



**SMARTNET's
TACTICAL ACCESS UNIT**

**THE MULTIMEDIA INTERNET
FOR THE DIGITISED BATTLEFIELD**





SmartNet is the ultimate Local Area System (LAS) offering the highest level of communications systems integration in the world today. The extendability of the system creates an evolutionary growth potential enabling users to increase the capabilities of any operational unit with the requirements imposed on these units. The integration of many interfaces into a single system, thereby offering integration, redundancy, cable reduction and lower life cycle costs, are unsurpassed in the world and a class of its own when taking required quality of service into account. By providing these capabilities not only in a vehicle but also between vehicles, making assets in other vehicles accessible, the tempo of current-day operations can be greatly enhanced and information superiority can be achieved.

Flexible, Transparent and Modular

As a result of the highly modular structure of SmartNet, total configuration flexibility can be offered to the customer. Because of the available resources in SmartNet transparent service can be offered to connected subsystem with very short delays. This facilitates the unmodified connection of existing systems over SmartNet while allowing the distributed access (both in and between vehicles) to these systems.

Unleash the Power of distributed networking

Configurable

The system components allow for total freedom of configuration changes even when the equipment is operational in the field. The configuration can be accommodated to three different levels. Each separate interface type can be configured, the functionality available is dependent on the user assignment to the component, and most advanced, the current operational role of the vehicle induces modifications in the configuration (access control, addressing, assets available from other vehicles) if the customer requires these changes. All three options are basically independent.

Maximise network performance

By combining all the different traffic types in one network, SmartNet is able to provide an optimal use of the available resources in the network and even for external bearer systems used by SmartNet to access other SmartNet or gateway systems.

Survivability

Since the SmartNet system does not have to rely on a central system, either providing the interfaces or controlling the system highway, a high degree of survivability can be achieved. Depending on the application's requirements, a dual or triple redundant system can be provided both in terms of connectivity as in degraded mode of operation. Because of the internal mechanisms to prioritise information flows, SmartNet provides levels of sustainment of operations never seen before.

Distributed

As the system is distributed, it is easy to attach different subsystems near their actual location in the vehicles instead of wiring it to a central box. The integration of all information systems into this network also implies that information can be accessed from any location in the vehicle, even from other vehicles depending on authorisation. By making efficient use of available bandwidth, in combination with the distribution of information sources and sinks over the system, the aggregate bandwidth available to the system is much higher than in traditional shared medium networks.



Easy to use

SmartNet Tactical Access Units and Advanced User stations use a graphical display that can be used for the SmartNet system control, but also provides a platform for applications. Furthermore, a web-based version of the Human Machine Interface (HMI) will be made available, facilitating the further workstation/communication integration by allowing the user to control the system from his workstation. The Network Management can be pre-planned to yield a high productivity of the crew member owing to available functions, ease of access to the functions and the operational role of the system at that moment.



Network Management System

SmartNet is a system that is capable of network management from platform level up to the largest possible networks. However, it is important to note that for the operational use of the system no management station is required. Since industry standard Simple Network Management Protocol (SNMP) is used, integration in an existing management system is possible.

Enhanceability

New interface cards and their applications continue to be developed by Thales. Furthermore, developments in other products of Thales lead to integration of these functions into the SmartNet equipment. With the largest installed base of systems in the world, Thales is well positioned to provide standard interfaces. The available capabilities enable specific user interfaces to be accommodated.

User mobility

SmartNet makes full use of Thales' vast experience to support an unprecedented level of user mobility. The flexibility of SmartNet enable the user to select the mobility level and the associated features, for example the information per user available throughout the network, the ease of access/mobility, the number of users allowed to be mobile, the area covered by the system in which users are mobile.

System Elements

Crew Station

The SmartNet Crew Stations provide access to the intercom facilities and the radios. The LEDs display the radio traffic status and the system status. The two audio interfaces and the serial data interface support the connection of audio ancillaries, data terminals and/or even Combat Net Radios.

Commander Station

The SmartNet Commander Station is identical to the Crew Stations but with additional facilities to allow a vehicle commander to control the system mode of operation. These commander facilities are programmable and include: Radio Silence, Intercom Accent, Access Rights for dismounted users, Signalling on external lines, etc.

Advanced User Station

The Advanced User Station provides a menu-driven Man-Machine Interface, especially for Commanders and other high-profile users. The frequently used system services are accessed by a single key action. Scroll-down menus give access to the advanced features, such as telephone emulation.

Tactical Access Unit

The Tactical Access Unit is designed with flexibility and ease-of-use in mind. The unit allows four option cards to be selected from a large collection of options. The Human Machine Interface allows the user to select advanced functionalities with the push of a button. The unit allows total control of the local and of remote units, and can deliver extremely high performance to individual end-users. This clearly is one box to build a system.



SMARTNET

Technical Specification

Optical interconnections:

Multimode dual fibers : 1310 nM
Ruggedised connectors

Option modules:

Audio for : Headsets
Handsets
Radio equipment
Public announcement
Entertainment systems

Data interfaces for:

RS232
RS422
X.21
Ethernet (10BT, UTP or STP)

Video interface for analog signals:

PAL
NTSC

ISDN interfaces:

Basic Rate, both subscriber and PBX side
Primary Rate

Telephone Systems:

Subscriber access interface
PBX interface

Field Telephone interfaces

Management Information Systems:

Equipment configurator
System configurator
Maintenance tools (incl. extensive built in test access)
Network management solutions

Quality Assurance

Thales Communications B.V. obtained the international quality certificate ISO-9001/AQAP-110 for all its processes. In 1995 the AQAP-150/Tick-It certification was achieved for Software Design and Development. Since June 2000, the company has been certified to be compliant with level 3 of the Software Engineering Institute's Capability Maturity Model.

SMARTNET is just one of an outstanding range of military and civil communications products from Europe's leader in electronics. These products cover Radiocommunications, Electronic Warfare, Security and Spectrum Management applications.

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