

Naval & Maritime users of MilDef products

Introduction

This white paper details the requirement of today's complex Maritime environment and examples of in service/incumbent MilDef hardware.

SKYNET Communications

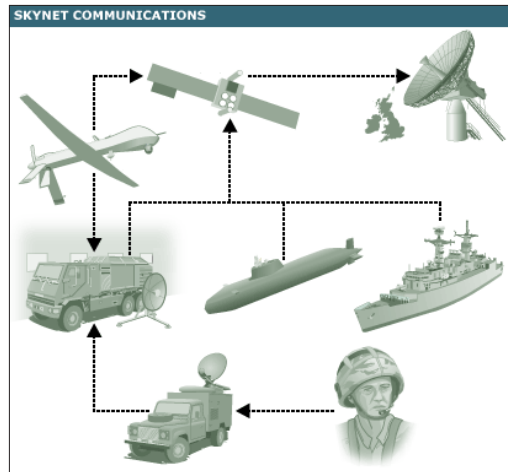
MilDef has supplied rugged computing hardware on to the UK SKYNET System since 2014. Our customer, AIRBUS UK have deployed MilDef rugged laptops and associated server infrastructure on to SKYNET as part of the Satellite Communications Onboard Terminal (SCOT) system, fitted to all UK Naval Surface Ships and the REACHER Terminal - Land Forces.



MilDef develops rugged electronics for military applications. With reference cases from more than 20 countries and experience from over two decades of supplying mission-critical equipment, the company has collected a wealth of domain-specific knowledge.

The MilDef white paper series shares some of our proven solutions for digitalization, developed in close collaboration with our customers.

For more information, visit www.mildef.com.



SCOT Terminal Navy - Satellite Communications Onboard Terminal

MilDef are incumbent as the remote server on Satellite Management Terminals onboard all HM Ships in the Royal Navy.

The remote server laptop has been designed with the same fit/form/function in mind, to enable maintainers to carry out a 1 for 1 swap if required and ease when upgrading the unit. The custom designed server tray was designed in 2014 with the consideration of same fit/form/function. They were repurposed initially in 2018 for an upgrade of the Advanced SATCOM Terrestrial Infrastructure System in Australia and more recently in 2020, following the upgrade of a German Naval SATCOM Management Terminal upgrade.

What differs MilDef from the standard COTS product, is the understanding of the end user requirement; each Custom Design Project is carefully considered at the Proposal, R&D and Production stage.

REACHER Terminal – Land Forces

To meet the Army specific use case for the Reacher Terminal, the MilDef RK10 laptop and server infrastructure was customized to meet EMI enhancements of TEMPEST Level B, inclusive of the ViaSat Eclipt drive and MIL-STD-461F Ground Army compliant.

MilDef SCOT Terminal Components:



Figure 1
MilDef RK10 (REACHER Configuration)



Figure 3
MilDef RK10 (Maritime Configuration)



Figure 2
RK10 Army Dock/Server Infrastructure



Figure 4
RK10 Navy Dock/Server Infrastructure

WECDIS – Warship Electronic Chart Display and Information System (ECDIS)

Royal Navy and Royal Fleet Auxiliary were the first military organizations in the world to adhere to NATO requirement for electronic mapping in 2004. MilDef were selected in 2005 to provide the reversionary and remote method to WECDIS in the RT7 laptop and Dockunder. These units remained in service for 9 years, which is testament to MilDef product reliability, before being upgraded to the later generation RK9 series laptop with Dockunder, which remains in service to date. These units are a key part of navigation and interface to the Command Management System on all major warships. The rugged nature of the RK9 allows for remote use of route and tactical exercise planning, or missile safety zone and gun weapon arcs, whether in situ on the Dockunder, or remotely during evacuation drills.



The Dockunder was designed to securely lock the laptop into the dock ready for all sea states, whilst ensuring the unit was MIL-STD-461F compliant.

Civilian Maritime Navigation Systems

The MilDef DK10 rugged tablet computer is deployed in the North Sea by our customer Ultra Electronics. It is fitted within surface vessels used to transport equipment and personnel to the offshore oil rigs. Its sunlight readable LCD, ability to withstand severe shock & vibration and resilience to salt-water ingress makes it the obvious choice for this application.



Special Forces Long Range Insertion Craft

The MilDef DS13 IP67 & rugged mount have been trialled on the LRIC platform that serves the Special Boat Service (SBS) User.



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