

# MARITIME COMMUNICATIONS

Integrated Communications System (ICS) with APCOS®5000\*)

## APCOS®5000 - Advanced Platform Communication System®5000:

Internal / External Communications System based on Ethernet standards. Routing and Switching of voice and data communications and control signals.

### SSDN - Secure Software Defined Network **NEW!**

- Security Level Separation (more than just two levels)
- System Expandability (Future proof)
- Network Consolidation (less cabling)
- Mission Specific System Reconfiguration

### VCT - Voice and Control Terminal

Voice and Control Terminals are user terminals located throughout the ship. They provide the user with access to the ship's internal and external communications facilities and also with control capabilities.

### Node

The APCOS - Nodes route dynamically the entire flow of the payload and control signals among the system and links the peripheral communication equipment to the backbone. The Nodes will heal the backbone by reconfiguration in case of faults.

### TAU - Terminal Adapter Unit

Terminal Adapters (TAs) interface the attached communication equipment to the APCOS® 5000 system.

\*) Predecessor System APCOS®4000 installed on the German Frigates Class "F125" and Chilean Submarines Class "Scorpene"

## COSYMA - COMMUNICATION SYSTEM MANAGER

- System and Network Management and Control
- Control of Radio Devices and other Communication Equipment

## Military Message Handling System (MMHS) - SAMMS®7 - Secure Automatic Military Messaging System

- Conformant to military messaging protocols ACP127/ACP128
- Transmit and Receive messages in a LAN environment
- Integration with other systems
- Multilingual support (incl. Arabic)

## Submarine Antenna Systems:

- **AT-4000 Series** - Multifunctional Antenna System
- **AT-5000 Series** - UHF-SATCOM - DAMA Multifunctional Antenna System
- **AT-7000 Series** - Multifunctional and Military Intelligence Antenna System **NEW!** with **Dual Interface**, a Signal splitter to connect any Radio-, Signal Analyzer/Recorder System
- **RFDU** - Radio Frequency Distribution Unit (Tx-Rx)



## FEATURES:

- ❖ Integrated Communications System (ICS) - suitable for all classes of vessels and submarines
- ❖ Submarine Antenna Systems - for mobile applications with limited space, especially on board of conventional submarines

# MARITIME COMMUNICATIONS

Integrated Communications System (ICS) and Submarine Antenna Systems

# MARITIME COMMUNICATIONS SYSTEM

**Integrated Communications Systems (ICS)** provide ultimate convenience for all tactical and administrative communication tasks, custom-made for naval vessels of any type or size – from patrol boat to destroyer and on submarines. The **APCOS® 5000** decentralized switching platform is developed to meet the latest

requirements for a digital communications network. The associated control software **COSYMA (COmmunication SYstem MANager)** provides sophisticated and comprehensive system control. AEROMARITIME's variety of **Submarine Antenna Systems** is designed to be used under extreme conditions, in confined spaces and for various applications.

- APCOS® 5000 consists of**
- Network Nodes
    - › for building and keeping the backbone
    - › interconnected via redundant network links
    - › connected to Terminal Adapters (TA) via unified digital interfaces
  - Terminal Adapters (TA) for the Adaption of the external Terminals
  - Voice & Control Terminals (VCT)
    - › for internal and external voice communications and control functions
- The Network Nodes are interconnected by a dual FOC ring to guarantee a maximum of survivability of the system in case of cable breaks or Node faults.

