



# SEICAM<sup>®</sup> 5066 IP-based HF Messaging System

**SEICAM  
5066**

IP-based HF Messaging  
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# SEICAM<sup>®</sup> 5066 – IP-based HF Messaging System

The Hagenuk IP-based HF messaging system SEICAM<sup>®</sup> 5066 provides for IP connectivity over HF links and accommodates key services for the participation in national and international network centric warfare. The system is based on the NATO standard STANAG 5066 which describes a “Profile for Maritime High Frequency (HF) Radio Data Communications”. It caters to reliable and adaptive data communication over HF radio links and defines interfaces of a node to a range of sub-networks for various IP-based services.

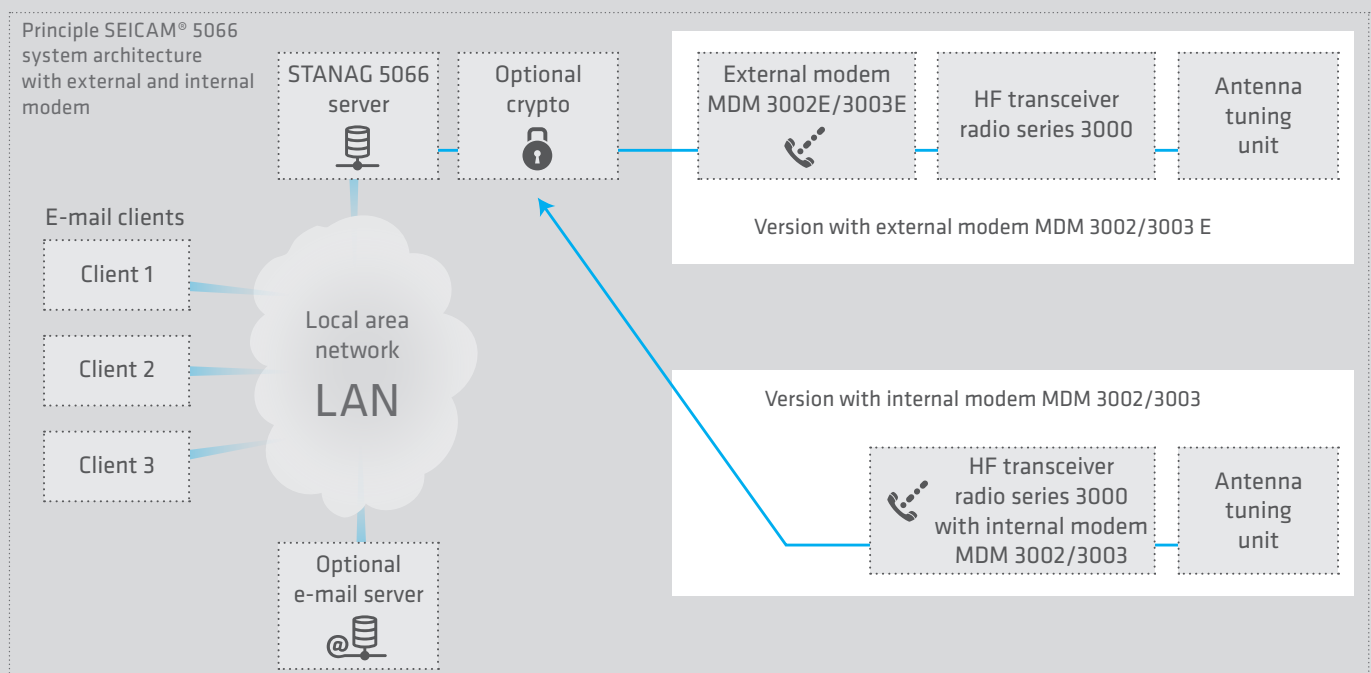
## FEATURES

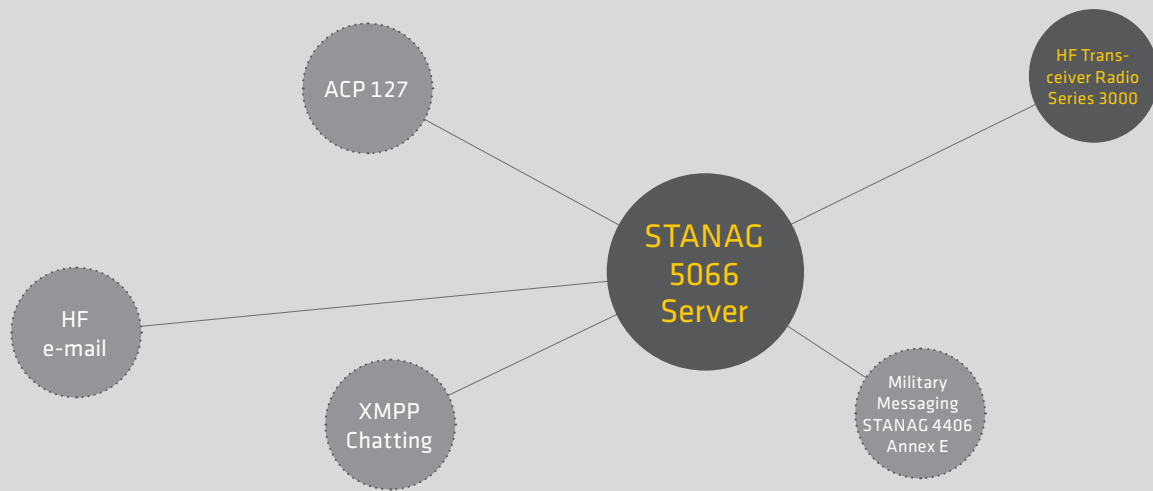
SEICAM<sup>®</sup> 5066 is an optional part of the HF Radio series 3000

