25x86 Logic Processor

Intelligent Data Acquisition and Control

Models: Standard, Low Power, and Extended Temperature

HSQ TECHNOLOGY

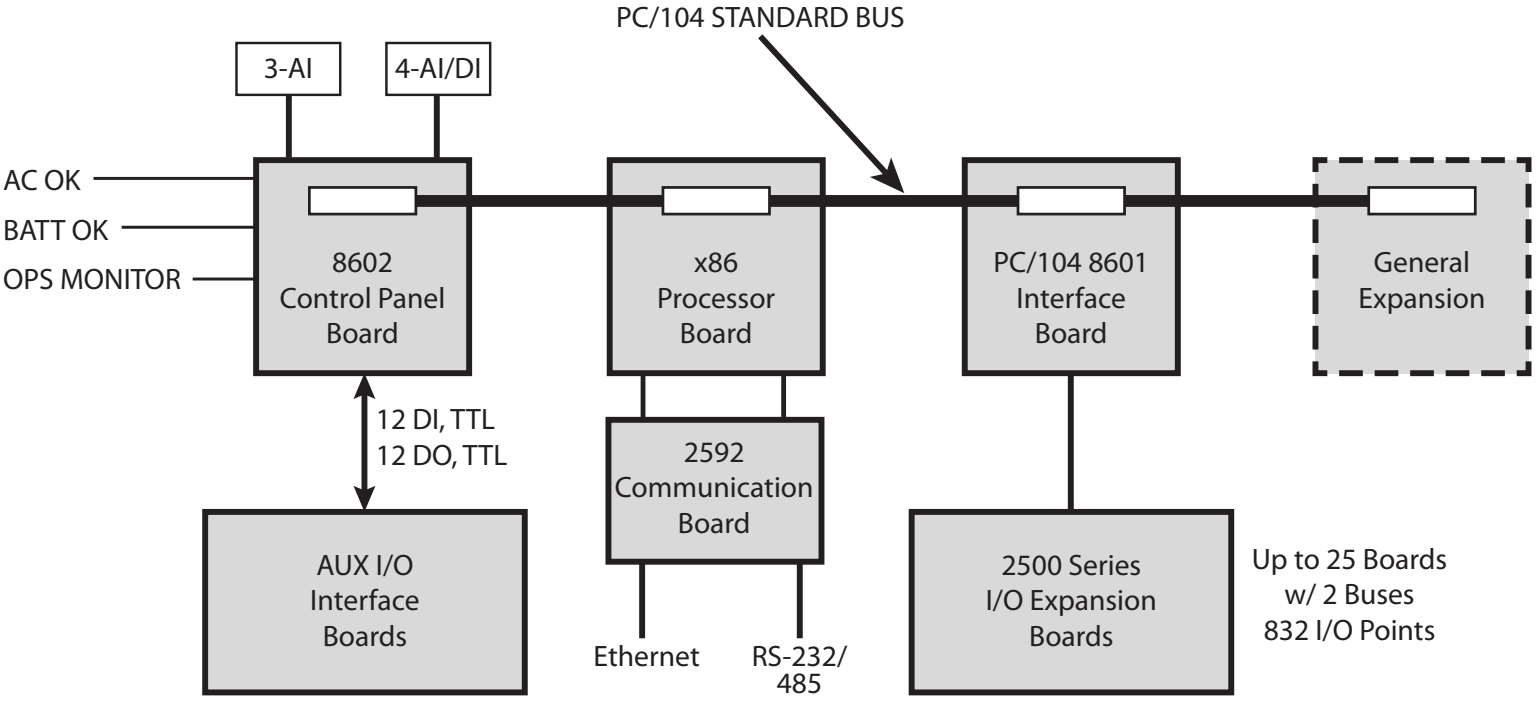
Technical Summary

Key Features

- Industrial Processor
- Distributed Alarm and Data Processing
- Sequence of Events (SOE) Buffering
- Synchronized Real-Time Clock
- Intelligent Stand Alone Control
- VisualCL (Graphical Control Logic)
- IP LAN/WAN Support
- IEEE 802.3 10/100 Ethernet
- Backup Power Supply Option
- MODBUS Master and Slave Capability
- DNP3 Master and Slave Capability
- Low Power Option
- Extended Temperature Option

The Model 25x86 Logic Processor Stack is an x86-based data acquisition and control computer intended for a wide range of telemetry, SCADA, distributed automation, and facilities management applications. The 25x86 processor board provides software and communications compatibility with existing HSQ Model 2500/86 and Model 2500 Logic Processors.

