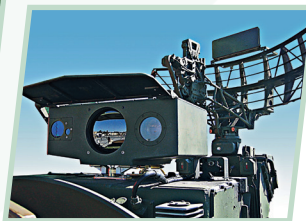


OPTOELECTRONIC HEAD



The optoelectronic head is a state-of-the-art device integrating passive optoelectronic sensors working in the bands from visible to thermal as a means for detection, recognition, identification, and observation, and following integration onto the platform to determine angle co-ordinates of remote targets in the visible spectrum and in the infrared.

The optoelectronic head may work under various weather conditions, both during the day with sunlight or artificial lighting as well as in the conditions of limited visibility.

The optoelectronic head works in a set of devices which provide for manual and automatic guidance of the head optical axis at the target under observation. The laser range finder being an element of the equipment provides for range finding to the target from 100 m to 30000 m.

The head makes it possible to passively track the target based on its television or thermal imaging shown on the digital display by means of a video tracker.

CAPABILITIES

- » passive detection – identification – thermo-video recognition, no detection of own position,
- » control over the airspace,
- » eye-safe laser range finding,
- » data on the target range and azimuth,
- » positioning, determination of co-ordinates,
- » potential adjustment to any platform.

PURPOSE

The optoelectronic head may be adjusted to any fire control platform of anti-aircraft systems, in particular, for the following air defence systems:

- » 2K12 KUB (SA-6),
- » 9A33BM2 OSA (SA-8),
- » 2K11 KRUG (SA-4),
- » an example of a different type of platform – Combat Field Reconnaissance System integrated onto a HUMVEE platform.

ADVANTAGES OF APPLICATION

- » Replacement of the sight used so far enabling the systems to thermally detect the target and to improve detection range.
- » Limited radar radiation and improved radio electronic camouflage.
- » Upgrade and improvement of missile weapons which are a significant potential in use by Land Forces, Air Force, Air Defence and Navy of the Republic of Poland.

OPTOELECTRONIC HEAD

ELEMENTS OF THE OPTOELECTRONIC HEAD

The optoelectronic head is furnished with the following:

- » **Thermal camera** serves the purpose of surveillance of remote air targets. It provides for target detection and observation independent of lighting conditions both during the day and at night and allows to detect thermal signals emitted by objects in the detector field of view due to high temperature sensitivity.
- » **LLLCCD** television camera serves to observe remote targets within the range of visible light in the conditions of minimum lighting. It is furnished with an advanced zoom lens. Thanks to the application of a modern converter, the camera may work under minimum lighting conditions.
- » **Laser range finder** consists of a laser transmitter where a strong optical impulse is generated and a laser receiver which is able to detect extremely low levels of laser radiation.
- » **Digital display and control** displays images from the television camera or thermal camera on LCD screen. It provides for controlled drive in azimuth and in elevation. In anti-aircraft missile systems the digital display serves as an integrated display to present data from other channels, such as, e.g., radar tracking stations, IFF target identification systems, or laser range finders. The picture from the television camera or from the thermal camera is superimposed on the micro-computer-generated image with the target parameters from the radar station, IFF system and laser range finder (azimuth, elevation, altitude, range, 'friend or foe').

TECHNICAL PARAMETERS

Technical parameters of the systems within the optoelectronic head are selected in accordance with the client's individual demands and the conditions of prospective use.

AWARDS

DEFENDER Award granted at the 17th International Defence Industry Exhibition for the development of Optoelectronic head GOE01.

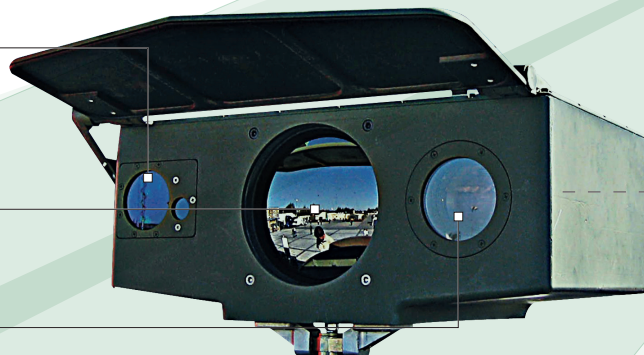


Optoelectronic head mounted on upgraded anti-aircraft missile combat vehicle PRWB OSA

Eye-safe laser range finder

Long-range thermal camera

Long-range television camera



Integrated digital display

