CAS-2700-01
Hobart Ground Power
Modbus (RTU and TCP) and BACnet and HTML Gateway

Description

The HOBART Ground Power Serial Driver allows the Gateway to poll Hobart devices for status, real time and configuration data. Thus the driver can be used to read current, voltage, phase, power and other variables from the Hobart device.

The Hobart Ground Power (HGP) Gateway serves data from a HGP controller as Modbus, BACnet or Web data. The gateway supports all these options simultaneously. Use the data you want and ignore the other.

The Gateway connects to the HGP controller, reads data and stores it internally. When a remote system requests data, this data is served in a form that is appropriate to the protocol. In the event that the connection to the HGP controller 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, in that it is ready to operate out of the box with the default configuration.

The driver is a serial driver using a RS232 serial port to connect between the Gateway and the HOBART unit.

- **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 Hobart Device per connection*
Server	0	*Not supported or documented.*

Connection Information - Port 1: Hobart Port

Connection type:	EIA232
Baud Rates:	Driver Supports :; **9600**; 19200Baud *HOBART*supports: **9600**
Data Bits:	Driver Supports : 7,**8** *HOBART* supports: 8
Stop Bits:	Driver Supports : **1**,2 *HOBART* supports: 1
Parity:	Driver Supports : Odd, Even, **None** *HOBART* supports: None
Hardware interface:	N/A
Multidrop Capability	No

Connection Information - Port 2: Modbus RTU Server Port

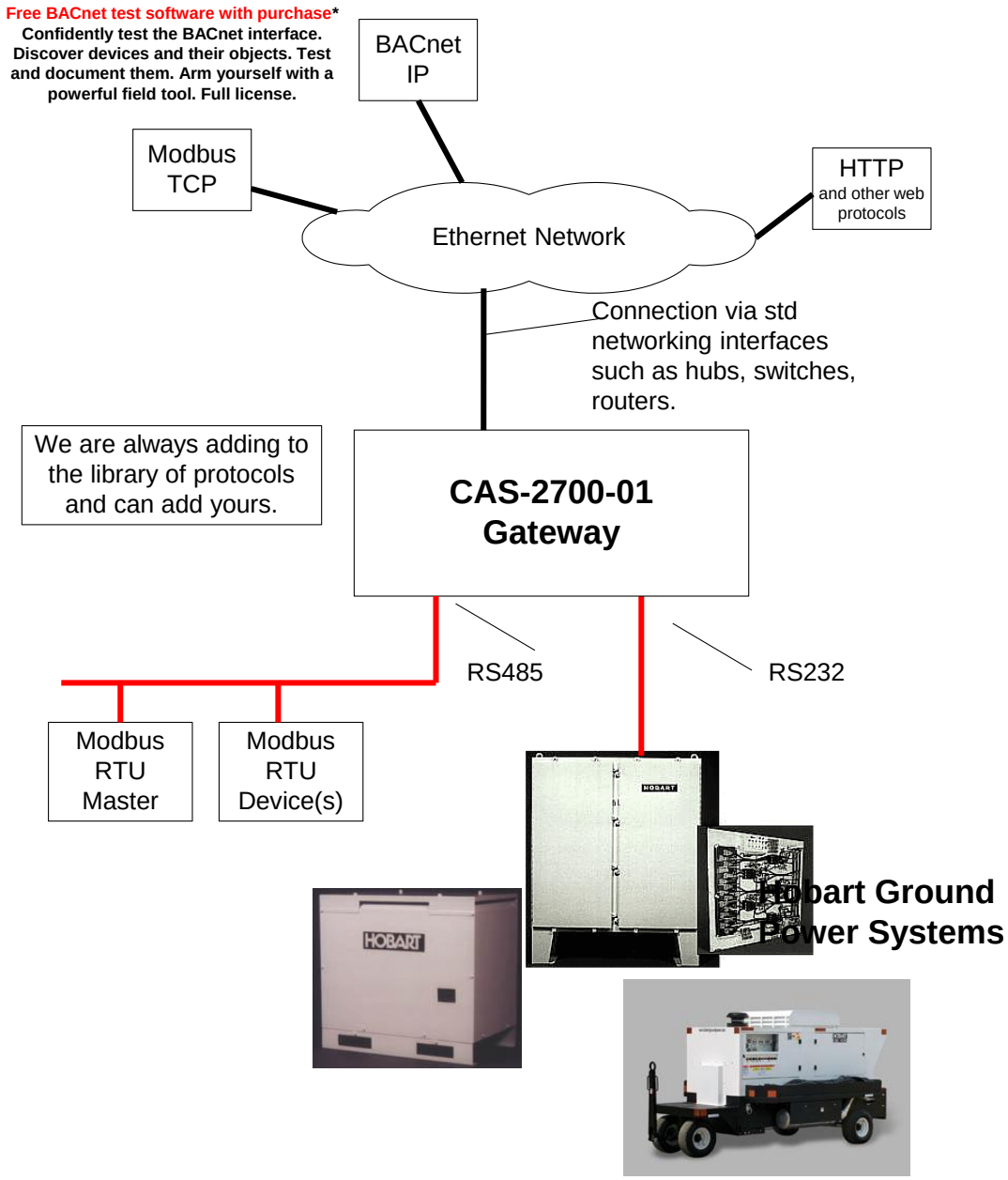
Connection type:	**RS485** (Jumper change to RS232)
Baud Rates:	**9600**; 19200Baud
Data Bits:	**8**
Stop Bits:	**1**
Parity:	**None**
Hardware interface:	N/A
Multidrop Capability	Yes

