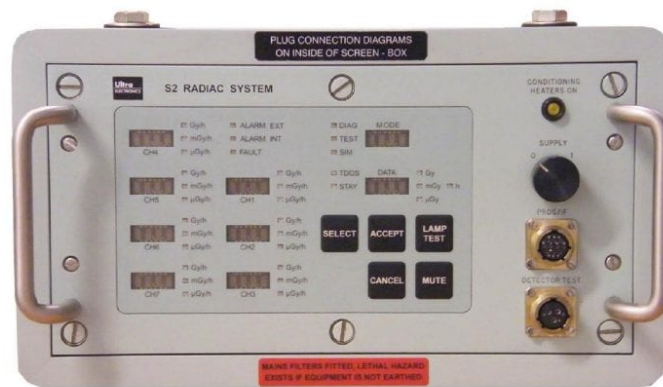




Product Data Sheet Military Platforms



The ANV-S2 is an exceptionally robust, highly qualified, naval vessel installed gamma radiation monitoring system used by navies worldwide to detect the residual radiation resulting from a nuclear weapon detonation. The system monitors the radiological environment within the ship or submarine whilst providing continuous data regarding the external threat in both air and water.

The ANV-S2-FV is an exceptionally robust, highly qualified, vehicle installed gamma radiation monitoring system for use in first responders applications, military personnel peace keeping operations, anti-terrorist activities and by other government specialist bodies to detect the residual radiation resulting from a nuclear weapon detonation. The equipment consists of a number of fixed gamma radiation detectors mounted in strategic positions, both inside and outside the vehicle.

The ANV S2 design has been proven in a comprehensive range of environmental and other conditions against Defence Standards. The system's modules are designed to perform continuously with minimum maintenance, have excellent reliability and an extended pedigree with many navies. Interface to the Platform Management Systems (PMS) is via a standard data port. The radiological threat information is presented direct to the platform commander

The design has been proven in a comprehensive range of environmental and other tests against UK MOD Defence Standards. The Type Testing programme included the demanding mechanical specifications for shock and vibration for systems on tracked and wheeled military vehicles. The system's modules are designed to perform continuously with minimum maintenance and have excellent reliability. The detectors are suitable for external mounting on amphibious vehicles. The ANV-S2-FV system can incorporate up to three wide range detectors capable of measuring from natural background levels to full threat levels which may be experienced post nuclear weapon detonation.

An ANV S2 system can have up to seven detectors capable of measuring from natural background to full threat levels which may be experienced post nuclear weapon detonation. The detectors are sited to monitor the exposure of the crew, the airborne threat and sea water contamination. For smaller vessels and submarines, a two detector system is used providing the same comprehensive data, alarms and displays for the platform.

[S2-Naval](#)

[S2-Land](#)

ANV S2 RADIATION MONITORING SYSTEM SHIPS & SUBMARINES



EXTENDED MEASUREMENT
RANGE
VARIABLE ALARM THRESHOLD
RUGGED, LOW-COST DESIGN
EXCELLENT RELIABILITY
INTEGRATED DIAGNOSTICS
IN-SERVICE WITH NATO FLEETS

Ultra Electronics has supplied radiation monitoring systems to navies throughout NATO and the rest of the world and continues to provide new systems and in-service support for maritime operations. The ANV S2 system meets the current operational requirements of both surface and submarine fleets. The system monitors the radiological environment within the ship or submarine whilst providing continuous data regarding the external threat in both air and water.

The ANV S2 design has been proven in a comprehensive range of environmental and other conditions against UK MOD Defence Standards. The system's modules are designed to perform continuously with minimum maintenance, have excellent reliability and an extended pedigree with many navies.

The ANV S2 naval systems have proven performance in active deployment and, following recent enhancements included in the latest design, are able to interface with Platform Management Systems (PMS) via a standard data port. The radiological threat information can now be presented direct to the platform commander as and when an alarm situation occurs or when there is a heightened status of alert.

An ANV S2 system can have up to seven detectors capable of measuring from natural background to full threat levels which may be experienced post nuclear weapon detonation. The detectors are sited to monitor the exposure of the crew, the airborne threat and sea water contamination. For smaller vessels and submarines, a two detector system is used providing the same comprehensive data, alarms and displays for the platform.

Nuclear Control Systems

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INSTALLED RADIATION MONITORING SYSTEMS FOR NAVAL APPLICATIONS

SYSTEM CONFIGURATION

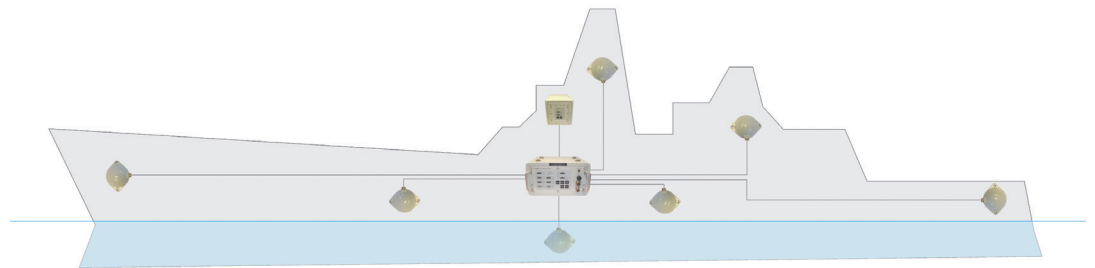
The ANV S2 naval system provides the platform commander with dependable data throughout extended deployments where there may be a radiological threat. Operational requirements in the maritime environment have transformed over recent years and current and predicted future activities will expose platforms to significant asymmetric threats.