- Compliant with the international standard STANAG 5066
- Deployable at mobile (i.e. ships) and fixed installations (shore stations)
- Extendable to distribution over Internet based wide area network
- Compliant with MIL-STD-188-110A and B
- Using up-to-date adaptive waveforms and ARQ for quick and error free data communication
- Automatic managed transmission data rate depending on link quality
- Highly scalable
- Integrated e-mail server but configurable for external e-mail servers
- Point-to-point and broadcast operation
- Automatic anti collision management
- Fully supporting 2<sup>nd</sup> and STANAG 4538 3<sup>rd</sup> generation automatic link establishment (ALE) if used in conjunction with the HF radios 3000 series of Hagenuk Marinekommunikation

## FEATURES

- Reduced training needs by using COTS/ MOTS client software (Outlook, Thunderbird etc.)
- Cost-effective offline encryption by implementation of plug-in software (i.e. PGP or open source GPG, Verisign) for e-mail clients
- Optional online encryption by means of standard data crypto equipment and by use of optional synchronous serial interfaces
- Radio sharing: One SEICAM<sup>®</sup> 5066 node may be shared on a LAN by multiple users and for all available services (STANAG 5066 e-mail, STANAG 4406 Annex E, XMPP and ACP 127)
- Maximum throughput: ARQ, compression on the fly and dynamic negotiation of modem data rate ensure errorfree data at the maximum possible data rate
- Fully supports Hagenuk HF equipment and software
- Supported OS: Windows 7





### OPTIONAL SUB-NETWORKS

The following services are supported by SEICAM® 5066, selectable as required. They can be accessed and used simultaneously:

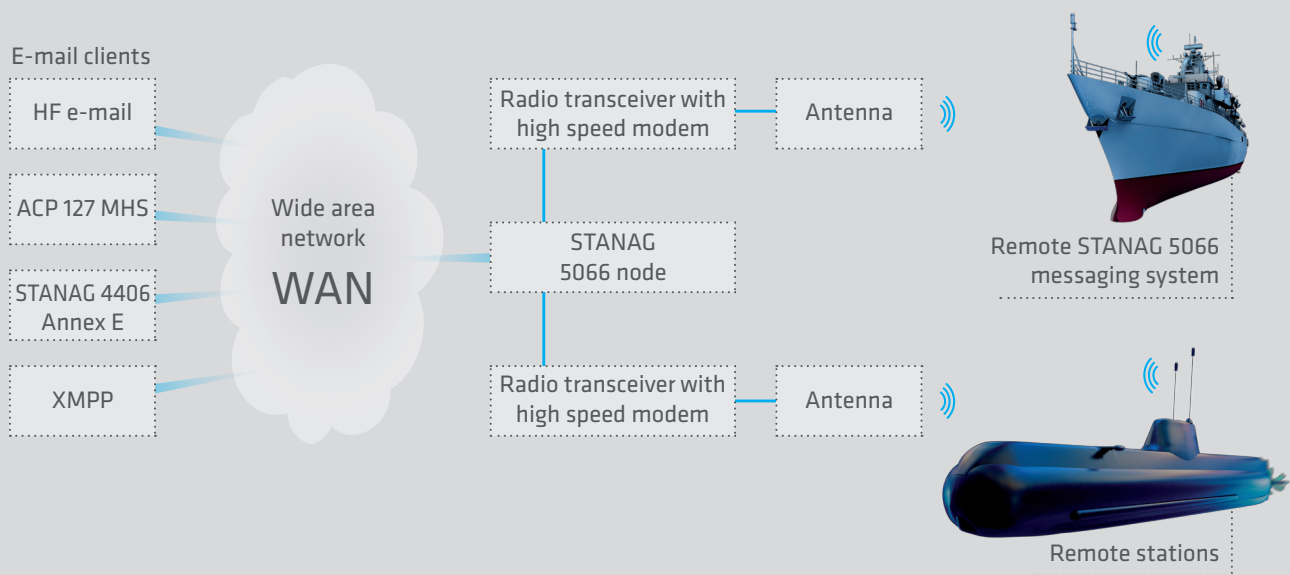
- **HF e-mail acc. to STANAG 5066** communication by utilizing standard SMPT/POP3 e-mail clients
- **Formal military X.400 messaging acc. to STANAG 4406 Annex E (Pmul)**
  - a protocol for reliable messaging in bandwidth constrained and delayed acknowledgement environments. This service extends the terrestrial X.400 network to wire less short and long range deployments and uses the ACP 142 protocol to provide unicast and multicast messaging in the HF environment under EMCON (emission control) and priority conditions
- **ACP 127** service is a formal messaging protocol standard realized by means of dedicated radio teletype technologies. It can be integrated as a service in SEICAM® 5066
- **XMPP** (Extensible Messaging and Presence Protocol) is an instant informal messaging service used extensively on the internet and is now made available over SEICAM® 5066 as a client-server application

### SYSTEM ARCHITECTURE

The SEICAM® 5066 architecture is based on following components:

- 3000 Series HF transceiver (150 W TRX 3015, 500 W TRX 3050 or 1kW TRX 3100) with antenna
- External modem MDM 3002/3003 E or built-in modem MDM 3002/3003
- Windows based computer with serial and LAN interface
- STANAG 5066 server software SEICAM® RC 66-H
- Optional XMPP server software
- A set of distributed clients
- Standard SMTP/POP3 e-mail client like Outlook or Thunderbird for HF e-mail
- Outlook client with STANAG 4406 plug-in for military STANAG 4406 Annex E messaging
- XMPP client for chatting
- ACP 127 client or subsystem like the HMK SEICAM® 2000 MHS software package for formal messaging

Principle of a data communication / messaging infrastructure based on SEICAM® 5066



## Contact

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