TopOwl®
Helmet Mounted Sight & Display for helicopters

Dare to make the difference. Now.
Thales TopOwl is firmly established as the benchmark helmet-mounted sight display solution. Combat-proven over the past years on a number of high-risk theatres of operations, TopOwl demonstrates its worth as the natural link between pilot, outside environment, armament system and machine on a daily basis.

TopOwl is a robust, high added-value sight display that provides the pilot with optimum vision capabilities, including nightvision, preserving the pilot's natural vision of the outside environment. It integrates all types of images whilst maintaining see-through and full peripheral vision qualities thanks to the largest full overlap binocular field of view. Data, symbols and synthetic imaging fed by aircraft systems and onboard sensors are displayed by the scalable system in front of the pilot's eyes. A high-accuracy head-tracking system enables precise control of sensors and weapons (slaved cannon to pilot's head and firing). The associated fully-personalised helmet's finely-tuned centre of gravity provides high levels of comfort thereby reducing pilot fatigue, and improving performance and safety on arduous missions.

Conceived and continuously enhanced in close conjunction with pilots, TopOwl is now firmly positioned ahead of the pack. Operational feedback has been continually excellent, pilots reporting back with their accounts of how TopOwl was a key asset in the completion of missions ranging from recurrent night-time operations to airborne missions in support of ground force initiatives.

> If you’re looking for high-level operational performance in critical military operations, TopOwl is the essential helmet-mounted sight & display solution for your Forces... and is already setting tomorrow's standards!
MISSION - Ahead of the pack
TopOwl, the only wide-angle binocular helmet with visor-projected systems, ensures best-in-class levels of eyes-out performance whilst preserving natural vision of the outside environment by day and by night. The display of mission and/or piloting symbology enables direct control over sensors and weapon systems through direct and unobstructed vision.

VISION - Head up / eyes out
TopOwl provides the pilot with the means of switching seamlessly between different types of sensor, offers integrated I2T, high-definition FLIR and video imaging, and supplies piloting and mission symbology. As a helmet, TopOwl meets all stringent impact and noise protection norms.

The only Helmet that preserves natural vision of the outside environment

VISION - Head up / eyes out
TopOwl provides the pilot with the means of switching seamlessly between different types of sensor, offers integrated I2T, high-definition FLIR and video imaging, and supplies piloting and mission symbology. As a helmet, TopOwl meets all stringent impact and noise protection norms.

The only Helmet that preserves natural vision of the outside environment

MISSION - Ahead of the pack
TopOwl, the only wide-angle binocular helmet with visor-projected systems, ensures best-in-class levels of eyes-out performance whilst preserving natural vision of the outside environment by day and by night. The display of mission and/or piloting symbology enables direct control over sensors and weapon systems through direct and unobstructed vision.

COMFORT - Extremely good protection & comfort
Featuring a moulded design which is tailored to each individual pilot and a finely-tuned centre of gravity, TopOwl provides the pilot with optimum levels of comfort, reducing pilot fatigue and improving performance over long, security-critical iterative missions.
On Board

- Display of HD FLIR images
- Integrated image intensifier tubes (I2T) visor display equivalent to the highest level of night vision performance
- High accuracy head tracking system, to slave any weapon and sensors
- Display of image coming from any sensors located on the aircraft
- Unique customized helmet-fit system
- Compatible with NBC kit and prescription glasses

KEY FEATURES

- Visor-projected day/night display - 100% overlapped binocular system 40° field of view
- Day and night conformal symbology
- Night vision levels 1 to 5
- FLIR HD (SXGA – 1280 x 1024)
- Same module for day and night
- Augmented reality compatible
- Perfectly well balanced
- Weight 4.85 pounds (2.2 kg) in full configuration (including night vision system)
- Seamless transition from day to night configuration

OPERATIONAL CAPABILITIES

- Unmatched pilots’ situational awareness thanks to wide 40° binocular field of view
- Visor projection suppress tunnel effect of NVG and provides excellent peripheral vision
- Easy and simple in-flight switching between day/night and I2T/FLIR configurations
- Pilot’s fatigue reduced thanks to unrivalled comfort and well-balanced helmet

PILOT’S SUCCESS

Recent conflicts have underscored the key role played by helicopters. The Thales TopOwl helmet-mounted sight and display has thus been deployed on the battlefield aboard the French Tiger helicopter, the United States Marine Corps Y-model Huey helicopter and the Italian NH90 in Afghanistan, as well as on the French Tiger in Libya and Mali. As such, the TopOwl system has demonstrated its operational benefits and its ability to increase mission success rates on a daily basis. In Afghanistan, where TopOwl has been deployed since 2009, French Tiger helicopter crews have come to view the system as their “cat’s eyes”. In Libya, helicopters were deployed without ground forces. For more than four months, all offensive missions were conducted from a naval platform at night, in total darkness. The TopOwl-equipped Tiger was a major component in these operations, working closely with other helicopters deployed on night missions to destroy large numbers of targets with a broad range of weapon systems.