



SEICAM[®] 5000

IP-based Digital Audio, Video and Data Distribution

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Hear. See. Understand.



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Next Generation Design

In response to customer requirements and stimulated by the progress in and the availability of broadband IP network technologies, Hagenuk Marinekommunikation presents SEICAM® 5000 – the next generation of advanced integrated communications distribution system. SEICAM® 5000 not only supports traditional services but also interfaces to other IP-based subsystems. It provides a generic decentralized broadband IP network infrastructure for external / internal communications for naval ships, supporting all kinds of concurrent digital audio and data distribution services.

Features

Intelligent and compact user station

- Touch screen operation with 6.5" colour TFT display
- Split mode for external / internal operation
- MMI with optional country specific language incl. Asian and Arabic
- User specific desktop
- Desktop available as application software for PCs

Reduction of cabling due to equipment-to-bus (EBI) concept

- Distributed bus sockets for direct equipment access to radio network
- No network interruption in case of equipment failure
- Standard interfaces with ports for audio, data link, keying, equipment remote control, synchronous data and auxiliary functions

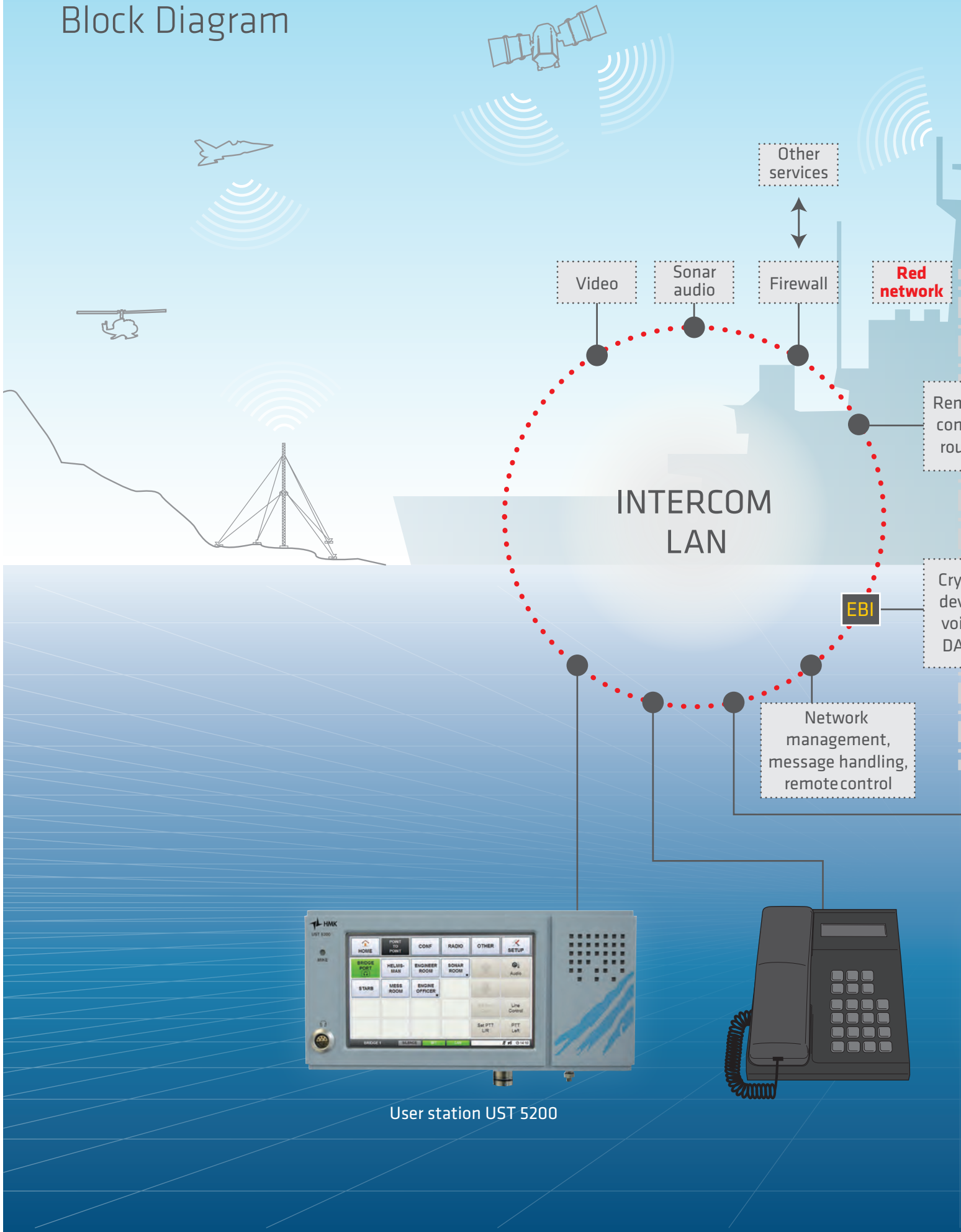
Flexible and decentralised system architecture

