SELEX Communications
A Finmeccanica Company

THAMER

THAMER is a low cost, High Grade, point-to-point link encryptor that provides protection for data up to TOP SECRET Codeword.

The THAMER equipment can be integrated easily into most of the commercial bearer systems, including the most commonly available narrow band and broadband systems.

The THAMER unit has been designed to reduce management intervention through life costs to a minimum. After installation, which takes a few minutes, the system can be left to manage its own security updates through key exchange and re-synchronization (when necessary) for its entire life. Reliability is particularly impressive and the small, unobtrusive unit can be placed either in a desktop position or can be rack mounted along with other systems.

The THAMER unit employs tamper protection and detection methods which, when combined with the removal of the small access device, enable the device to be left unattended in a secure area. The CESG designed crypto Key Generator uses the most modern key management process that requires no manual intervention after installation and initial synchronisation. Key exchange and distribution is conducted automatically and effortlessly on a 'as required' basis. This is a significant contribution to the very low cost of running and managing the THAMER system.

THAMER comprises a main unit into which Line Interface Modules (LIM's) are installed. These are dependent on the intended use and type of bearer system required. The modular design of THAMER means that individual units can be quickly and easily reconfigured with different LIMs at the User level. A separate power supply unit completes the system.

An Enhanced User Interface (EUI) management port is provided on all THAMER systems to provide a remote capability for control or monitoring of additional status information, if required.

THAMER features

> Fully Secure
> Cost effective
> Fast up to 2.048 Mbits/s
> Flexible and easily expandable

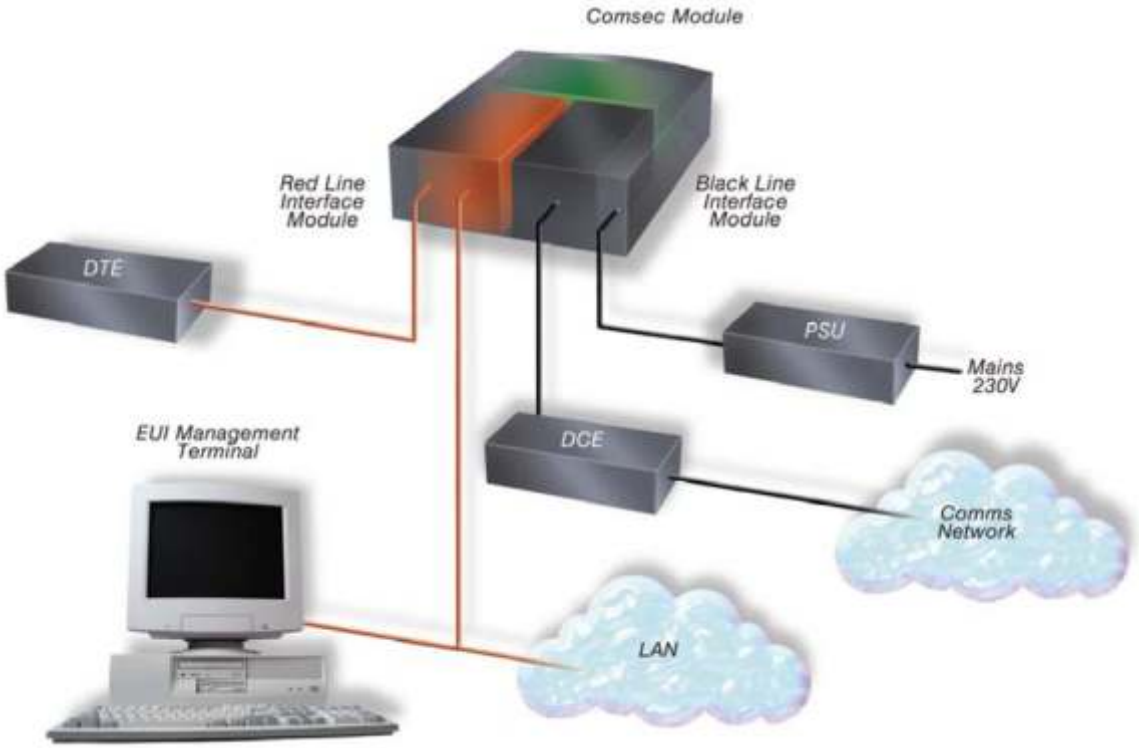
Ease of use

> Simple access control device
> No routine key changes
> No controls
> No need to lock it away
> Fit and forget

Key management

To facilitate low support costs, THAMER provides fully automatic key generation between each pair of equipments using Public Key Cryptography (PKC). Once a link is established the equipment can be left to operate without further intervention.

When operating at the maximum data rate of 2.048 Mbits/s, this key management system requires access to the data channel once in any 4 day period for the PKC exchange, for a maximum of ten seconds.



Access control

To enable operation of THAMER, each equipment requires an access control device (CIK). These devices are produced in pairs by CESG. During the PKC exchange, a key variable is generated which is used to protect the subsequent PKC exchange. This variable is stored in two parts, one inside the THAMER unit and the other on the removable access device.

The PKC exchange binds a THAMER equipment to its own Access Control Device and to its partner at the other end of the communications link. However, should either equipment need to be redeployed or an unrecoverable fault occur, then the equipment can be re-initialised by the insertion of a new pair of access control devices.

Interfaces

The THAMER unit connects to the outside world via two plug in modules, one on the red side and the other on the black side of the unit. Various interface modules are available including RS-232,V11 and G703, allowing the user to select the exact configuration required without the expense of additional unwanted options. Each module is colour coded and provided with an indicator bar which, when attached to the front panel of the THAMER, provides a visual indication of the configuration. This facility is particularly useful when multiple THAMERs are mounted in a 19" rack.

Enhanced user interaction

An enhanced user interface management port is available which provides additional control and status information for the equipment. This red port is presented on an RS-232 serial interface or via SNMP protocols presented on an Ethernet connection.

The RS-232 asynchronous interface communicates with a controlling terminal equipment device. The THAMER red processor provides a simple device to allow operational parameters to be modified.

The SNMP Ethernet option provides direct control of THAMER by a standard SNMP manager application, allowing fully automated remote operation of a suite of THAMER units. The SNMP manager application can remotely update THAMER system parameters and request status information. In addition, the THAMER unit can inform the manager of important status changes such as alarm conditions.

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