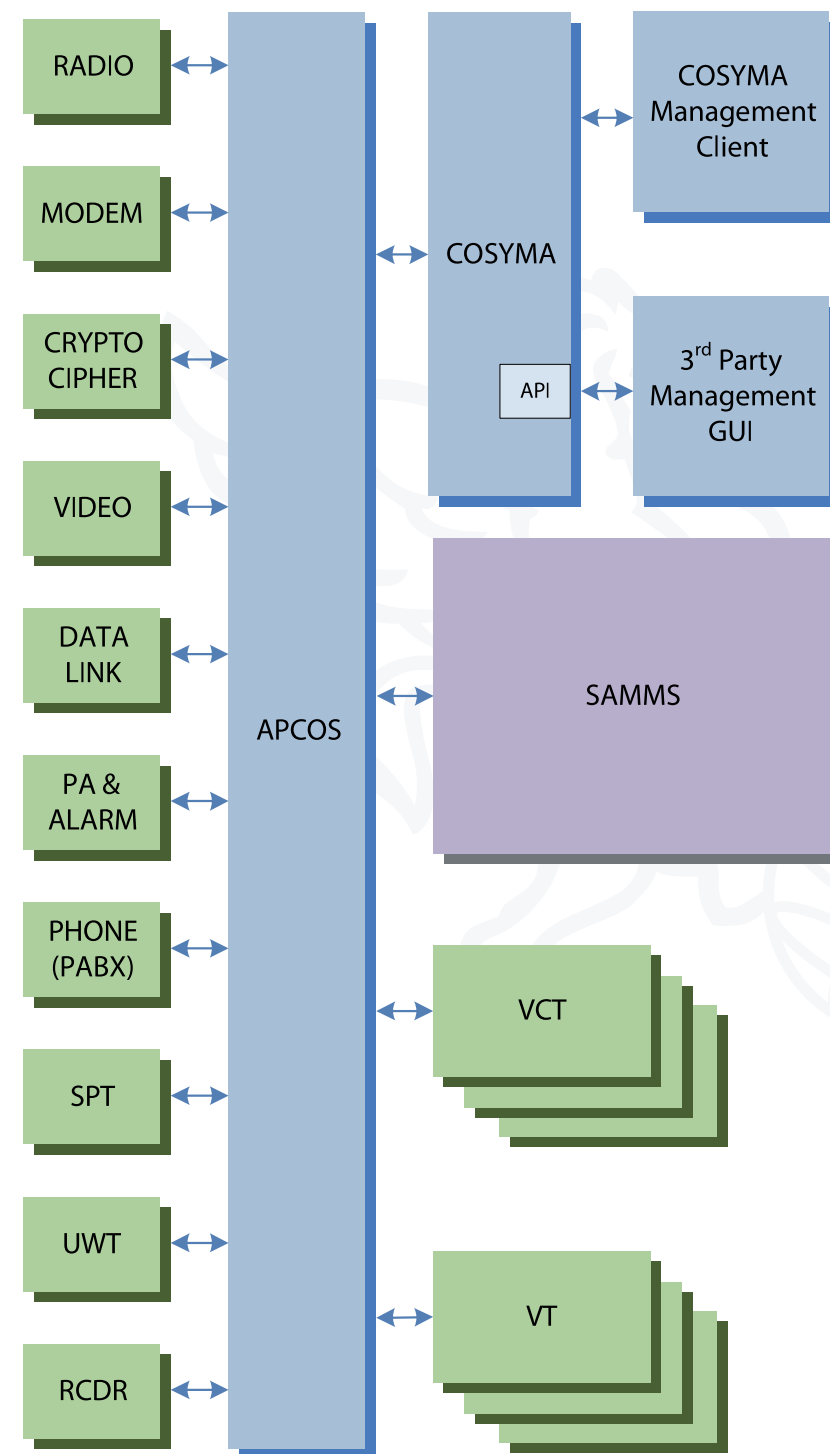


APCOS® 4000

System Architecture



SCAN ME



AEROMARITIME



FEATURES:

Mission-critical data, voice and video communications system

- External tactical voice communications with any kind of radio system
- Internal communications
- Routing and switching of voice, data and control signals
- High availability
- Reduced manpower, decentralised operation
- Effective system integration

APCOS® 4000

Advanced Platform
Communications System

APCOS® 4000

APCOS® is a high available, reliable switching communications system for data, voice and video. The secure separation of confidential information is standard either on logical or physical level or in combination. The network is designed to fulfill deterministic and packet oriented requirements. APCOS® is a non-blocking network which can be scaled to any capacity needs.

