissance and target acquisition at day and nighttime. It combines a powerful thermal imager and glass optics with a laser rangefinder, magnetic compass and GPS.

Day and Night Vision

The compact observation device combines an uncooled high resolution thermal infrared camera for night vision and multiple coated glass optics with 7x magnification.

Target Measurement

The integrated eyesafe diode laser rangefinder operates at a wavelength of 1550 nanometers within a maximum range of 5,000 meters. In combination with DMC and GPS it warrants exact target localization.

Benefits

- Small, lightweight and handy
- Multi-functionality combined in one compact device
- No acoustic detection
- Night vision in absolute darkness
- Vision also through smoke and fog
- Short startup time
- Long autonomous battery operation time
- detection and measurement of targets at large distances

Applications

- Surveillance & reconnaisance
- Observation & target acquisition
- For infantry, special forces and police

Sensor Systems

NYXUS BIRD

Thermal imager for day & night target acquisition

Specifications

Day Channel (VIS)

Type	Monocular, multiple coated glass opctics
Field of view (FOV)	6.75° (118 m / 1000 m)
Magnification	7×
Optical Aperture [Ø]	40 mm

Night Channel (IR / thermal)

Sensor type	Uncooled microbolometer
Sensor resolution	384 × 288 pixels I 640 × 480 pixels
Thermal resolution (NETD)	< 80 mK
Spectral sensitivity	8 µm ... 14 µm
Field of view (FOV)	10° × 7°
Electronic zoom	2×
Detection range (vehicles)	> 3,000 m
Recognition range (vehicles)	> 1,000 m
Start-up time	< 10 s

Laser-Rangefinder

Range	maximum:	10 m ... 5,000 m
	typical [1]:	> 3,500 m
Accuracy		± 2 m
Wavelength		1,550 nm
Laser Classification		Laser Class 1 (according to IEC EN 60825-1 2007-03)

Digital Magnetic Compass

Azimuth range	360°
Azimuth accuracy	< 0.3°
Elevation range	65°
Elevation accuracy	±0.2°

Display information

Reticle / target mark	LED, visible in day- and night channel
Measured data	Target position, object measurements and cloud base height in day- and night channel

Electrical

Power supply	Primary Lithium-Ion batteries *or* rechargeable Lithium-Ion batteries
Autonomy	> 8 hrs continuous operation (typical operation, 50% thermal imager switched on, per battery set)

Interfaces

USB 2.0	Video output & device control

Physical Dimensions

Dimensions [L × W × H]	180 mm × 150 mm × 70 mm (without ocular eyecups)
Weight	< 1.5 kg (including batteries)

Environmental

Applied standards	MIL-STD-810F
Operating temperature	-32 °C ... +55 °C
Storage temperature	-40 °C ... +63 °C

Miscellaneous

Mounting	1/4" standard tripod thread

Accessories

Standard	Transportation bag

[1]) Measured with NATO standard target board, 2.3 m x 2.3 m; 30 % reflectivity; 10 km visibility

JENOPTIK I Defense & Civil Systems
ESW GmbH I Business Field Sensor Systems
Pruessingstrasse 41 I 07745 Jena I Germany
Phone +49 3641 65-3041 I Fax -3573
sensorsystems.dcs@jenoptik.com
www.jenoptik.com/sensorsystems

012635-001-99-14-0112-en