



## > MINIE-D

### Night vision goggle with video display

*The multipurpose goggle selected for the new soldier french program*



**Ultra-compact and lightweight goggle, allowing remote aiming, IL - IR optical fusion and data display. Compliant with all types of new soldier systems.**

- Selected for the new soldier french program
- Ultra compact and lightweight : 370g
- Low profile
- Enlarged field of view (51°)
- Large field of view video display (42.5°)
- Low consumption
- Compliant with all video standards
- Adjustments of intensifier tube gain and display brightness
- Hands-free use with helmet adaptor
- Compliant with 3.8x and 5x magnifiers
- Ruggedized, waterproof design that's compliant with military standard requirements

With over 75 years of innovation in high precision optics, Thales Angénieux remains the worldwide leader for Film zoom lenses and the european leader for Night Vision. The unique experience in optical and mechanical design and the expertise in I<sup>2</sup> and IR technologies allow Thales Angénieux today to bring its customers the most innovative solutions.

# MINIE-D

## Night vision goggle with video display



MINIE-D (or MINIE-Display) is an image intensified night vision goggle including a video display, capable to superimpose data or video to the intensified image. Based on an original patented design, MINIE-D constitutes a new step in compactness, lightweight and optical performances in optronics field for infantryman while offering new essential functions for modern warfare.

The video display adjunction allows:

- the visualisation of data from the system
- the remote aiming from a camera mounted on the weapon, ensuring the soldier protection
- the fusion of intensified and infrared images by mean the adjunction of a thermal camera connected to goggle (this module being proposed by Thales Angenieux in MINIE DIR system)

MINIE-D can be mounted on all systems for infantryman or be coupled with all kinds of cameras thanks to its multi-standard electrical interface.

With its folding optical architecture, MINIE-D offers a close to face low profile, decreasing torque of the helmet-mounted equipment and assures long wearing comfort. Just like the well-known LUCIE® night vision goggle, MINIE-D delivers enlarged field of view of 51°. Compared to the 40° field of view of other conventional goggle, this enlarged field of view facilitates a 70% increase in the observed scene, which drastically improves user awareness and mobility.

MINIE-D proposes a modular structure allowing to be either connected to the system or to a removable battery housing box (stand-alone mode ensuring night vision function without video), or to an Infrared module for IL/IR optical fusion. MINIE-D is also compliant with Thales Angenieux 3.8x and 5x magnifiers and responds to military standard requirements.

### MAIN CHARACTERISTICS

Magnification : 1x

Field of view of intensified image: 51° circular

Field of view of video display : 34° horizontal x 25,5° vertical (42,5° diagonal) for a 800x600 pixels image

Typical on-axis resolution of intensified image at optimum light level, with intensifier tube at 60pl/mm: 1.1 cycle/mrd.

Diopter adjustment: -6 to +3 dioptries

Interpupillary distance: 56 to 74mm

Eye relief: ≥ 20mm

Focus range: 20cm to infinity

Automatic gain control of the intensifier and manual gain adjustment

Display brightness adjustment

Goggle weight ( without cable): 370g

Power supply: either from the system or from the optional removable battery housing box (for one standard AA battery) in the "stand-alone" mode.

Voltage supply:

- 5V to 12V in "system" mode,
- 1.1V to 3.7V in "stand alone" mode

Electrical consumption:

- < 2W when all functions are on,
- < 0.15W in "stand alone" mode with standard non autogating tube ( that is to say 50 hours of typical Battery life at 20°C for a 1.5V AA battery)

Communication interfaces: RS232 serial link

Video standards compliance: VGA, SVGA, CCIR, RS170

Built-in infrared illuminator with IR-on indicator

Low voltage indicator when in « stand alone » mode.

Automatic cut-off of the intensifier in high light conditions.

Helmet adaptor for goggle ensuring:  
quick mounting and dismounting  
Positioning adjustments  
Flipping up with auto-off feature

Operating temperature: -32°C to +44°C

Storage temperature: -46°C to +71°C

Water immersion: 1 meter for 2 hours

Field of view with 3.8x magnifier: 9°

Field of view with 5x magnifier: 10°

### STANDARD COMPOSITION

- Goggle
- Interconnection to system cable (according to system)
- Helmet adaptor (according to helmet model)

### OPTIONAL ACCESSORIES

- 3.8x magnifier
- 5x magnifier
- Carrying bag with cleaning set
- Transport case
- Removable battery housing box for one AA standard battery