

RC66 RapidM Combat Communications Suite

STANAG 5066 HF e-mail



HF e-mail standards

- STANAG 5066 Annex F
- CFTP Client (Compressed mail)
- HMTF Client

Internet e-mail

- Microsoft Outlook™ Compatible
- SMTP, RFC 2821

ARQ Data Protocol

- STANAG 5066 protocol V1.2
- Automatic Data Rate Change
- Automatic Link Maintenance
- Interoperable with S5066 Compliant Implementations

Platforms

- Windows™ 2000, and XP

Secure OTA Transmissions

- Crypto Support
- ALE Linking Protection
- RM6 Security Processor

HF e-mail Communications

The **RC66** RapidM Combat Communications Suite provides the ability to send and receive e-mails efficiently and reliably over HF radio links and the Internet. **RC66** simplifies the task of setting up the HF Network, integrating Internet and HF e-mail seamlessly. **RC66** is compatible with standard e-mail applications like Microsoft Outlook™, which is used by the user to read and write e-mails. Additionally, the **RC66** informs the user about HF e-mail transmission success/failure via confirmation e-mails.

RC66 contains a STANAG 5066 ARQ protocol stack that provides interoperable, networked, error-free and efficient communication over HF radio links. The **RC66** suite is demonstrably interoperable with STANAG 5066 e-mail clients of other leading vendors.

Compressed mail via CFTP

RC66 increases throughput by means of RFC 1952 standardized compression as mandated by STANAG 5066 Annex F (CFTP).

The CFTP supports prioritization of e-mails, sending higher priority e-mail first. Should the transmission of an e-mail be interrupted or preempted by a higher priority e-mail, the interrupted e-mail will be resumed at an appropriate time.

ALM and Data Rate Change

RC66 uses the optional **ALE** function of the **RM6** modem to enable multi-frequency operation.

RC66 continually maximizes throughput by monitoring the signal quality and adjusting the data rate in accordance with the link quality. If the radio channel is no longer viable for communication the **ALE** is used to select a different channel for continued communication (ALM channel change).

RC66 GUI

- Assisted Network Configuration
- E-mail delete/re-prioritize
- E-mail throughput/utilization
- Channel status (SNR, BER)
- Radio status, S-meter, VSWR

The **RC66 GUI** assists the HF Network Administrator to define a hierarchical HF Network layout without complexities associated with ALE and STANAG 5066. **RC66** allows HF Network configuration to be updated when new nodes are added or removed.

The **RC66** structures status information to allow the user to pinpoint faults, failures and inefficiencies in the HF Network.

Operational Modes

- ARQ Mode
- Broadcast Mode
- Voice Mode
- Radio Silence Mode

RC66 gives the user complete control to use the radio for data or voice transmission as required by the user. The **RM6** has the ability to sense the PTT signal allowing the **RC66** to automatically stop data transmission when the user uses the radio for voice transmission.

RM6 ALE Function

The **RM6 ALE** function provides MIL-STD-188-141B App A and B compliant Automatic Link Establishment with Linking Protection. **RM6 ALE** is utilized by **RC66** to provide the user with Multiple Frequency HF Network capabilities. The **RM6 ALE** setup is automatically derived by the **RC66** from the HF Network configuration.

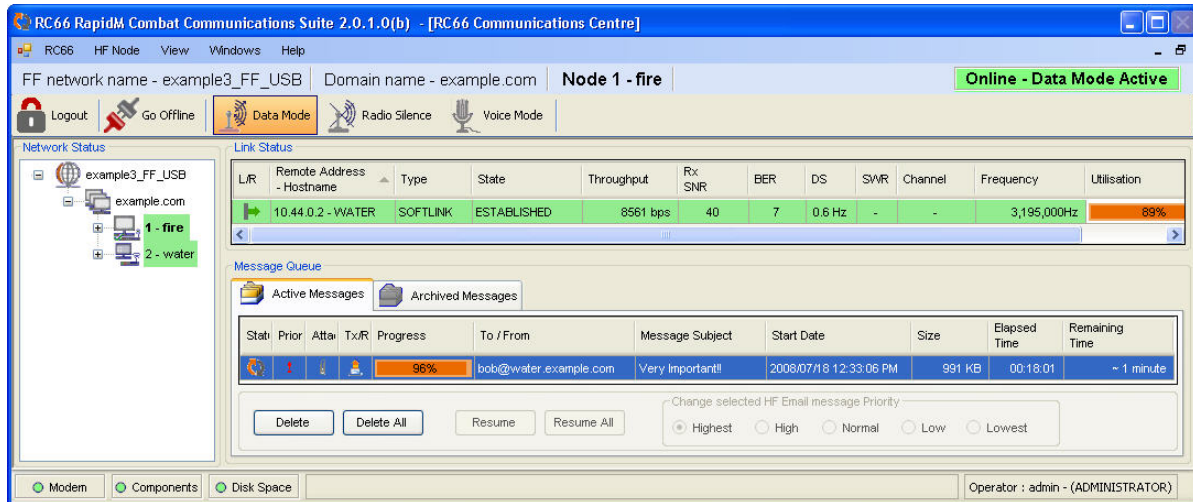


Fig 1: RC66 RapidM Combat Communications Suite GUI

CATEGORY	CAPABILITY
DATA LINK PROTOCOLS	STANAG 5066 (Annex A, B, C)
STANAG 5066 STACK	ALE (MIL-STD-188-110B Appendix D, E) ALM (Automatic Link Maintenance) DRC (Data Rate Change) ARQ (Automatic Repeat on Request) and Non-ARQ mode Radio Silence mode Supports 2ISB Collision Avoidance and Recovery
SECURITY	End-end email encryption support (S/MIME, PGP) External Crypto support
NETWORK PLANNING & CONFIGURATION	Network wide 5066/ALE Addressing HF frequency planning & selection Hardware configuration HF Network reconfiguration Only authorized configuration changes
HF MESSAGING CLIENTS	CFTP: Compressed File Transfer Protocol (STANAG 5066, Annex F) PCFTP: Priority CFTP BCFTP: Broadcast CFTP HMTP: HF Mail Transfer Protocol (STANAG 5066, Annex F) BHMT: Broadcast HMTP
LAN EMAIL CLIENTS	POP3 (RFC 1939, excluding APOP) SMTP (RFC 2821, excluding authentication)
HF MESSAGE MANAGEMENT	Message resumption (CFTP) Message grouping to destination Priority-based message queuing Message filtering Store & forward Message delivery status notification
MODEM INTERFACES	RM-SC RapidM Synchronous PCI Card <ul style="list-style-type: none"> o Data (DTE): Synchronous/Asynchronous, RS 232/422/423 o Modem control (REM CTRL): Asynchronous, RS 232/422
HF MODEMS	RapidM RM6 HF Modem & ALE Controller <ul style="list-style-type: none"> o Supports MIL-STD-188-141A (ALE), ALE Linking Protection (LP) & Occupancy Detection o Waveforms: <ul style="list-style-type: none"> o MIL-STD-188-110B o MIL-STD-188-110A o MIL-STD-188-110 ACF (2ISB) o STANAG 4539 o STANAG 4285 (only for non-ARQ) o STANAG 4529 (only for non-ARQ)
HF RADIOS	See RM6 User Manual

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