**APCOS® 5000**  
**Advanced Platform Communications System with Communication System Manager COSYMA**

Node



VT

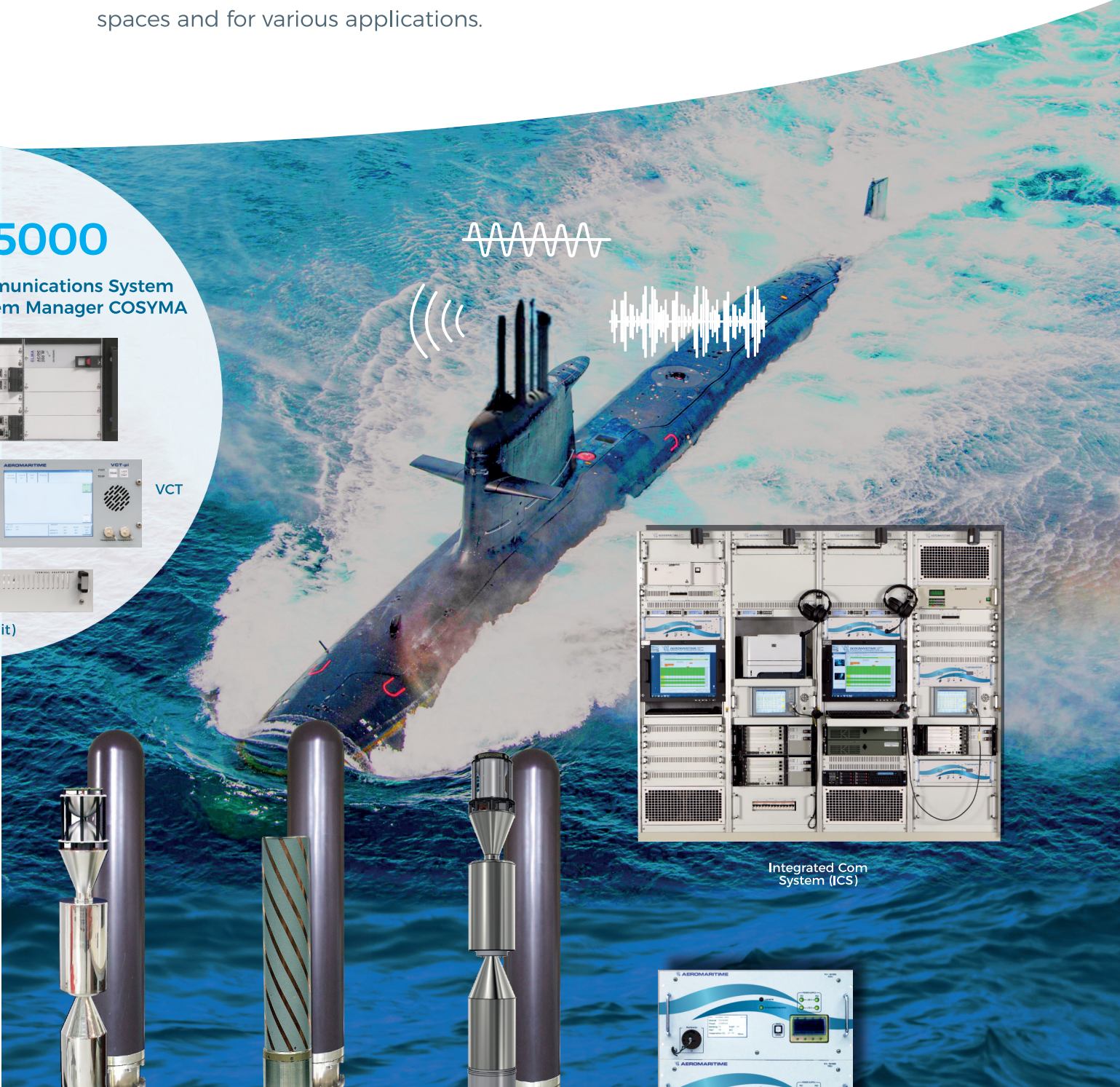


VCT



TAU (TA Unit)





Integrated Communications System (ICS)



Integrated Com System (ICS)



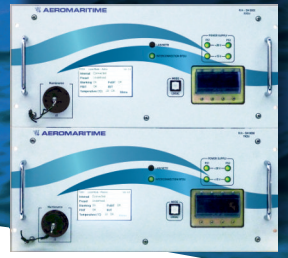
AT-4000 Series Multifunctional Antenna



AT-5000 Series UHF - DAMA SatCom & Multifunctional Antenna



AT-7000 Series Multifunctional & Military Intelligence Antenna



RF-Distribution Unit (RFDU)