- Radio Network for access to radio facilities
- Intercom LAN with interfaces to other ship subsystems
- Hierarchical security layers over firewall if required
- Network management system for configuration, monitoring and control
- Utilisation of existing IP backbone systems

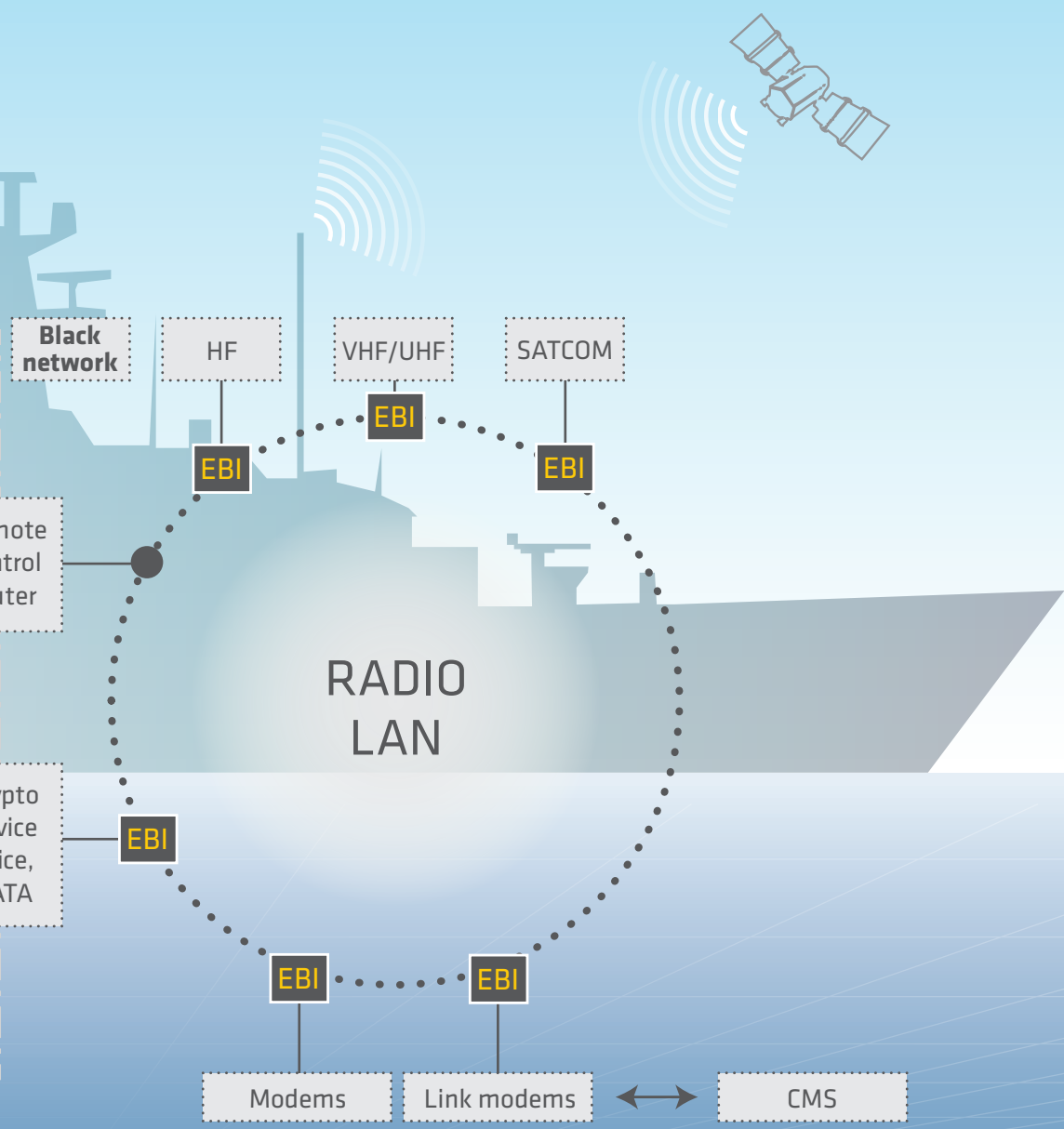
Multi-services broadband IP infrastructure

- Based on standard protocols
- Capable of secure exchange of voice/ audio, data/multimedia and video

