



SOTAS_{M2}

The new standard in Multimedia
Intercoms and Vehicular Local Area Systems

SOTAS_{M2}

- *Highly Configurable - from Voice Intercom to C4ISTAR: One scalable system for the whole fleet.*
- *Voice, Data and Video services on one system*
- *Networking (Inter-vehicle and extension into WAN)*
- *Integrated IP router, Tactical DNS, VoIP services, Ethernet Switch*
- *Protocol optimization for IP data over Combat Net Radios*
- *Mil-Spec*
- *Cost Effective*



The Network Centric Warfare Challenge

The Digital Battlespace imposes new requirements on vehicle communications systems. To support commanders in their decision-making process, vehicles are equipped with a multitude of information and communication assets. The challenge for the vehicle network designer lies in the integration of all these assets: To provide a seamless system, carrying voice, information systems data, sensor data

and video traffic. Offering Internet-like services to Tactical C4I applications. Static and On The Move, in-platform and between platforms.

SOTAS_{M2} more than meets the Challenge

SOTAS_{M2} is a perfect blend of COTS standards and rugged MIL-Spec construction. The system sets new standards for audio quality and for the number voice services provided. And with the integrated IP/Ethernet interfaces and services, SOTAS_{M2} enables users to inter-work in the Tactical Internet using standard IP-based applications. The connectivity between applications running in the Mobile Networks and in the Deployed Networks is enhanced by the system's protocol adaptation that optimises the transfer of IP data over Combat Net Radios. SOTAS_{M2} is a major enabler for tightening the commander's decision loop.



Total Configuration Flexibility

The flexibility of SOTAS_{M2} is endless. With a range of interface modules and crew box types, SOTAS_{M2} suits all types of vehicles.

At any point in time new interfaces and crew boxes can be added to the system.

New configuration files or indeed new software versions can be downloaded to a SOTAS_{M2} system, without disturbing the installation.

The modular construction, both in physical and in functional architecture, is designed to support spiral development. This means that the introduction of new services does not require a big-bang approach. With Thales, the migration to a Tactical Internet can start from any level of the existing communication infrastructure.

In-Vehicle communications

At first glance SOTAS_{M2} presents itself as an intercom system, easy to operate, providing crystal-clear voice communications with Dynamic Noise Reduction between crewmembers. And it is. But there is more than meets the eye. SOTAS_{M2} is packed with services: Vehicle Intercom, Command Post Intercom, Emergency Broadcast, Radio Communications, Traffic Status Indication on crew stations, Tank Telephone, Field Telephone, Alarm Distribution, Local Call (dial-up) facility, Voice over IP telephony (locally and into the WAN), Serial Data communications, Integrated IP router, Tactical DNS, VoIP services, Ethernet Switch, Video Services, Software Download facility, Built-in Test, Network Management System, etc, etc.



Inter-Vehicle Communications

SOTAS_{M2} services are not limited to individual vehicles. Vehicles can be connected in any order and in any topology. On connection, SOTAS_{M2} automatically adapts to the new topology; no management action is required. As soon as vehicles are connected, users have instant access to the multimedia inter-vehicle services: Voice, Data, Video communications, sharing of radios, sensors and computer resources, etc. The open standard network interfaces (IP/Ethernet) offer a massive bandwidth.

Dynamic Noise Reduction

The Dynamic Noise Reduction system eliminates the vehicle noise from the microphone signal, leaving the clear speech signal. This results in crystal-clear communication channels, not only inside the vehicle but also over the radios.

Platform Integration

SOTAS_{M2} is a true multi-service system and is designed to support all the in-vehicle and inter-vehicle communications. For the end-user this offers an unsurpassed service level. To the platform integrators this integration of all services into one compact, rugged, system reduces the on-board payload (the “number of boxes”), thereby freeing up valuable space inside the platform and simplifying the cable harness. This also reduces the weight of the payload, the power consumption and improves the overall MTBF of the payload.

The SOTAS_{M2} crew stations are connected with standard (low-cost) coaxial cables, requiring only two connection points on the slipping of turreted vehicles.

Management Information System

The SOTAS_{M2} system connects to any Management Station, using an SNMP interface. This capability is especially useful for Command Post configurations.

The powerful yet user-friendly SOTAS_{M2} management application runs on a standard PC. The tool



provides all the facilities needed to effectively configure and monitor SOTAS_{M2} Networks.

One scalable system for the whole fleet

SOTAS_{M2} systems can be configured to range from a voice / serial data intercom to a command post Local Area System offering the broadest range of communication technologies such as: Inter-vehicle Networking, Ethernet, IP routing, IP telephony, optimized IP transport over Combat Net Radios, Video, etc.

Thanks to this scalability SOTAS_{M2} meets the on-board communications needs for all military vehicle configurations. MBT, AIFV, Recovery, Ambulances, etc. as well as Command Vehicles can all be equipped with the same system. The advantages are clear: Minimal Life Cycle costs, reduced training effort en smooth inter-working.

And in the future when new requirements emerge, SOTAS_{M2} systems can be brought to higher service levels simply by adding equipment.



SOTAS_{M2} System Elements

The flexible architecture of the SOTAS Product Family allows a customer to start with a basic configuration and upgrade later to a more extended system configuration.

Basic Crew Station

The Basic Crew Station (CM2) provides the user interface to the inter-com facilities and to the radios. The LEDs display the radio traffic status and the system status. The two audio interfaces and a serial data interface support the connection of audio ancillaries, data terminals and/or Combat Net Radios.

Advanced User Station

The Advanced User Station (AUS) provides a menu driven Man Machine Interface. The frequently used services are accessed by a single key action. Drill down menus give access to the advanced features such as telephony and system management & maintenance services.

Tactical Access Unit

The Tactical Access Unit (TAU) contains the full SOTAS_{M2} functionality in one box. It is a distributed network switch with a menu driven Man Machine Interface added to it. The capability to insert up to four access interface cards makes the TAU a highly modular and versatile product.

Central Multimedia Switching Unit

The Central Multimedia Switching Unit (CMSU) forms the heart of the system. It provides connectivity for peripherals and all types of crew stations. Multiple CMSUs can be interconnected by means of optical fiber cables to form a high-speed multi-service network.



Off-the-shelf Communications Systems for the Digitised Battlefield

Consistent Communications Solutions from Landrover to Command Post

Worldwide Installed Base

Thales Communications offers a range of vehicle communications systems and networks.

All products offer

- Built-in reliability
- Installation dimensions are based on replacement of all kinds of current intercom systems
- Shock and vibration conditions for tracked vehicles
- Built-in-Test Equipment
- Maintenance Packages

Thales Communications B.V. obtained the international quality certificate ISO9001/AQAP-110 for all its processes.

The AQAP-150/Tick-it certification has been achieved for Software Design and Development.

SEI CMM level 3.

THALES

THALES COMMUNICATIONS

P.O. Box 88 1270 AB HUIZEN The Netherlands

Tel: +31 (0)35 524 82 48 Fax: +31 (0)35 524 82 42

Info.tc@nl.thalesgroup.com Internet: www.thales-communications.nl