FS8705-18
Multistack Compu25 Protocol,
Modbus TCP and BACnet and HTML
Gateway

Description

The Compu25 protocol can be used to connect to suitably enabled legacy Multistack Inc, Chiller and Heat Pumps. This is a serial protocol using RS485. Multiple Field devices can be connected on a single trunk. The gateway supports one trunk.

The Gateway connects to the HVAC devices, reads data and stores it internally. When a remote system requests data, this data is served in a form that is appropriate to the requesting protocol. In the event that the connection to the HVAC 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.

Max Nodes Supported

<table>
<thead>
<tr>
<th>Gateway Mode</th>
<th>Nodes</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client</td>
<td>1</td>
<td>10 devices per trunk (limitation on initial release)</td>
</tr>
<tr>
<td>Server</td>
<td>0</td>
<td>Not supported or documented.</td>
</tr>
</tbody>
</table>

Connection Information - Port 1: Debug Port

<table>
<thead>
<tr>
<th>Connection type:</th>
<th>EIA232</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baud Rates:</td>
<td>Driver Supports : 1200, 2400, 4800, 9600; 19200Baud</td>
</tr>
<tr>
<td>Data Bits:</td>
<td>Driver Supports : 7,8</td>
</tr>
<tr>
<td>Stop Bits:</td>
<td>Driver Supports : 1,2</td>
</tr>
<tr>
<td>Parity:</td>
<td>Driver Supports : Odd, Even, None</td>
</tr>
<tr>
<td>Hardware interface:</td>
<td>N/A</td>
</tr>
<tr>
<td>Multidrop Capability</td>
<td>No</td>
</tr>
</tbody>
</table>
Connection Information - Port 2: Compu25 Port

<table>
<thead>
<tr>
<th>Connection type:</th>
<th>RS485 (Jumper change to RS232)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baud Rates:</td>
<td>9600; 19200Baud</td>
</tr>
<tr>
<td>Data Bits:</td>
<td>8</td>
</tr>
<tr>
<td>Stop Bits:</td>
<td>1</td>
</tr>
<tr>
<td>Parity:</td>
<td>None</td>
</tr>
<tr>
<td>Hardware interface:</td>
<td>N/A</td>
</tr>
<tr>
<td>Multidrop Capability</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Devices tested

<table>
<thead>
<tr>
<th>Device</th>
<th>Tested (FACTORY, SITE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCHR</td>
<td>Heat Recovery</td>
</tr>
<tr>
<td>MCHP</td>
<td>Heat Pump</td>
</tr>
<tr>
<td>MCMS</td>
<td>Chiller</td>
</tr>
</tbody>
</table>
Connection configurations

Free BACnet test software with purchase*
Confidently test the BACnet interface.
Discover devices and their objects.
Test and document them.
Arm yourself with a powerful field tool.
Full license.

Connection via std networking interfaces such as hubs, switches, routers.

We are always adding to the library of protocols and can add yours.

Protocols

Ethernet Network

FieldServer FSB2510 Gateway

RS232

RS485

Modbus TCP

BACnet IP

HTTP and other web protocols

Compu25 Controller

Compu25 Controller

*Tel: 1866 383 1657, Fax: (416) 915-4024
Email: dfs@chipkin.com
Website: www.chipkin.com
**Driver Operation**

The driver can be configured to read or write any of the addresses documented for these devices. The data sent is stored internally in the Gateway and is made available to other protocols (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.

**Exception Handling**

If communications to the HVAC are lost, then after some (configurable) time, the data values can all be set to zero, -1 or some other configurable value. This method allows the consumers of the data to know, if the values are valid.
Communications functions

Supported functions.
Not all SEC 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. Not all data points are available on all UPS’s. Mitsubishi publish a document that details which variables are available per model.

<table>
<thead>
<tr>
<th>COMMAND</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read</td>
<td>Read operational data from HVAC device</td>
</tr>
<tr>
<td>Write</td>
<td>Write a command / setpoint</td>
</tr>
</tbody>
</table>

Supported Data Points

All Data points can be read/written provided the address is known.

The driver will not send the next message 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

<table>
<thead>
<tr>
<th>Date</th>
<th>Resp</th>
<th>Format</th>
<th>Driver Ver.</th>
<th>Doc. Rev.</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Oct 2011</td>
<td>PMC</td>
<td>0.00</td>
<td>0</td>
<td>Created</td>
<td></td>
</tr>
</tbody>
</table>