Single Port HSMS-SECSI Protocol Converter Guide

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Los Alamos, NM

Introduction

The single port SECSI-HSMS Protocol Converter allows Fab Host software to transparently access equipment on SECSI (serial) ports as if they were HSMS (Ethernet).
It has a built-in Web server for to configure the SECS timeouts and other parameters for the SECSI connections and the IP Address and HSMS Port for the Ethernet connection.

Running the Hardware

The converter will power on when the power is applied. Wait a minute for thehardware to be fully initialized after power up.

The Port Connections

The single port converter will have an RJ-45 connector for the Ethernet and a DB-9 serial socket for the SECSI serial connection. Connect an Ethernet cable to the RJ-45 socket and a serial cable (DB-9 pins) to the RS-232 socket. A null modem and/or gender changer may be required for the serial port connection.

Configuration

Unless an IP Address was set before shipping from ErgoTech, the IP Address will be set to 192.168.5.104. Use a web browser to connect to this IP address. You will see a web page as shown below:
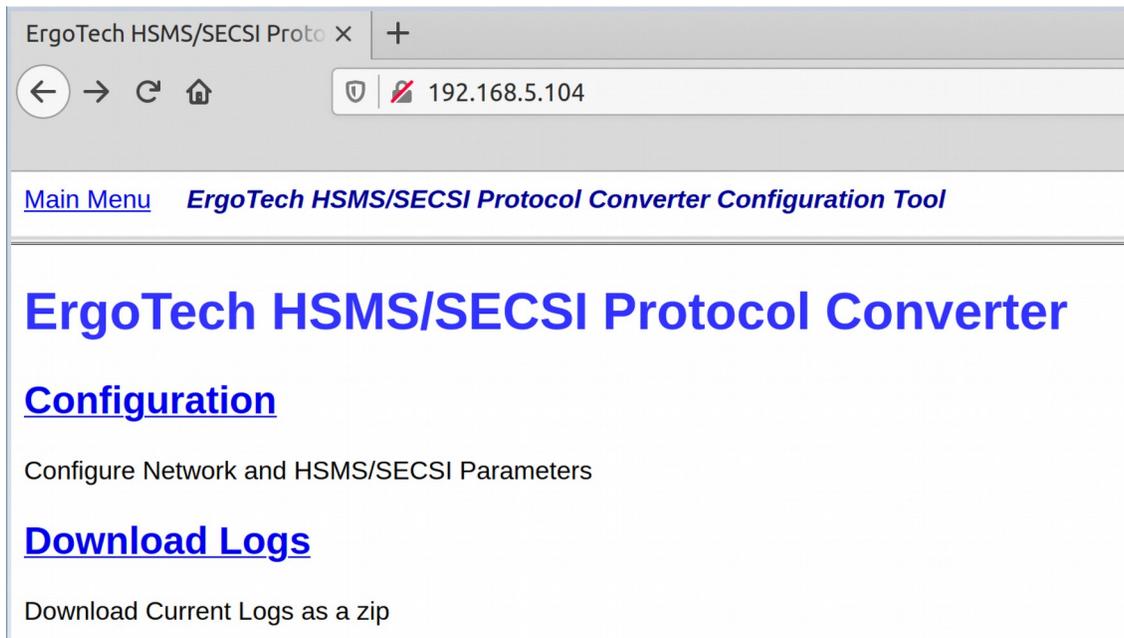
Click on the **Configuration** link. You will see a web page for Configuration:

Select a Serial Port for Configuration [RS232 ∨]   [OK]

[Network Configuration]

Current Network Settings
Broadcast Address:192.168.5.255
Netmask:255.255.255.0
Gateway:192.168.5.34
IP Address:192.168.5.104
Network:
Note: if you change any of these parameters you risk losing network contact with the Converter box.

SECSI-HSMS Parameters

For a single port Protocol Converter you will have the option to configure the one "RS-232" Port. Pressing the OK button loads a web page where you set the SECSI and HSMS properties for the Protocol Converter connection.

The **Baud Rate** of the serial port connection to the tool can be selected. Per the E4 Standard, the serial communication uses 8 bits, 1 stop bit, (N) no parity.

The **HSMS Port** can be set to any integer value (>256). This will be the HSMS port the Fab Host will use to connect to the tool (any device id will be accepted).

The **Description** is optional and has no effect on the converter operation.

The **HSMS Host IP Address** should be left blank unless the Host is a passive entity (not usual) and the tool is expected to make a connection to the Host (very unusual).

The **Disconnect on T2** forces a disconnect if the T2 timeout is exceeded. This allows a quicker timeout for a bad SECI connection.

The "Log" parameters can be set to increase/decrease the message logging details. When **Log Messages** is set to "true" only the SECS messages will be logged. If the **Log Bytes** parameter is set to true, both messages and the raw data bytes will be logged. When **Log Events** is set to "true", Events, Messages, and raw data bytes will be logged. If you do not want any message logging, set all these logging parameters to "false".

The other Tx (timeout) parameters default to the SEMI E5 values.

Press the **Submit** button to save your changes and return to the Main Menu.

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SECSI Port **RS232**

Baud Rate	9600
HSMS Port	5010
Description	
HSMS Host IP Address	
Log Bytes	false
Log Messages	true
Log Events	false
Disconnect on T2	false
T1 Inter-Character Timeout	0.5
T2 Protocol Timeout	20
T4 Inter-Block Timeout	90
T5 HSMS Connect Separation Timeout	10
T6 HSMS Control Transaction Timeout	5
T7 HSMS Not Selected Timeout	10
T8 HSMS Network Intercharacter Timeout	5
Retry Limit	3

Submit   Cancel

Please press the Submit button after editing values.

Network Configuration

Press the Network Configuration Button to change the IP Address of the Protocol Converter and other network parameters. The IP Address will be the HSMS address the Fab Host will use to connect to the tool.

Main Menu   *ErgoTech HSMS/SECSI Protocol Converter Configuration Tool*

Configure the Network Parameters

IP Address: 192.168.5.104

Gateway: 192.168.5.34

Netmask: 255.255.255.0

Broadcast
Address: 192.168.5.255
Network:

Note: if you change any of these parameters you risk losing network contact with the Converter box. If you change the IP Address, you will need to re-log into Converter after pressing the Update button.

Update   Cancel

The broadcast address will be calculated based on the entries for the IP Address and the Netmask. After making changes, press the **Update** button. The changes will take effect immediately and the Protocol Converter will then be running on the new IP Address.

Log Files

The Protocol Converter stores log files while running unless all logging is set to "false" in the configuration. These log files are not stored when the system is turned off (they are in volatile memory and are limited to a few MB) so use the **Download Log Files** to retrieve the active logs since power on.