

ACAMS CAT III Status Monitor Module

General

The ACAMS product is a computer system providing an integrated and homogeneous solution to the basic monitoring and control as well as aeronautical information requirements of an airport tower.

The first ACAMS system was developed for the Norwegian Civil Aviation Authority (NATAM) in 1998/99. This new concept proved itself well and is now installed at 9 airports in Norway.

Functional Description

The ACAMS CAT III Status Monitor module provides the user with a continuous monitoring of the various nav aids, meteorological, and runway lighting equipment operational status.

The status of each equipment is indicated using a combination of colours and text. In the event of a status change a visual and audible alert (if enabled) is provided

Based on the status signals of the individual equipments, the Status Monitor module automatically calculates the operational category for the systems. If degradation in the operational category occurs, a visual and audible alert will be given. After a fault has been cleared the status of the individual equipment will be updated automatically but the category status will only be upgraded after manual intervention.

The operator may choose to hide equipment which is OK and only show fault equipment status. Status information is presented in real time.

The module may be optionally integrated with the ACAMS Data Logging module. System events and monitored data are time stamped and stored in a database.

- ✓ Nav aids equipment status changes
- ✓ Meteorological equipment status changes
- ✓ Runway lighting system status changes
- ✓ Operational category status changes
- ✓ System error events

The information can be retrieved and analysed when required.



Example HMI

ACAMS CAT III Status Monitor Module

System Architecture

The ACAMS system is made up of COTS components with the main processing being performed by PCs in a client/server configuration. A Programmable Logic Controller (PLC) is used to interface to the various external systems. The components are interconnected using an Ethernet network.

The system may include a database for data logging and efficient management of the information stored in the system.

The server is typically installed in a 19" rack in the technical room with the associated Technical Control and Monitoring (TCM) terminal. The rack will also house the PLC equipment.

A Client PC is typically installed in the tower cabin integrated with a 12" LCD flat screen touch panel.

ACAMS client monitors are based on COTS equipment allowing the use of the latest state of the art monitors thereby providing the best Human Machine Interface.

For real time monitoring functions a distributed client processing architecture is utilised providing high reliability and rapid response time.

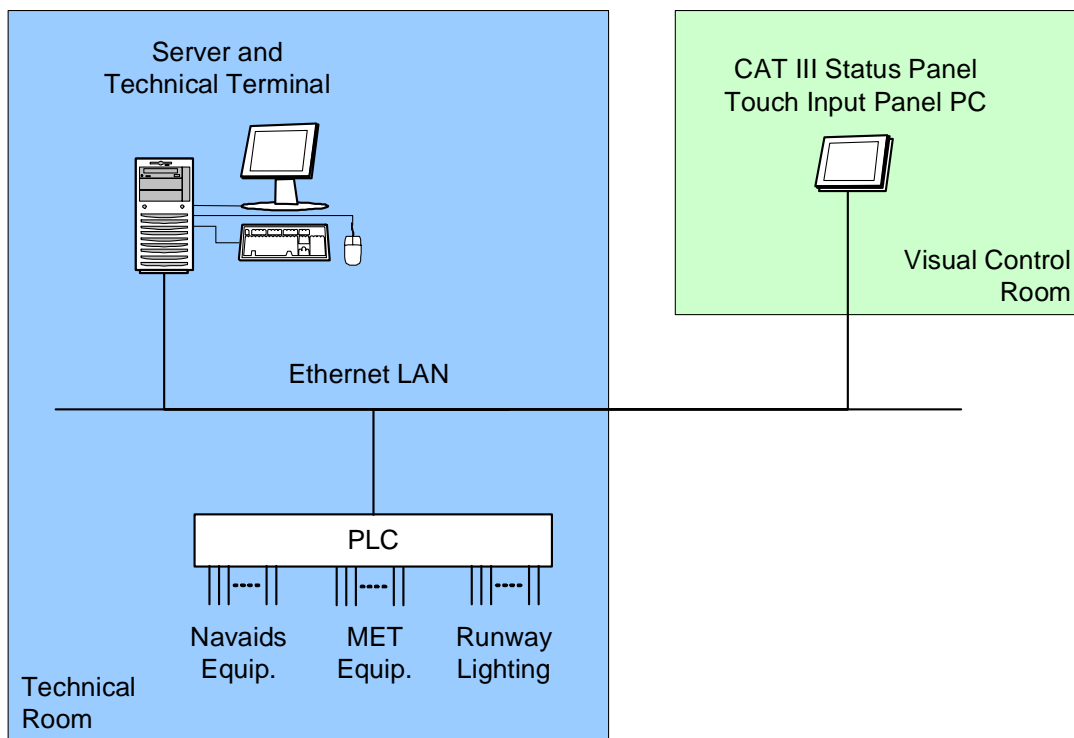
The ACAMS software is implemented using a modular and flexible architecture which allows the HMI to be tailored to individual customers' requirements. Text language, colours and shaped of the HMI may easily be adapted and modified.

Optional Expansion

The system may be easily expanded with additional hardware and/or software in order to provide the following functions:

- ✓ Airfield Lighting Control
- ✓ Meteorological Information Display
- ✓ ATIS
- ✓ Publications
- ✓ Maps
- ✓ Directories
- ✓ AFTN Display
- ✓ Direction Finder
- ✓ Time Synchronisation & Display
- ✓ Tower Cabin Internal Lighting Control
- ✓ Sun Shade Control
- ✓ Video Surveillance
- ✓ Entrance Control
- ✓ Notice Board
- ✓ Internal Messaging
- ✓ External Message Display
- ✓ Conversion Calculator
- ✓ Data Logging
- ✓ External Alarm

Please refer to the ACAMS web site www.acams.net for further information.



System Architecture