Stratus Installation Sheet Package

STRATUS UNIT MANAGER ASM08150

A next-generation controller designed for seamless integration and total customization. Built to support a wide range of products with adaptable functionality and unmatched versatility.

PHYSICAL

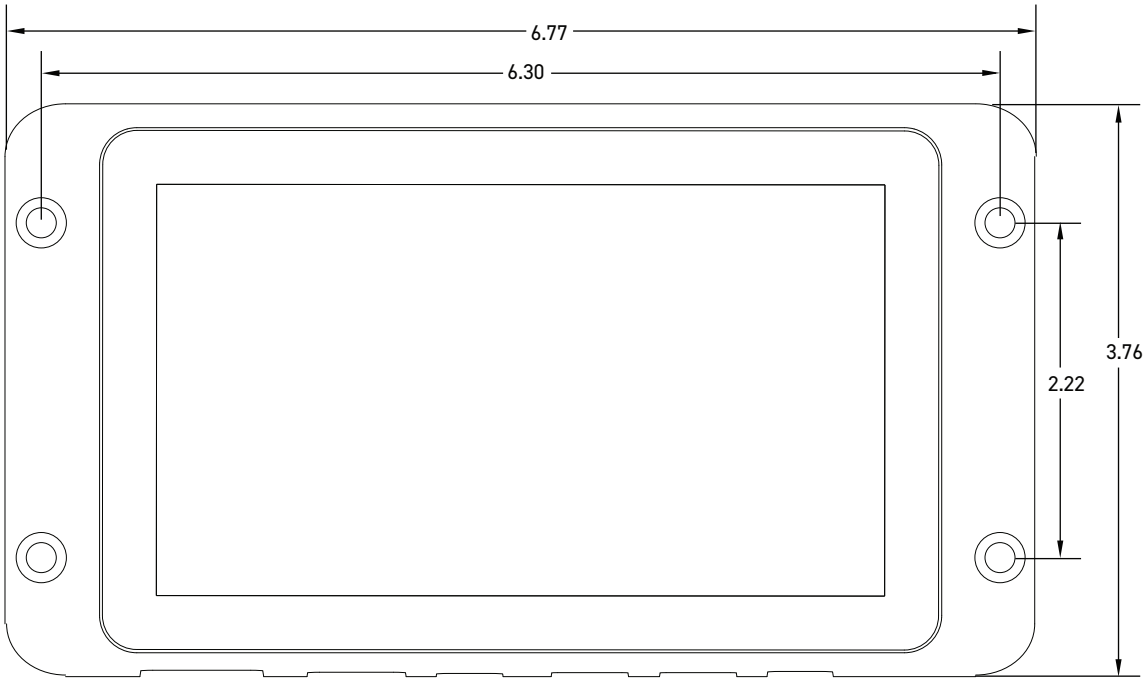
Multi-board control and communications

The Stratus Unit Manager allows users to interact with system units, coordinating the actions of the various Stratus I-O Boards. The Stratus Unit Manager provides the following functionality:

- In-Unit Board Communications
- MS/TP or BACnet IP Communications
- Building IP Network Communications
- E-BUS Sensor Communications
- TS Space Sensor Communications

Electrical and Environmental	
Operating Power	23-26 VDC 24 VDC Nominal
Operating Temperature	-31°F to 158°F -35°C to 70°C
Power Consumption	10W Nominal 90W Maximum
Operating Humidity	0-95% RH Non-Condensing
Connections	1 Ethernet 1 T1L 1 Wattcomm 1 BACnet MS/TP 1 USB-A 1 USB-C

Contact AAON Support for Technical Assistance
www.aaon.com/contact



NOTE: All dimensions are in inches.

INSTALLATION

Mounting

The Stratus Unit Manager is designed to be mounted by using the four mounting holes in the enclosure base and the included mounting screws (#8 x 1" sheet metal screws).

The Stratus Unit Manager needs to be installed in an environment which can maintain a temperature range of -31°F to 158°F not to exceed 95% RH levels (Non-Condensing). It is important to mount the device in a location that is free from extreme high or low temperatures, moisture, dust, and dirt. Be careful not to damage the electronic components when mounting the controller.

