



Britannia Defence Systems Limited

Designers, Manufacturers & Integrators of Specialist
Surveillance Systems and Equipment

DSQ-20

Night Vision Thermal Fusion System (Quadro NVTF)



Features

- CNC Machined, Strong and Durable
- Light Weighted Aircraft Aluminium Body
- Images from NV or TI Channels Can Be Used Separately or Dichoptically Fused
- TI Channel "Video-Out" Feature
- Manual Gain Control-Adjustable Brightness of TI Channel Display
- Built-In Powerful, Focusable Laser Infrared Illuminator
- When Its ON Warning LED Flashing In Operator's Field Of View

Description

There is two technologies available for night time, low light and adverse weather conditions observation: Image Intensification and Infrared Thermal Imaging. Both have their own advantages as well as limitations. The special purpose of DSQ-20 system is to combine both technologies. It allows fully and effectively exploit their capabilities by creating "Hybrid" or so-called "Fusion" Enhanced Night Vision observation system. DSQ-20 is lightweight, portable, individual optical electronic hand held or helmet mountable device combines near infrared (NIR) Image Intensifier Tube, Long Wave infrared (LWIR) Thermal Imaging Engine and Infrared laser aimer/marker.

DSQ-20 very effectively exploits multi-technology capabilities by creating unique Fusion Enhanced Night Vision observation system. Whatever is missing under Image Intensified Night Vision device observation, will be detected by Thermal Imaging Channel. And whatever is missing under Thermal Imaging observation, will be detected by Image Intensified Night Vision Channel. Both channels dichoptically fused. Built in Infrared Laser has dual functions: 1. Aimer/Pointer, i.e. IR Marker, 2. IR Illuminator which allows to use Night Vision Channel in total darkness. DSQ-20 Enhanced Night Vision System guarantees 100% night time, low light and adverse weather detection capabilities. DSQ-20 is The most desired by World's Law Enforcement and Military Users!

Options

- USB Adapter & Software (Allows To Display Thermal Images on Computer or Use Them for Further Transmission)
- Head Gear/Helmet Mount for "Hands Free" Operations
- External Battery Pack with Li-Ion Rechargeable Batteries and Charger, Goods For Up To 7 Hours Continuous Use
- "Snap-On" magnification lenses can be used separately on either NV & TI channels



Britannia Defence Systems Limited

Designers, Manufacturers & Integrators of Specialist
Surveillance Systems and Equipment

DSQ-20

Night Vision Thermal Fusion System (Quadro NVTF)

Specifications

Image Intensifier Tube (ITT):	Gen. 2+, XD-4, XR5, "Onyx"
Thermal Imaging Core (TIC):	Microbolometer, Uncooled
IIT Resolution:	57-73 lp/mm
TIC Format/Video Out:	160 x 120/640 x 480
Display Resolution/Type:	640 x 480/colour VGA
Diopters Adjustment:	+2/-6
Magnification:	1X, digital zoom 2X (3X)
Weight:	850 grams
Dimensions:	165 x 110 x 95mm
Powered By:	3 V Lithium Batteries
* Operation time on 2 pcs. of CR123 batteries	Up to 4 hours, continuous

Night Vision

Modern Night Vision Devices are Small, Light Weight and equipped with high performance/resolution image intensifier tubes. Increased photosensitivity, SNR and more recently auto gating provide the user with the capability to operate in even lower light situations than ever possible before. Additionally, today's Night Vision Devices provide greater detail of people and objects, even on the darkest nights. When utilized with active infrared illuminators or Laser pointing aiming devices, the operator is still able to conduct observation tasks with effective recognition and scene assessment. However, not very effective if the person or object is concealed behind light bush, in a shadow or camouflaged. A scenario such as this highlights the vulnerability of the image intensification technology.

Thermal Imaging

Today's Thermal Imaging Devices are Small, Light Weight and equipped with high performance engines (cores). Combined with superb resolution min-displays, provide the operator with high resolution, high sensitivity imaging and detection range. Thermal Imagers provide detection of people's and object's heat signatures even if hidden behind thin bush, in a shadow or camouflaged. Thermal Imagers also have the additional benefit of operating during day and night and are furthermore able to see through smoke or fog. However, not very effective as only provides heat (infrared) 'signatures' of people or objects – provides no target detail, therefore results in very ineffective target recognition and scene assessment.