ADVANCED FEATURES

Scalability

- Applicable small up to very large sized systems (from submarine or patrol boat to destroyer)

Modularity

- Flexible mixture of analogue and digital user interfaces
- Gateways are easily adapted to any required communication device
- Investment protection by usage of standard interfaces and ease of extensibility

Fault Tolerance

- Redundant fiber-optic connections between nodes and switches for high fault tolerance
- Continuous availability of devices in the event of a failure to be achieved by the connection of equipment to independent nodes (dual homing)
- No single point of failure

Configurability

- Easy and intuitive setup and recall of mission specific configurations.
- Remote control of devices
- Definition, storage, and activation of presets

Integration Aspects

- Slim robust 19" customized rack design for reduced footprint and less weight
- Extensive use of fiber optic cables for less weight and maximum EMI robustness
- More than 40 years and 650 systems experience in vendor-independent systems integration

INTERNAL COMMUNICATION

APCOS® offers intercom voice connections for point-to-point, point-to-multipoint and conferencing. There are no limitations regarding connectivity and capacity. The communications matrix is software defined. Participants of conferences are dynamically configurable by the operator. APCOS® user stations can interface to any other telephone networks and 3rd party communication equipment

EXTERNAL COMMUNICATION

External communication lines can be assigned to any user station by the system management. External data channels for serial line or IP-connections are available according to the communications matrix. Unrestricted multivendor support.

SYSTEM MANAGEMENT

APCOS® is controlled by the COSYMA "Communication System Management" application via a graphical user interface. Any operator station may be equipped with a communication control client. Various settings for the communications matrix can be stored. Presets are quickly accessible for naval operation scenarios. COSYMA includes remote control for radios and other communication equipment. Frequency management is available for propagation prediction, multiple radio scenarios, frequency spacing and output power. An API is available to easily connect a customer-furnished management system or user interface.

GATEWAYS

Equipment - e.g. radio, modem, crypto or cipher - is connected to APCOS® by the use of generic gateways for voice, data and device control to fulfill communication requirements such as:

- Secure Voice as narrowband or wideband
- ESM- or Sonar-audio
- Data Link e.g. Link-11, Link-22, Link-14, Link-Y
- MMHS synchronous and asynchronous data
- STANAG 5066, STANAG 4406
- E-Mail, Chat, File transfer
- EPM-Mode e.g. HQ, HQII, SATURN, HF-EPM, Link-22

APCOS® is ready to connect any communication equipment, not limited to specific manufacturers.

OPTIONAL FUNCTIONALITY

Additional system interfaces or functionality are available, e.g.:

- Ship's Telephone (PABX)
- Public Address and Alarm (PA)
- Underwater Telephone (UWT)
- Sound/Self Powered Telephone (SPT)
- Flight Deck communication, wired or wireless
- Voice Recorder (RCDR)
- Video applications e.g. CCTV, conferencing (VIDEO)
- Secure Automatic Military Message System (SAMMS)

VOICE AND CONTROL TERMINAL (VCT)

VCT user stations may be configured for internal and external communication as well as radio control. The VCT is operated via a user-friendly GUI in softkey technology.

To fulfill different system integration aspects, the following VCT types are available:

- Voice and Control Terminal - indoor (VCT-i)
- Indoor bulkhead/wall mount
- Voice and Control Terminal - console, indoor (VCT-pi)
- Indoor rack/console mount (19" or customer-specific size)
- Voice and Control Terminal - outdoor (VCT-o)
- Outdoor bulkhead/wall mount

All VCT types support:

- Headset split operation of external and internal communications
- Monitoring of wideband audio

- Remote control of radios
- Individual collection of most needed communication keys on one page (favorite page)
- Control of access rights via personal login
- Loadable role-specific user profile

VOICE TERMINAL (VT)

VT user stations are designed for internal communication.

- Voice Terminal - indoor (VT-i)
- Compact design
- For indoor bulkhead/wall mount



VCT-i, indoor bulkhead/wall mount



VCT-pi, indoor rack/console mount



VCT-o, outdoor bulkhead/wall mount



VT-i, indoor bulkhead/wall mount