



INDUSTRIAL CONTROL COMMUNICATIONS, INC.

Erlab GFH Client Driver Manual



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1 Erlab GFH Client

1.1 Overview

The GFH client driver enables communication with Erlab Green Fume Hood (GFH) server devices. This is accomplished by reading the “`etat_hotte.txt`” hood status file on GFH servers via FTP. The hood status file is then parsed and the extracted values are stored in the internal database in a predefined manner. The driver uses a connection object element to target each hood. The connection object defines a connection to a specific endpoint (IP address.)

Some notes of interest are:

- All status values are stored as predefined structures of 32-bit integers, starting at a specified database address.
- The driver supports up to 10 total connection objects.

1.2 Client Settings

Scan Rate

This is the time in seconds (0...65535) the driver will wait between sending file read requests. This is a useful feature for reducing overall network utilization. The start time for this delay is taken with respect to the moment at which the driver is capable of sending the next packet (due to either reception or timeout of the previous request). If no additional time is required, setting this field to 0 instructs the driver to send its next request packet as soon as possible (a setting of 0 may not provide greater data responsiveness, however, as the “`etat_hotte.txt`” hood status file itself is not updated very frequently on the server.)

1.3 Connection Object Settings

Description

This 32-character (max) field is strictly for user reference: it is not used at any time by the driver.

IP Address

Defines the IP address of the GFH server device to be targeted by the connection object. All connection object *IP Address* assignments must be unique.

Base Database Address

Defines the starting database address at which to store the predefined data structure, comprised of values extracted from the server’s “`etat_hotte.txt`” hood status file. The structure is comprised of 26 32-bit integers (104 bytes total), and each status item resides at a given offset from the *Base Database Address* location. The format of this data structure is detailed in Table 1.

Table 1: GFH Hood Status File Structure Mapping

Section	Property	Database Offset	Description
Hotte	etat	0	1=Running, 0=Standby mode
Hotte	verrou	4	1=Locked, 0=Not locked
Hotte	al_main	8	0=Deactivated
Ventilateurs	consigne_def	12	Default setpoint (tr/mn)
Ventilateurs	consigne	16	Actual setpoint (tr/mn)
Ventilateurs	nombre	20	Number of fans
Ventilateurs	tachy1	24	Fan1 tachymeter value (tr/mn)
Ventilateurs	tachy2	28	Fan2 tachymeter value (tr/mn)
Ventilateurs	tachy3	32	Fan3 tachymeter value (tr/mn)
Ventilateurs	tachy4	36	Fan4 tachymeter value (tr/mn)
Ventilateurs	tachy5	40	Fan5 tachymeter value (tr/mn)
Solvant	present	44	1=Connected, 0=Not connected
Solvant	etalonnage	48	Calibration date (ddmmyyyy)
Solvant	mesure	52	Solvent M value (mV)
Solvant	reference	56	Solvent R value (mV)
Solvant	seuil	60	Trigger (mV)
Solvant	tempo	64	Alarm temporization (minutes)
Acide	present	68	1=Connected, 0=Not connected
Acide	etalonnage	72	Calibration date (ddmmyyyy)
Acide	mesure	76	Measured value
Reserved	Reserved	80	Reserved
Acide	tempo	84	Alarm temporization (minutes)
Porte	present	88	1=Connected, 0=Not connected
Porte	mesure	92	Sash height measure (% of the sash maximal opening)
Temp	present	96	1=Connected, 0=Not connected
Temp	mesure	100	Temperature (°C)

1.4 Diagnostics Object

Each connection object can optionally include a diagnostics object for debugging and diagnostics.

Diagnostics Database Address

Enter the database address at which to store the diagnostics information.



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