

# QUICK START GUIDE

V1.00.02

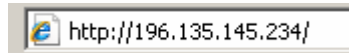
|                                                                                                                      |   |                               |
|----------------------------------------------------------------------------------------------------------------------|---|-------------------------------|
| <b>TIME_CONFIG.Source</b><br>This indicates to the module what will be used as the time source.                      | 1 | GPS                           |
|                                                                                                                      | 2 | IRIG-B                        |
|                                                                                                                      | 3 | PTP (FUTURE)                  |
|                                                                                                                      | 4 | NTP (FUTURE)                  |
|                                                                                                                      | 5 | External (FUTURE)             |
| <b>TIME_CONFIG.PTPOutputEnable</b><br>When this bit is set the module will enable PTP synchronization on Ethernet.   | 0 | 1588 PTP output is disabled   |
|                                                                                                                      | 1 | 1588 PTP output is enabled    |
| <b>TIME_CONFIG.NTPOutputEnable</b><br>When this bit is set the module will enable NTP on Ethernet.                   | 0 | NTP output is disabled        |
|                                                                                                                      | 1 | NTP output is enabled         |
| <b>TIME_CONFIG.IRIGBOutputEnable</b><br>When this bit is set the module will enable IRIG-B on the coaxial interface. | 0 | IRIG-B-122 output is disabled |
|                                                                                                                      | 1 | IRIG-B-122 output is enabled  |

## Web Interface

The web interface can be used from any PC that has a web browser. It will provide all the diagnostics of the module as well as each field device as shown below:

The web interface can be accessed by entering http:// IP address into the address bar of the browser as shown below:

**Eg. 1756HP-TIME IP address:** 196.135.145.234



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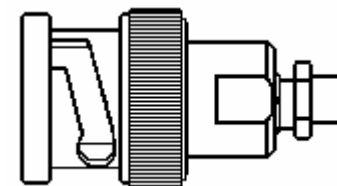
## INSTALLATION

### Software

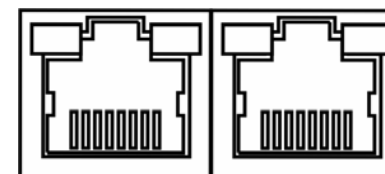
The User-Defined-Type (UDT) needed can be found in the example code. These must be copied from the Input image and copied to the Config – and Output images to make sense of the data. Please refer to the example code.

### Hardware

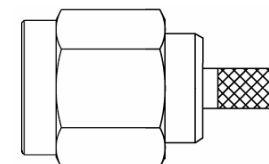
- **IRIG-B:** The module connects to the IRIG-B network using a BNC connector.



- **Ethernet:** The module requires a RJ45 connector to operate.



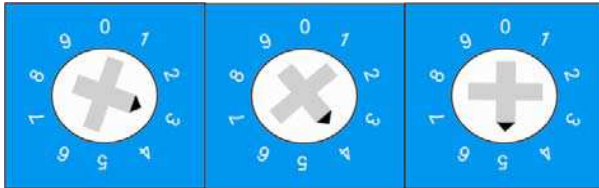
- **GPS Antenna:** The GPS antenna is connected to the module via a SMA connector.



## SETUP

### Ethernet Address

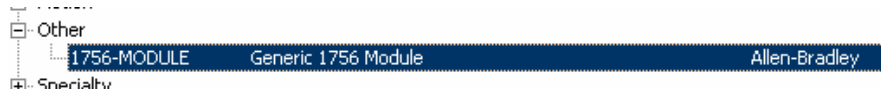
The module will have BOOTP enabled when shipped. The user can set an address via a BOOTP server or set the hardware switches to hardcode an IP address. The switches can be found on the top of the module.



- Switches set to 1 – 254: Use IP address 192.168.1.xxx
- Switches set to 888: Settings back to out-of-the-box
- Switches set to 900: Enable BOOTP

### RSLogix 5000

The module must be added to the RSLogix 5000 IO tree by selecting the Generic 1756 Module as shown below:

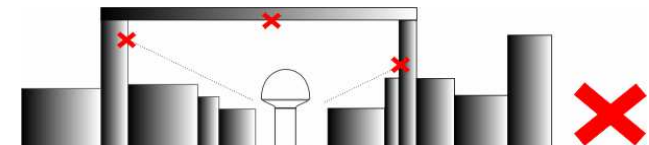
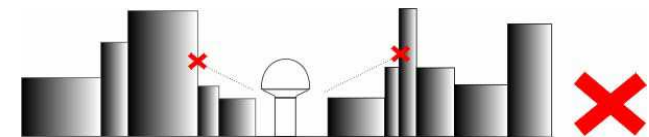
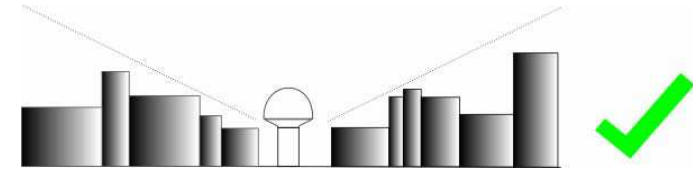


#### Connection Parameters

|        | Assembly Instance  | Size | Format |
|--------|--------------------|------|--------|
| Input  | 65                 | 34   | 32-bit |
| Output | 66                 | 4    | 32-bit |
| Config | 68                 | 28   | 8-bit  |
| RPI    | MIN 10ms MAX 750ms |      |        |

### Antenna Installation

The bullet antenna must be installed with a clear view of the sky (nothing obstructing the view of the antenna to the sky). If an antenna is installed with a limited view of the sky the GPS receiver will either have a low satellite lock count or will not be able to obtain lock.



## OPERATION

### RSLogix 5000

| Time_Config                            | {...} | {...}   | TimeConfig      |
|----------------------------------------|-------|---------|-----------------|
| + Time_Config.ConfigRevNumber          | 0     | Decimal | DINT            |
| + Time_Config.Source                   | 0     | Decimal | INT             |
| - Time_Config.PTPOutputEnable          | 0     | Decimal | BOOL            |
| - Time_Config.NTPOutputEnable          | 0     | Decimal | BOOL            |
| - Time_Config.IRIGBOutputEnable        | 0     | Decimal | BOOL            |
| - Time_Config.IRIGBLostTx              | 0     | Decimal | BOOL            |
| - Time_Config.PreV16Support            | 0     | Decimal | BOOL            |
| - Time_Config.CSTMastershipEnable      | 0     | Decimal | BOOL            |
| - Time_Config.ExternalSourceAddress    | {...} | {...}   | Decimal SINT[4] |
| + Time_Config.ExternalSourceAddress[0] | 0     | Decimal | SINT            |
| + Time_Config.ExternalSourceAddress[1] | 0     | Decimal | SINT            |
| + Time_Config.ExternalSourceAddress[2] | 0     | Decimal | SINT            |
| + Time_Config.ExternalSourceAddress[3] | 0     | Decimal | SINT            |
| + Time_Config.NTPUpdateInterval        | 0     | Decimal | DINT            |
| + Time_Config.AdvancedConfig           | 0     | Decimal | DINT            |
| + Time_Config.DemoWeekNumber           | 0     | Decimal | DINT            |
| + Time_Config.DemoWeekSeconds          | 0     | Decimal | DINT            |

The user must update the parameters in the TIME\_CONFIG UDT (provided in the example code) to what is needed from the application.

