



## NYXUS BIRD Multifunctional Thermal Imagers

Observation, Location and Measurement at Day & Night



Sensors



## Lightweight, compact, multifunctional.

Discover the world's most compact thermal imager for precise and fast target observation, location and measurement at day & night.

NYXUS BIRD is an easily portable and versatile observation system for reconnaissance and target location at day & night. It combines a thermal imager and direct view glass optics with an eye-safe laser rangefinder, digital magnetic compass (DMC) and GPS for target location and measurement.

### Crystal Clear Day and Night Vision

For target detection at night and day NYXUS BIRD features an uncooled high resolution thermal infrared camera. Multi-coated glass optics with 7-fold image magnification offer crystal clear day vision – or night vision when used with night vision goggles.

The eye-safe 1550 nm laser rangefinder operates within a range of 5000 meters. Together with onboard DMC and GPS it enables exact and fast target localization.

### Benefits

- Small, lightweight, handy and noiseless
- Multi-functionality combined in one compact device
- Short startup time, Long battery operation time
- Vision in absolute darkness, also through smoke
- Detection & measurement over large distances
- Many included and optional functions, for example, guide-me-home, fall-of-shot correction, infrared image and data storage, day-vision & infrared image overlay

### Applications

- Surveillance and Reconnaissance
- Observation, Target Acquisition & Location
- Infantry, Forward Observers, Forward Air Controllers, Joint Fire Support Teams, Special Forces, Homeland Security, Law Enforcement, Police

High Resolution OLED Display



GPS Module

Digital Magnetic Compass

Easy Handling and Intuitive Operation

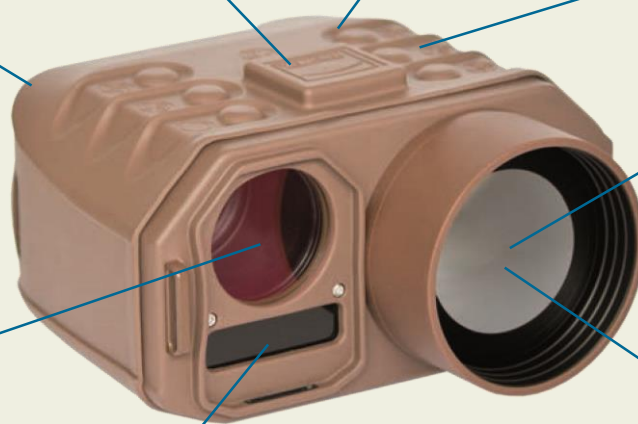
Infrared Optics

Multi-coated Direct View Glass Optics with 7x Magnification



Eye-safe Laser Rangefinder

High Resolution Thermal Imager







## Specifications

### Day Channel (VIS, direct view glass optics)

Type	Monocular, broadband multi-coated glass optics
Field of view (FOV)	6.75° (118 m / 1000 m)
Magnification	7x
Optical Aperture [Ø]	40 mm
Display	LED (target mark, target information, measured data)   Reticle (target mark, target distance estimation)
Use with night vision goggles	7x magnification of intensified night vision image

### Night Channel (IR, thermal infrared)

Sensor type	Uncooled microbolometer (focal plane array)   Spectral sensitivity: 8 µm ... 14 µm (LWIR)
Sensor resolution	640 × 480 pixels, 17 µm pixel pitch
Thermal resolution (NETD)	< 80 mK
Startup time	< 10 s
Electronic zoom	2x, 4x
Displays	OLED (for image display and device control) LED (target mark, target information, measured data)

#### NYXUS BIRD Medium Range (MR)

#### NYXUS BIRD Long Range (LR)

Field of view (FOV)	11° × 8°	7° × 5°
Range <sup>(1)</sup>	> 5 km	> 7 km
Detection	> 2 km	> 2.8 km
Recognition	> 1 km	> 1.4 km
Identification		

### Laser Rangefinder

Range	10 m ... 5,000 m   Typical Range <sup>(1)</sup> : > 3,500 m
Accuracy	± 2 m
Wavelength	1,550 nm
Laser Classification	Laser Class 1 (eye-safe, according to IEC EN 60825-1)

### Digital Magnetic Compass (DMC)

Azimuth / horizontal	Range: 360° (6400 mil)   Accuracy: 0.5° (8 mil) RMS
Elevation / vertical	Range: 65° (1155 mil)   Accuracy: 0.2° (4 mil) RMS

### Features & Functions

Measurement functions	Target distance, angles and coordinates   Object dimensions   Cloud base height
Additional functions	Guide-me-home   Fall-of-shot correction (optional)   VIS-IR image overlay (optional)
Image storage	Internal storage of up to 2,000 IR images with measured data set

### Interfaces

Data in/out & device control	USB 2.0 (device control, infrared image & video output)   Bluetooth (data transfer, optional)
GPS protocol	PLGR/DAGR input

### Electrical

Power supply	3.0 VDC ... 3.6 VDC   Primary or rechargeable lithium battery (D type, optional AA type)
Autonomy	> 8 hrs continuous operation per battery (D type, typical operation, 50% thermal imager switched on)

### Physical Dimensions

Dimensions (L × W × H)	180 mm × 150 mm × 70 mm (without ocular eyecups)
Weight	1.6 kg (including battery)

### 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	Various accessories (e.g. honeycomb filters) available on request. Please contact us for details.

<sup>1)</sup> For standard NATO Target, Size 2.3 m x 2.3 m, Reflectivity 30%, Visibility 10 km.