



Defence

Low Cost Sight 100 (LCS – 100)



Name Surname

Position

Company

LOW COST SIGHT 100 (LCS - 100)

OVERVIEW

The Low Cost Sight 100 (LCS – 100) is an indirect aiming system that provides target observation, detection and identification (by day and night) with a range measurement capability.

The LCS -100 payload comprises a Laser Range Finder (LRF), a Day Camera Payload and an uncooled Thermal Imaging System (TIS).The system includes a Multi Function Display (MFD) which displays the video images, aiming symbology and systems parameters as well as providing the payload with its control commands.

Boresighting to the main weapon is performed during installation. Fine boresighting can be done in the field by adjusting the crosshair on the video image. The LRF aiming mark is visible in all Fields of View (FOV).

The system implements traverse and elevation offsets automatically for the weapon selected. Offsets are implemented by moving the aiming mark on the image. The maximum ballistic offset that can be implemented is 4°.

DESCRIPTION

The Low Cost Sight 100 (LCS – 100), was developed to optimise the performance of older type weapon systems such as the Ratel 60, Ratel 90, Eland 90 and Cascavel, with a state of the art new generation, high performance, all-weather capability Fire Directing System (FDS). By upgrading your vehicle with the LCS -100, the vehicle is transformed into a fighting machine with excellent all-weather, day and night fighting performance, with a significantly improved first shot hit probability.



The LCS - 100 is a strap on system which can be installed within a few hours on a vehicle.

The LCS - 100 payload includes an uncooled 8 to 12 μm Thermal Imager (TI) with a 5.6 degree Field of View (FOV). Working in the 8 to 12 μm wavelength region gives excellent performance in pitch darkness (no light requirement). Operating at these long wavelengths also gives very good performance in smoke, fog, and dusty conditions. With this TI, a target can be detected at ranges up to 5 kms and recognised typically more than 1.1 kms away, even in pitch darkness.

During day time, a standard video camera with the same FOV as the TI is used. Once a target has been identified, the range to the target can be measured using an eye-safe Laser Range Finder (LRF). The LRF, day camera and TI are bore sighted with each other and with the weapon system.



Range information is fed to the Fire Computing System (FCS). The FCS calculates the weapon's ballistic performance, which is indicated on the 7 " Multi Function Display (MFD), by an aiming mark which relates to a 95% (calculated) first shot hit probability under all weather conditions (day/night, smoke, fog, dust, etc.).

The FCS can accommodate the following:

- 7.62 mm, 20 mm, 23 mm, 35 mm automatic weapons
- 90 mm and 105 mm, main weapons.

The weapon caliber is hard coded in the cable connecting the payload to the FCS. This is done to reduce the chance of using the wrong ballistic tables.

All the functional indicators on the FCS are implemented with easily understandable generic graphic symbols, eliminating the need to translate the key labels into different languages.

Ansys Forum, 170 Outeniqua Avenue, Waterkloof Park, 0181

P.O. Box 95361, Waterkloof, 0145, South Africa

T. +27 12 346 3141

F. +27 12 346 3720

Ansys Limited
www.ansys.co.za