SEICAM[®] 5000 Block Diagram

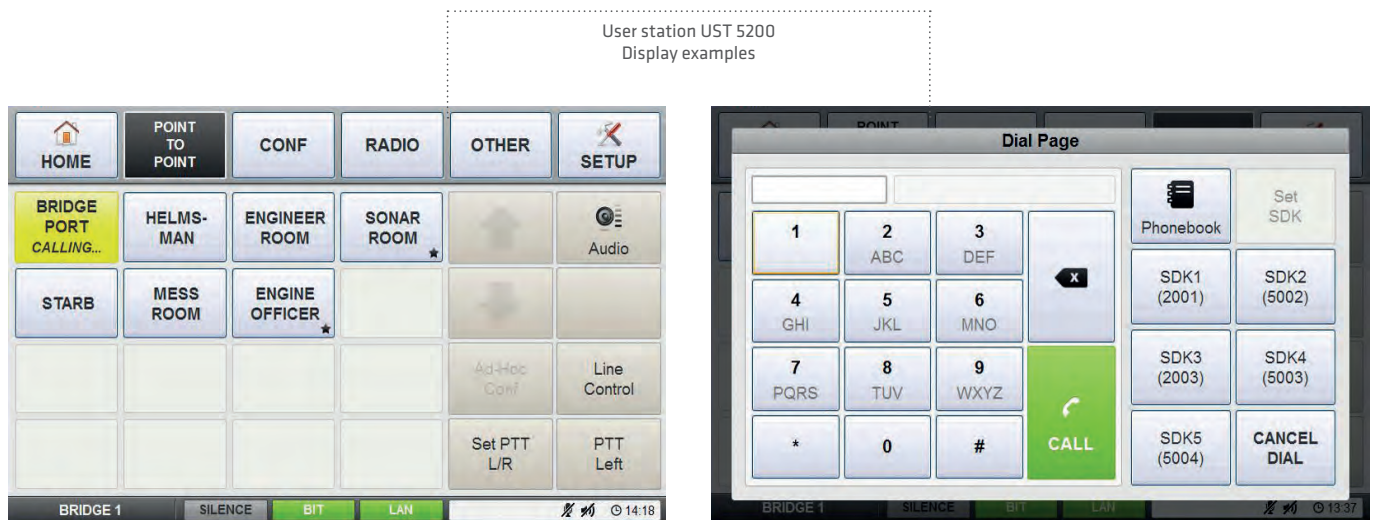


User station UST 5200



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Advantages for the Customer



In addition to traditional voice, audio and data distribution, SEICAM® 5000 is designed to integrate new IP-based services such as TV/video monitoring, video conferences and audio / video on demand as well as other multimedia services. The technological advantages of SEICAM® 5000 are based on its flexible IP/VoIP-capable infrastructure. Thus, the system easily can be extended to new and future IP services.

SEICAM® 5000 provides switching and transmission of all kinds of data. This includes asynchronous and synchronous data for tactical, administrative and entertainment communications, but also time-critical signals such as PTT for radio control.

Due to the intrinsic IP technologies, seamless interoperability with the ship's IP backbone net and IP environment is guaranteed. Thus, SEICAM® 5000 supports the ship's platform integration into the growing IP community which is considered a must for the scenarios emerging from various network centric warfare (NCW) / network enabled capabilities (NEC) concepts.

Using virtual private network (VPN) technology, each connected system will get dedicated data and services. Firewall technologies are applied to isolate SEICAM® 5000 IP domains or zones from unwanted data from other ship interfaces which may also be connected.

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Technical Data

BROADBAND MULTI-SERVICES CAPABLE INFRASTRUCTURE

- VoIP-based tactical intercom (point-to-point and conferences)
- External radio communications (voice, data link, data, emission control, crypto and modem routing)
- Video conferencing
- Message handling
- Radio remote control
- Interfacing to optional subsystems such as:
 - Public address system
 - Sound powered system
 - Dialed telephone service (PABX)
 - Underwater telephone system (UT)
 - Wireless communication system for fire fighting and damage control e.g. TETRA or TETRAPOL
 - Closed circuit TV system (CCTV)
 - Voice recording system
 - Multimedia entertainment system (TV, video, audio)
 - Combat management system (CMS)
 - Standard interfaces with ports for audio, data link, keying, equipment remote control, synchronous data and auxiliary functions.

BRIEF TECHNICAL DATA

- Services: audio, TDL data, other data, video
- IT/COM-Security: physical red/black separation, VPN and firewall technologies
- Number of tactical user stations: more than 500

- Radio Network
 - Fast Ethernet technology with isochronous transfer
 - Radio bus data transfer rate: 100 Mbps
 - Number of equipment interfaces: up to 240 EBIs

- Intercom LAN
 - Technology: gigabit Ethernet
 - Medium: fibre optic or copper backbone
 - Multi-user audio conferencing: up to 128 participants in each conference
 - Multiple conferences: audio (standard), video optionally

- Environmental conditions
 - Shock: acc. to BV 0430
 - Vibrations: acc. to BV 0440
 - Operating temperature: -10°C to +55°C
 - Humidity: max 95% at 40°C
 - IP 56 housing for outdoor user stations
 - EMI / EMC acc. to MIL-STD-461E

User station UST 5200
Sample configuration



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A company of the ATLAS ELEKTRONIK Group