Scan the code for additional product information

STRATUS POWER COMM BOARD ASM08153

AAON Controls is involved in the design and selection of the sensors used with AAON units to ensure integration between sensors, controllers, software, and mechanical equipment.

PHYSICAL

High-speed connectivity and communications, all in one

The Stratus Power Comm board acts as the primary power and communications I-O board for Stratus.

Electrical and Environmental	
Operating Power	23-26 VDC 24 VDC Nominal
Operating Temperature	-31°F to 158°F -35°C to 70°C
Power Consumption	10W Nominal 90W Maximum
Operating Humidity	0-95% RH Non-Condensing
Connections	7 T1L Ports 6 EXV Ports 1 Power Supply Port 1 Power Downstream 1 PBO 1 24 VDC Aux Power

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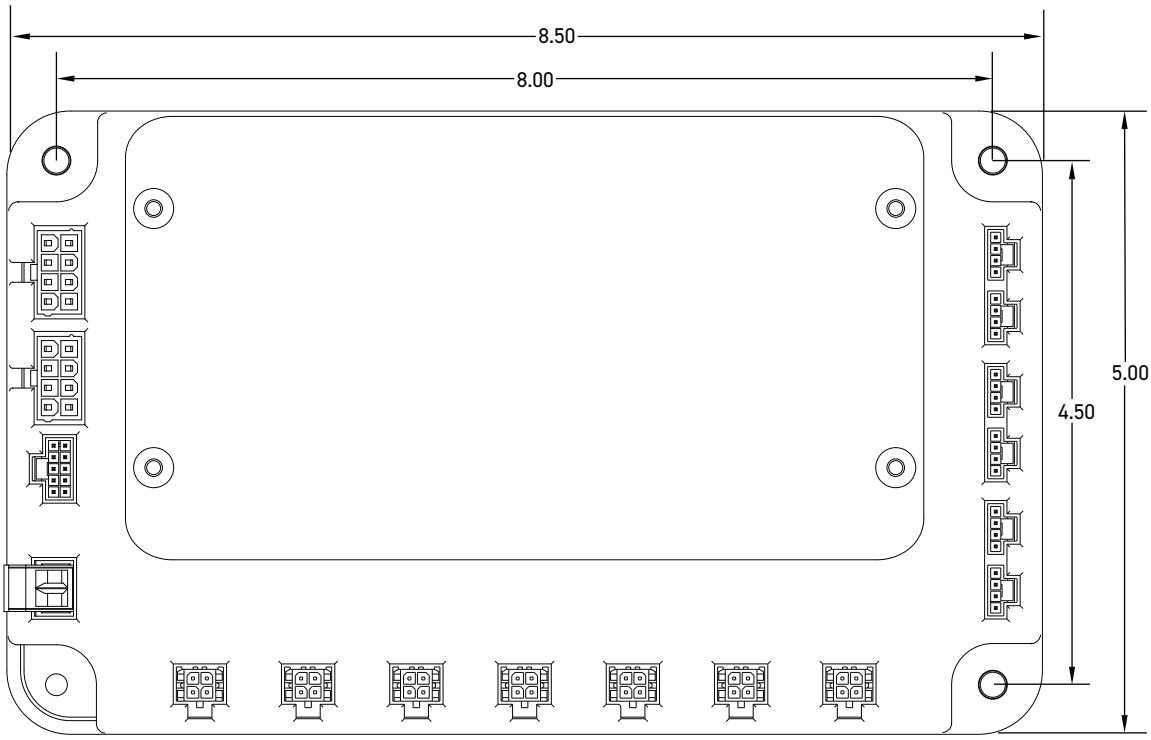


NOTE: All dimensions are in inches.

