



GENERAL

The HAWK is a compact platform utilizing the Niagara^{AX} Framework® for the integration of Heating, Ventilation, Air Conditioning (HVAC) systems and non-HVAC systems (e.g. lighting) in a building. It combines integrated control, supervision, data logging, alarming, scheduling and network management functions with Internet connectivity and web serving capabilities in a compact device. HAWK allows the control and management of external devices over the Internet and present real-time information to users in web-based graphical views. HAWK facilitates efficient project planning and smart engineering opportunities for small to large-size integration projects. It helps to maximize operating and services opportunities and to minimize associated costs.

FEATURES

HAWK supports such common open communication networks as LONWORKS, BACnet, EIB-KNX, Modbus, M-bus, SNMP, Z-wave, and oBIX – thus making it unnecessary to install multiple gateways. It permits the full network management of LONWORKS devices. Its built-in web server provides GUIs via an Internet browser. E-mail and SMS functionality are further features.

ENGINEERING

The Graphical Engineering Tool (COACH^{AX}) is embedded in the HAWK, thus allowing it to be engineered from an Internet browser without using any additional software at the PC. (Only the first commissioning of the HAWK must be done by a PC on which COACH^{AX} has been installed.)

CONNECTIVITY

HAWK features two Ethernet ports plus one RS 232 port and one RS 485 port as a standard.

2 Ethernet ports	10/100 MB, RJ-45 connections
1 RS232 port	9-pin D-connector
1 RS485 port	3-way, two-part connector

A dial-up or GPRS modem can be connected to the serial port, and a DSL modem/router can be connected to an Ethernet port, enabling IP communication for remote access and management.

PLUG-IN CARDS

The communication capability can be extended by adding plug-in cards into the unit's two expansion slots. The following Plug-In Cards are available:

CLAXHAWKIFLON	FTT-10A LONWORKS port
CLAXHAWKIF485	2 x RS485 ports
CLAXHAWKIF232	RS232 port

HAWK can be either used with additional LONWORKS I/O modules (e.g. CentraLine's CLIO modules) or with HAWK Plug-On I/O Modules.

PLUG-ON I/O MODULES

DIN rail-mounted HAWK Plug-On I/O Modules can be added to provide up to 66 directly-connected datapoints. These modules can be connected to the HAWK 2xx/6xx via a single multi-pin plug.

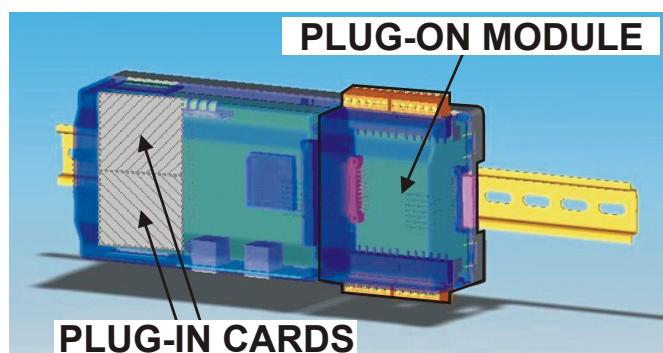


Fig. 1. Optional Plug-In Cards and Plug-On I/O Module

Two types of HAWK Plug-On I/O Modules are available:

CLAXHAWKIO16	8xUI, 4xAO, 4xDO 4 per HAWK or two in combination with the CLAXHAWKIO34
CLAXHAWKIO34	16xUI, 8xAO, 10xDO, 24 Vac/dc power supply module integrated 1 per HAWK also in combination with two CLAXHAWKIO16 modules

POWER SUPPLY

The power supply module provides the HAWK with 15 Vdc. 24-Vac/dc (control cabinet version) and 230-Vac (desk setup version) power supply options are available.

CLAXNBPPWR	Plug-On 24 Vac/dc power supply module, 25 VA max, DIN rail-mounted
CLAXHAWKIO34	Plug-On I/O Module with integrated 24 Vac/dc power supply module
CLAXWPMEU	100...240 Vac, 50/60 Hz, European plug type
CLAXWPMUK	100...240 Vac, 50/60 Hz, UK plug type

SPECIFICATIONS

There are two HAWK series: HAWK 2xx and HAWK 6xx.

platform	HAWK 2xx	HAWK 6xx
IBM PowerPC processor 405EP	250 MHz	524 MHz
DRAM	128 MB	256 MB
Serial Flash	64 MB	128 MB

Battery back-up, 5 minutes (typical); shut-down begins within 10 sec. Database storage and real-time clock: 3-month battery back-up.

Operating System

- QNX Operating System
- IBM J9 Java Virtual Machine
- Niagara^{AX} Framework[®]

Environmental Conditions

Operating temperature range: 0...50 °C

Storage temperature range: 0...70 °C

Relative humidity: 5...95%, non-condensing

Housing

Construction: plastic housing, internal air convection-cooling. Intended for indoor wall-mounting or panel-mounting, only.

Dimensions: 162x104(122)x62 mm (with terminals)

Panel fixing lugs add 20 mm to the main module width.

COMMUNICATION DRIVERS

Included Drivers

BACnet	IP, MSTP
LONWORKS	req. LON interf. card (CLAXHAWKF1LON)
EIB / KNX	IP
M-Bus	via RS232 and M-Bus Master
Modbus	Async, Slave, TCP, TCP Slave
Z-Wave	wireless communication standard
oBIX	Open Building Information Xchange
SNMP	Simple Network Management Tool

Additional Drivers

CLAXDRHLV	Helvar driver, DALI
CLAXDRHRSM	driver for Hortsmann meters
CLAXDRSMS	SMS Service for HAWK via GSM/GPRS modem

ORDERING

The Web User Interface, the engineering software COACH^{AX} and the most common open drivers (includes drivers) are included to the HAWK. The different versions of the HAWK are differentiated by the Java Heap Memory (JHM) and the available Resource Units (RU). The JHM and the RU needed by a given application depend upon the number of connected networks, the complexity of the logic and of the GUIs, the number of points, the histories, and the alarms. These numbers can be estimated by the Resource Estimator, which is part of COACH^{AX}.

model	memory	limitations
CLAXHAWK660	96MB JHM	--
CLAXHAWK650	48MB JHM	--
CLAXHAWK250	48MB JHM	--
CLAXHAWK240	16MB JHM	--
CLAXHAWK230	16MB JHM	450 kRU; 200 points per network (EIB 500 points)
CLAXHAWK220	16MB JHM	350 kRU; 8 devices per network; 34 points with Plug-On I/O Modules; restricted to one open network

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