BACK-FIT OPTION

A back-fit option is available for users supplied with MK22NRS and MK23NRS systems by the specialist suppliers of Plessey or, more recently, Siemens. The back-fit option provides a cost-effective method of upgrading performance by simple unit replacement.

POWER SUPPLY

- Ship's AC supply: 115V @ 60Hz or 230 V 50Hz
- Ship's DC supply: 24V DC Supply



OUTLINE SPECIFICATION

- Range: 10nGy/h to 100Gy/h
- Energy response:
 - 60keV to 1MeV $\pm 20\%$
 - 1MeV to 3MeV $\pm 35\%$
- Humidity: 93.2% RH at 55°C
- Temperature:
 - 40°C to +80°C (operating)
- Immersion:
 - IP67 (4m depth for detectors)
 - Def Stan 00-35 (for enclosures)



making a difference

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ANV S2 RADIATION MONITORING SYSTEM TRACKED & WHEELED VEHICLES



EXTENDED MEASUREMENT
RANGE
UP TO THREE DETECTORS
PER SYSTEM
RAPID RESPONSE
VARIABLE ALARM THRESHOLD
RUGGED, LOW COST DESIGN
EXCELLENT RELIABILITY
MILITARY VEHICLE
SPECIFICATIONS

The ANV S2 radiation monitoring system has been developed by Ultra Electronics to provide a robust and affordable solution for vehicle borne applications. The system continuously monitors the radiological environment both within the vehicle and external to the platform.

The design has been proven in a comprehensive range of environmental and other tests against UK MOD Defence Standards. The Type Testing programme included the demanding mechanical specifications for shock and vibration for systems on tracked and wheeled military vehicles.

The system's modules are designed to perform continuously with minimum maintenance and have excellent reliability. The detectors are suitable for external mounting on amphibious vehicles.

The ANV S2 system can incorporate up to three wide range detectors capable of measuring from natural background levels to full threat levels which may be experienced post nuclear weapon detonation.

A single detector can be sited internally to monitor the exposure of the crew whilst two external detectors will give a directional capability which can be exploited to locate the source of a radiological threat.

The ANV S2 fighting vehicle system has a rapid response to changes of radiation dose rate. This enhanced response is required to detect radioactive point sources whilst the vehicle is on patrol, conducting surveys or actively deployed.

Nuclear Control Systems

Ultra
ELECTRONICS

THE PREFERRED SOLUTION FOR RADIATION MONITORING FOR MILITARY AND SECURITY VEHICLES

SYSTEM CONFIGURATION

The ANV S2-FV system can be configured to suit a wide range of different applications and includes the option to provide the Platform's Management System (PMS) with data for use by the vehicle's commander / crew and for relay to Command Headquarters or an Operations Centre.

USER INTERFACE

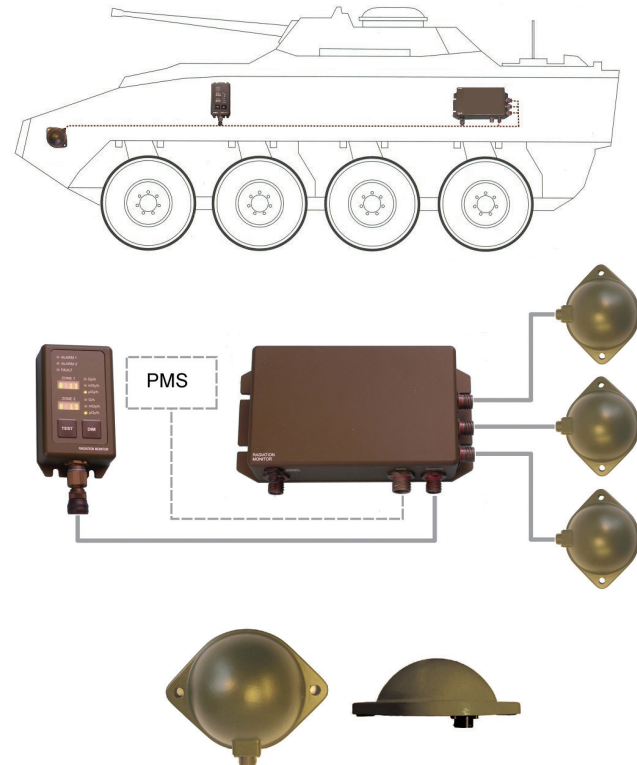
The features of the ANV S2 system, including the user interface, have been refined with the assistance from UK military personnel. The system provides a user interface via an optional remote unit or PMS. The system displays key dose rate data and other functions can be interrogated using push buttons.

DETECTOR OPTIONS

The detector unit is supplied finished to customer's colour specification with either a side entry connector or with a rear entry for inconspicuous mounting.

RADIOLOGICAL PERFORMANCE

- Range: 10nGy/h to 100Gy/h
- Energy Response:
 - 60keV to 1MeV $\pm 20\%$
 - 1MeV to 3MeV $\pm 35\%$
- Humidity: 93.2% RH at 55°C
- Temperature:
 - 40°C to +80°C (operating)
- Immersion:
 - IP67 (4m depth for detectors)



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