INSTALLATION

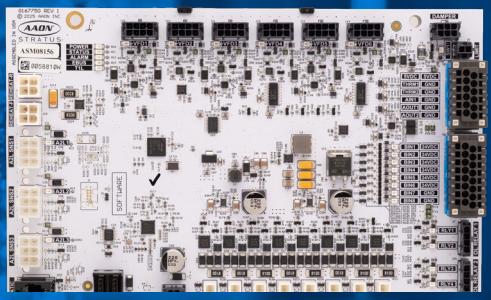
Mounting

The Stratus Power Comm Board is designed to be mounted by using the four mounting holes in the enclosure base and the included mounting screws (#8 x 1" sheet metal screws).

The Stratus Power Comm Board needs to be installed in an environment which can maintain a temperature range of -31°F to 158°F not to exceed 95% RH levels (Non-Condensing). It is important to mount the device in a location that is free from extreme high or low temperatures, moisture, dust, and dirt. Be careful not to damage the electronic components when mounting the module.

Scan the code for additional product information

STRATUS AIR HANDLER I-O BOARD ASM08156



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PHYSICAL

Highly configurable air handling solutions

The Stratus Air Handler I-O Board is an input/output board tailor made to work in conjunction with the Stratus Unit Manager. The Stratus Air Handler Board I-O provides the following functionality:

- Fan Control
- OA\RA Damper
- A2L Sensors
- Duct Static Sensor
- Supply, Return, and Space Air Temperatures
- Chilled\Hot Water Valve Controls
- Remote Shutdown
- Supply Fan Airflow Status
- Hood On Status
- BACnet Passthroughs

Electrical and Environmental	
Operating Power	23-26 VDC 24 VDC Nominal
Operating Temperature	-31°F to 158°F -35°C to 70°C
Power Consumption	10W Nominal 90W Maximum
Operating Humidity	0-95% RH Non-Condensing
Inputs	8 Binary Inputs (Configurable) 2 Thermistor Inputs (Configurable) 1 Analog Input
Outputs	2 Analog Outputs, 2 Configurable Relays
Connections	8 MOUTs (Configurable) 1 Limit Switch 1 Damper Port 6 VFD Ports 2 Reheat Ports 3 A2L Ports 1 Static Pressure Port 2 EBUS 1 T1L

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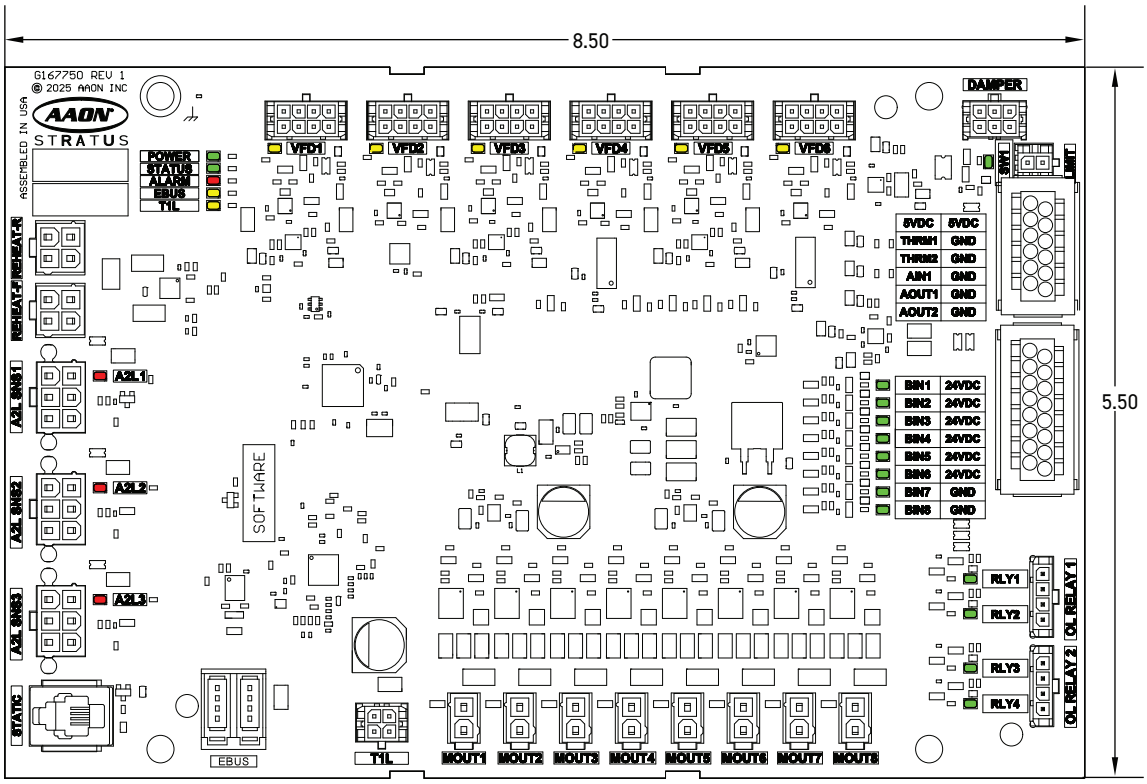