25x86 Architecture



Processor Boards

- **Processor Type/Speed:**
  Standard/Low Power x86 1.0GHz
  Extended Temperature x86 800MHz
- **Memory:** 256 Mb SDRAM standard, expandable
- **Non-Volatile Memory:** 64 Mb CompactFlash standard, expandable
- **Real Time Clock:** Year, Month, Day, Hour, Minute, Seconds, and an On-Board Clock Battery
- **Watchdog Timer:** Automatic System Reset after Software Failure
- **Ethernet Interface:**
  Standard/Extended Temperature Embedded 10/100, dual port configurable
  Low Power Embedded 10/100, single port
- **Serial Ports:**
  Standard/Extended Temperature Three RS-232 and One RS-232/422/485 standard, expandable, USB available
  Low Power One RS-232 and One RS-232/422/485 standard, expandable, USB available
- **Master Protocol:** Allen Bradley DF1, ASI, MODBUS Master (Serial/TCP), DNP3 Master
- **Remote Protocol:** HSQ COS Protocol, MODBUS Slave (Serial/TCP), DNP3 Slave
- **PC/104 Connector:** 32-bit PC/104-Plus Bus

HSQ 8602 Control Panel Board

- **Indicators:** Power, Stand Alone Active, Outputs Enabled, Initialized by Host, Door Open
- **Switches:** Stand Alone Mode (Forced/Auto/Inhibit), Outputs Enable/Disable
- **Embedded I/O:** 12 TTL Digital Inputs, 12 TTL Digital Outputs (compatible with HSQ AUX I/O Interface Boards
  4 Analog Inputs, (4-20 mA, 0-1 mA, 0-5 V, 0-10 V) (Note: Configurable as 24 V_{DC} Digital Inputs)
  3 Analog Inputs (4-20 mA, 0-1 mA)
- **I/O Expansion Bus Port:** 2500 Series I/O Expansion Boards, up to 25 boards, 832 points
- **Battery Voltage Monitor:** On-Board AI Monitors +24 V_{DC} Supply Voltage, Reads Battery Volts During Discharge
- **AC OK Monitor:** TTL from 2585 Power Control Board, indicates either AC Power or Battery being used
- **Battery OK Monitor:** TTL from 2585 Power Control Board, Indicates Defective Battery
- **Address Switches:** Unit Address, 1-999
- **Ops Monitor Relay:** 24 V_{DC}, 10 A Maximum
- **Door Alarm:** Photocell Activates Internal Alarm Point When Illuminated, Adjustable Threshold

General

- **Logic Power:**
  Standard/Extended Temperature 5 V_{DC}, 6 W
  Low Power 5 V_{DC}, 3.7 - 4.4 W
- **Field I/O Power:** 24 V_{DC}, Power Consumption Varies by I/O Configuration
- **Temperature:**
  Standard/Low Power 0° – 60° C (32° – 140° F) — Operating
  Extended Temperature -40° – 85° C (-40° – 185° F) — Operating
- **Humidity:** 5-95% Relative Humidity, Non-Condensing
- **Dimensions:** 1,778 mm x 2,540 mm (7" H x 10" W) — Depth Varies According to Board Configuration

2500 Series I/O Expansion Boards *

- **2507** — 4-ch Analog Output
- **2508** — 16/32-ch Analog Input
- **2509** — 32-ch Digital Input
- **2510** — 64-ch Digital Output
- **2533** — 32-ch Digital Output
- **2534** — 32-ch Intelligent Digital Input (SOE to one Millisecond)
- **2548** — 16-ch Relay Digital Output Form C 10 Amp Relay
- **2569** — 16-ch Digital Input and 16-ch Digital Output
- **2587** — 64-ch Digital Input or 64-ch Counter Input (TTL)

HSQ 6000 Series I/O Remote Multiplexer Expansion Boards *

- **HSQ-6015** — 7-ch Isolated RTD Input Module
- **HSQ-6017** — 8-ch Isolated Analog Input Module w/ 2-ch DO
- **HSQ-6018** — 8-ch Isolated Thermocouple Input Module with 8-ch DO
- **HSQ-6024** — 12-ch Isolated Universal I/O Module
- **HSQ-6050** — 18-ch Isolated Digital I/O Module
- **HSQ-6051** — 14-ch Isolated Digital I/O Module
- **HSQ-6052** — 16-ch Source-type Isolated Digital I/O Module
- **HSQ-6060** — 6-ch Digital Input, 6-ch Relay Module
- **HSQ-6066** — 6-ch Digital Input, 6-ch Power Relay Module

HSQ AUX I/O Interface Boards *

- **1046** — 8-ch Digital Input, 24 V_{DC}
- **1047** — 8-ch Digital Output, 24 V_{DC}
- **1332** — 8-ch Digital Output, Form C 10 Amp Relay
- **8646** — 12-ch Digital Input and 12-ch Digital Output, 24 V_{DC}

***NOTE:** All Digital Inputs can be used as Counter Inputs.

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