Chipkin Automation Systems

CAS-2700-31
CAS Gateway: Haffmans OGM to BACnetIP and Modbus (RTU and TCP)

Description

The Haffmans serial driver allows the gateway to poll Haffmans OGM to BACnetIP and Modbus (RTU and TCP) OGM O2 Gehaltemeter sensors for status, real time measurements, and configuration data. The driver can be used to read O2 temperature, timestamp and more .

The gateway serves data from a Haffmans OGM O2 sensors as Modbus, BACnet or web data. The gateway supports all these options simultaneously. Use the data you want and ignore the others.

The Gateway connects to a Haffmans OGM O2 sensor, reads data and stores it internally. When a remote system requests data it is served in a form that is appropriate to the protocol. In the event that the connection to the Haffmans OGM O2 sensor is lost or data cannot be read the gateway can signal this to the remote data client.

The gateway requires minimal configuration and can be considered a plug and play component of a system. It is ready to operate out of the box with the default configuration.

The gateway uses an RS232 serial port to connect to the Haffmans OGM O2 sensor.

Specs.

- **UL and ULc approved**
- 10/100BaseT with RJ-45 connector
- 1x RS232 Port
- 1x RS485 Port (Different Models have additional ports)
- 2MBytes flash memory, 8MBytes of SDRAM
- Power: 5-24VDC
- Operating Temperature: 0 to 70 C
- Dimensions: 4.2" x 3.25" x 1"
- LEDs: Link, Speed/Data, Power

Max Nodes Supported

Gateway Mode	Nodes	Comments
Client	1	*Only 1 Haffmans OGM O2 sensor per connection*
Server	0	*Not supported or documented.*

Connection Information - Port 1: Haffmans OGM O2

Connection type:	RS232
Baud Rates:	Driver Supports : 57600 Baud
Data Bits:	Driver Supports : **8**
Stop Bits:	Driver Supports : **1**
Parity:	Driver Supports : **None**
Hardware interface:	N/A
Multidrop Capability	No

