



JENOPTIK

Defense and Security

## Crystal-clear vision and target location with our compact NYXUS BIRD Thermal Imager.

### SHARING EXCELLENCE

The lightweight, compact, and convenient tool for observation, target location, and day or night measurement.

The Jenoptik NYXUS BIRD Multifunctional Thermal Imager is the reconnaissance and target locating device you will want to have with you on every single mission or operation. The NYXUS BIRD is extremely portable, light, and versatile for clear observation of targets in daylight, at night, in very poor weather conditions, or even through smoke. 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. For target detection in all light conditions, it features an uncooled high-resolution thermal infrared camera. Multi-coated glass optics with seven-fold image magnification offer crystal-clear day vision – or night vision when combined with night vision goggles. And the NYXUS BIRD's range is impressive too: the 1,550 nanometers laser rangefinder operates within a range of over 5,000 meters. Together with onboard DMC and GPS it enables precise and very fast target localization. The optional NYXUS BIRD GIS targeting system includes a compact "Micro Pointer" tactical mission computer incorporating a full geographic information system (GIS) for highly precise target localization based on visual observation and GIS data. With the NYXUS BIRD watching, there is truly nowhere to hide.



## The Jenoptik NYXUS BIRD Multifunctional Thermal Imager.

The versatile instrument for clear observation of targets in daylight, at night, or in poor weather conditions.

### The benefits speak for themselves:

- **Precise and extremely fast target localization:** Accurate and reliable over a long range.
- **Very convenient, compact, and lightweight design:** Weighs just 1.6 kilograms. Ideal for mobile use by dismounted troops.
- **Multifunctionality combined in one compact device:** No need for additional devices, saves costs and energy.
- **Versatile, 24/7 operation:** Crystal-clear view at day or night, even in total darkness or through smoke
- **Silent:** No acoustic detection.
- **Long battery life:** Ideal for mobile use on the field and long missions.

### Fields of application

- Surveillance and reconnaissance
- Observation, target acquisition & location
- Infantry, border control, 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



Multi-coated direct view glass optics with 7x magnification



Infrared optics

High-resolution thermal imager



Eye-safe laser rangefinder





Powerful and multifunctional yet compact and extremely light.

Clearly observe targets during the day, the darkest night or even in very poor weather conditions.

## Technical specifications

### Day channel (VIS, direct-view glass optics)

Type	Monocular, broadband multi-coated glass optics
Field of view (FOV)	6.75 deg (118m / 1000m)
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: from 8 µm to 14 µm (LWIR)
Sensor resolution	640 pixels × 480 pixels, 17 µm pixel pitch
Thermal resolution (NETD)	< 80 mK
Startup time	< 10s
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 deg × 8 deg	7 deg × 5 deg
Range <sup>1</sup>		
detection	> 5 km	> 7 km
Recognition	> 2 km	> 2.8 km
Identification	> 1 km	> 1.4 km

### Laser rangefinder

Range	From 10 m to 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 deg (6,400 mil), Accuracy: 0.5 deg (8 mil) RMS
Elevation/vertical	Range: 65 deg (1,155 mil), Accuracy: 0.2 deg (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)
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	From 3.0V DC to 3.6V DC, rechargeable lithium battery (optional AA type or D 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

### Environmental

Applied standards	MIL-STD-810F
Operating temperature	From -32°C to +55°C
Storage temperature	From -40°C to +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 × 2.3 m, reflectivity 30%, visibility 10 km.



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