Devices tested

Device	Tested (FACTORY, SITE)
Hobart Model xxxxxx	Tested

Connection configurations

Monitor and Control Hobart Ground Power using BACnet, Modbus or Web



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 some configurable time it is marked as out of service.

Configuration

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

Communications functions

Supported functions.
Not all Hobart communication functions are supported. Most that report status info are provided. Those used to configure the unit are not included. Please review this list in determining whether this driver is fit for your purpose.

COMMAND	**CONFIGURATION DATA**	
C00	DEVICE IDENTIFIER 0 CMD	
C01	DEVICE IDENTIFIER 1 CMD	
C02	DEVICE IDENTIFIER 2 CMD	
C03	RECORD POINTER CMD	
C04	MAN VOLT ADJUST ADJUST VALUE CMD	
C05	LINE DROP COMP ADJUST VALUE CMD	
C06	TOTAL ACCUM KILOWATTS 0 CMD	
C07	TOTAL ACCUM KILOWATTS 1 CMD	
C08	TOTAL ACCUM KILOWATTS 2 CMD	
C09	TOTAL ACCUM KILOWATTS 3 CMD	
C10	CURRENT TIME HOURS CMD	
C11	CURRENT TIME MINUTES CMD	
C12	CURRENT TIME SECONDS CMD	
C13	CURRENT DATE YEAR CMD	
C14	CURRENT DATE MONTH CMD	
C15	CURRENT DATE DAY CMD	
C16	PREVIOUS DATE MONTH CMD	
C17	KVA RATING CMD	
C18	TRANSFORMER 12 PULSE PRESENT CMD	
C19	CONTACTOR SENSE NUMBER CMD	

C20	RECORD OVERFLOW FLAG CMD	
C21	***SPARE 8 BIT 1 CONFIG CMD***	
C22	CURRENT LIMIT ADJUST VALUE 0 CMD	
C23	CURRENT LIMIT ADJUST VALUE 1 CMD	
C24	DC MAN VOLT ADJUST VALUE CMD	
C25	TR CONFIGURATION CMD	
COMMAND	**REAL TIME DATA**	
D00	EVENT DESCRIPTION CMD	
D01	ADVCOMM COMMAND CMD	
D02	ADV FAULT CMD	
D03	START TIME HOURS CMD	
D04	START TIME MINUTES CMD	
D05	START TIME SECONDS CMD	
D06	START DATE YEAR CMD	
D07	START DATE MONTH CMD	
D08	START DATE DAY CMD	
D09	MAX CURRENT TIME HOURS CMD	
D10	MAX CURRENT TIME MINUTES CMD	
D11	MAX CURRENT TIME SECONDS CMD	
D12	EF WARNING CMD	
D13	FRONT PANEL STATUS CMD	
D14	KILOWATTS CMD	
D15	OUTPUT STATUS CMD	
D16	***SPARE 8 BIT 4 DATA CMD***	
D17	***SPARE 8 BIT 3 DATA CMD***	
D18	***SPARE 8 BIT 2 DATA CMD***	
D19	***SPARE 8 BIT 1 DATA CMD***	
E00	ELAPSED TIME MINUTES TIMER CMD	
E01	PHASE A VOLTS CMD	
E02	PHASE B VOLTS CMD	
E03	PHASE C VOLTS CMD	
E04	PHASE A B VOLTS INPUT CMD	
E05	PHASE B C VOLTS INPUT CMD	
E06	PHASE C A VOLTS INPUT CMD	
E07	PHASE 1A AMPS CMD	
E08	PHASE 1B AMPS CMD	
E09	PHASE 1C AMPS CMD	
E10	PHASE 2A AMPS CMD	
E11	PHASE 2B AMPS CMD	

E12	PHASE 2C AMPS CMD	
E13	HIGHEST OUTPUT AVE AMPS CMD	
E14	NEUTRAL AMPS CMD	
E15	DC OUTPUT CURRENT CMD	
E16	KILOWATT HOURS CMD	
E17	OUTPUT FREQUENCY CMD	
E18	BUS VOLTAGE CMD	
E19	MAX CURRENT CMD	
E20	DC OUTPUT VOLTAGE CMD	
E21	***SPARE 16 BIT 1 DATA CMD***	

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
26 Aug 2010	PMC		0.00	0	Created
21 Sep 2010	PMC		0.00	1	Updated. Replaced supported function list.
14 Dec 2010	PMC		1.00	2	Updated, Added ModbusRTU, Block Diagram. Port Settings.