Connection Information - Port 2: Modbus RTU Server Port

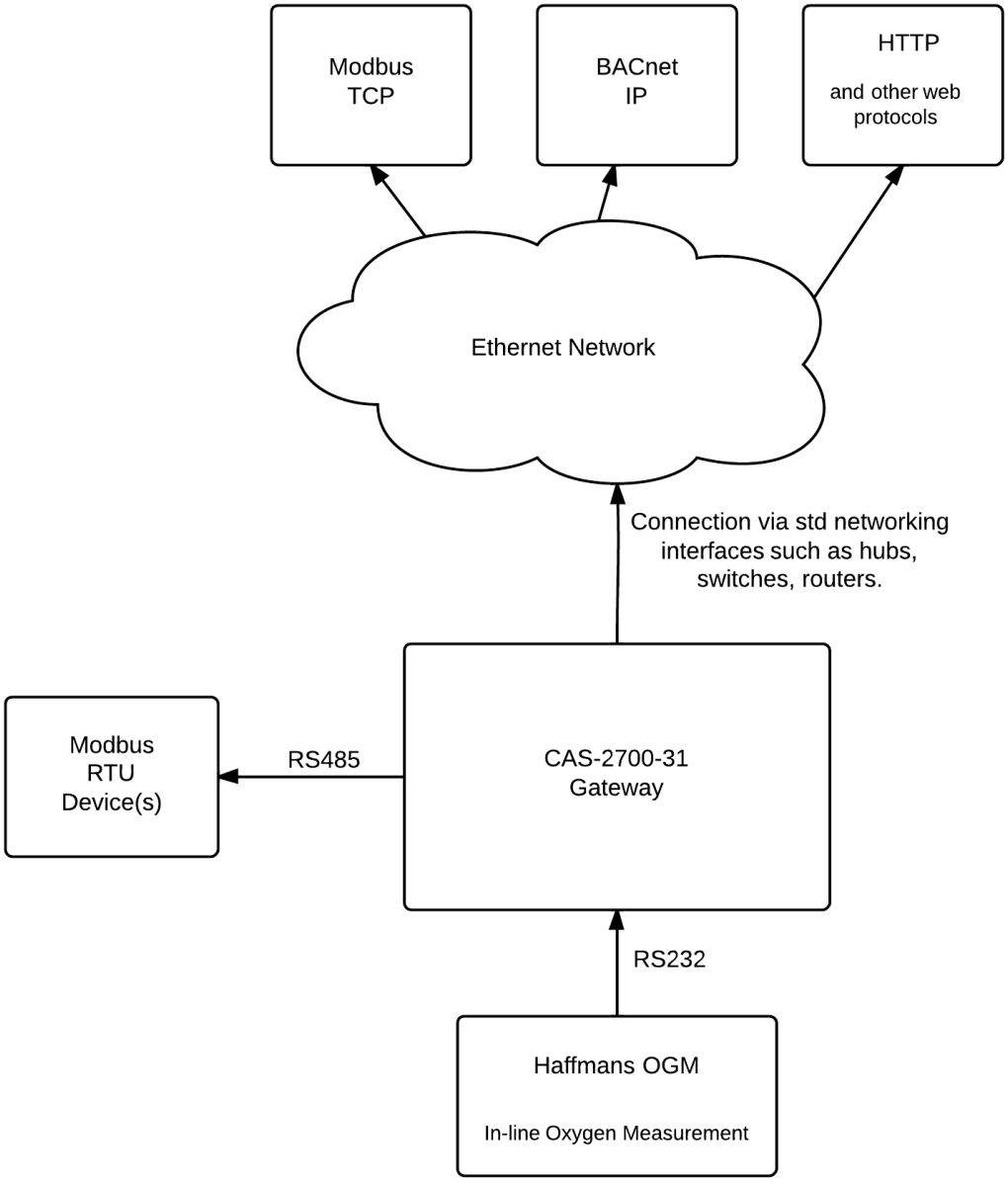
Connection type:	**RS485** (Jumper change to RS232)
Baud Rates:	**9600**; 19200 Baud
Data Bits:	**8**
Stop Bits:	**1**
Parity:	**None**
Hardware interface:	N/A
Multidrop Capability	Yes

Devices tested

Device	Tested (FACTORY, SITE)

Connection configurations

Monitor and control Haffmans OGM oxygen sensor using BACnet, Modbus, or Web.


Modbus
TCP
BACnet
IP
HTTP
and other web
protocols
Ethernet Network
Connection via std networking
interfaces such as hubs,
switches, routers.
Modbus
RTU
Device(s)
RS485
CAS-2700-31
Gateway
RS232
Haffmans OGM
In-line Oxygen Measurement

Driver Operation

The driver can be configured to execute any of the commands in the 'supported function' list. The data sent is stored internally in the Gateway and is made available to other protocols (Modbus RTU, Modbus TCP, BACnet IP, and HTML) .

The frequency with each data point is read is configurable. The driver retries on errors or timeouts. If the data cannot be read then after a configurable length of time it is marked as out of service.

The driver reports operating stats and issues on a web page, maintains a log that can be uploaded by HTTP or ftp.

Configuration

Via Web Page. Configure IP settings, Node ID's, Baud Rate and other parameters.

The names are used to form the names of the BACnet objects and populate the web page showing current values.

Use can specify
ModbusTCP: Node_ID
ModbusRTU: Node_ID, baud, parity, data length, stop bits
BACnet: Device instance number, device name.

Communications functions

Supported functions.
Not all Haffmans OGM O2 communication functions are supported. The following functions are supported by the web based configuration. Additional functions are supported but must be configured manually.

COMMAND		
RM	Read Measurements output string	
RT	Read Type output string	
RS	Read/Rewrite Setting(s) output/input string	
RN	Rewrite serial Number	
RL	Get Setpoint List	

The driver will not send the next command until a response has been received from the previous or until a timeout has expired.

Support

This driver was developed by Chipkin Automation Systems (CAS). CAS are proud to provide support for the driver. For support please call CAS at (866) 383-1657.

Revision History

Date	Resp	For mat	Driver Ver.	Doc. Rev.	Comment
01/21/14	REK		0.00	0	Created