NOTE: All dimensions are in inches.

INSTALLATION

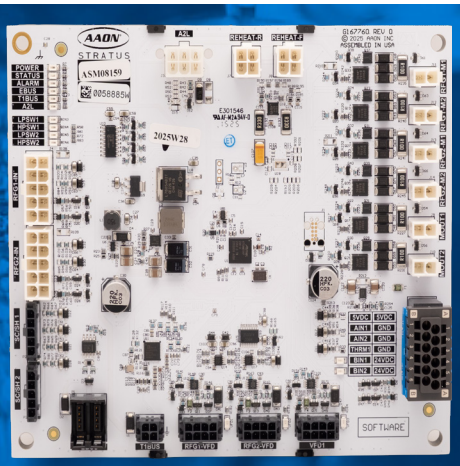
Mounting

The Stratus Air Handler I-O Board is designed to be mounted by using the four mounting holes in the enclosure base and the included mounting screws (#8 x 1" sheet metal screws).

The Stratus Air Handler I-O Board needs to be installed in an environment which can maintain a temperature range of -31°F to 158°F not to exceed 95% RH levels (Non-Condensing). It is important to mount the device in a location that is free from extreme high or low temperatures, moisture, dust, and dirt. Be careful not to damage the electronic components when mounting the module.

Scan the code for additional product information

STRATUS COOLING I-O BOARD ASM08159



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PHYSICAL

Versatile and configurable cooling capabilities

The Stratus Cooling I-O Board is an input/output board made to work with the Stratus Unit Manager. Designed to address cooling needs, the Stratus Cooling I-O Board provides the following functionality:

- Compressors
- Reversing Valve Control
- Reheat Valve Control
- Line Temperature Sensors
- Refrigerant Pressure Sensors
- Oil Level Sensors
- Defrost Switch
- Condenser Fan
- A2L Sensors
- BACnet Passthroughs

One Stratus Cooling I/O Board can support the following circuits:

- Single Variable Speed Compressor (VFD)
- Single Variable Capacity Compressor (Digital)
- Single 2-Step Compressor
- Single On\Off Compressor
- Variable Speed Compressor w\ Tandem 2-Step or On\Off Compressor
- Variable Capacity Compressor (Digital) w\ Tandem 2-Step or On\Off Compressor
- 2-Step Compressor w\ Tandem 2-Step or On\Off Compressor
- On\Off Compressor w\ Tandem On\Off

Electrical and Environmental	
Operating Power	23-26 VDC 24 VDC Nominal
Operating Temperature	-31°F to 158°F -35°C to 70°C
Power Consumption	10W Nominal 90W Maximum
Operating Humidity	0-95% RH Non-Condensing
Inputs	2 Analog Inputs (Configurable) 2 Binary Inputs (Configurable) 1 Thermistor Input (Configurable)
Connections	6 MOUTs (Configurable) 2 VFD Comp Ports 1 VFD Port 1 A2L Port 2 Reheat Ports 2 Cooling Ports 2 E-BUS Ports 1 T1L Port 2 SC/SH Ports

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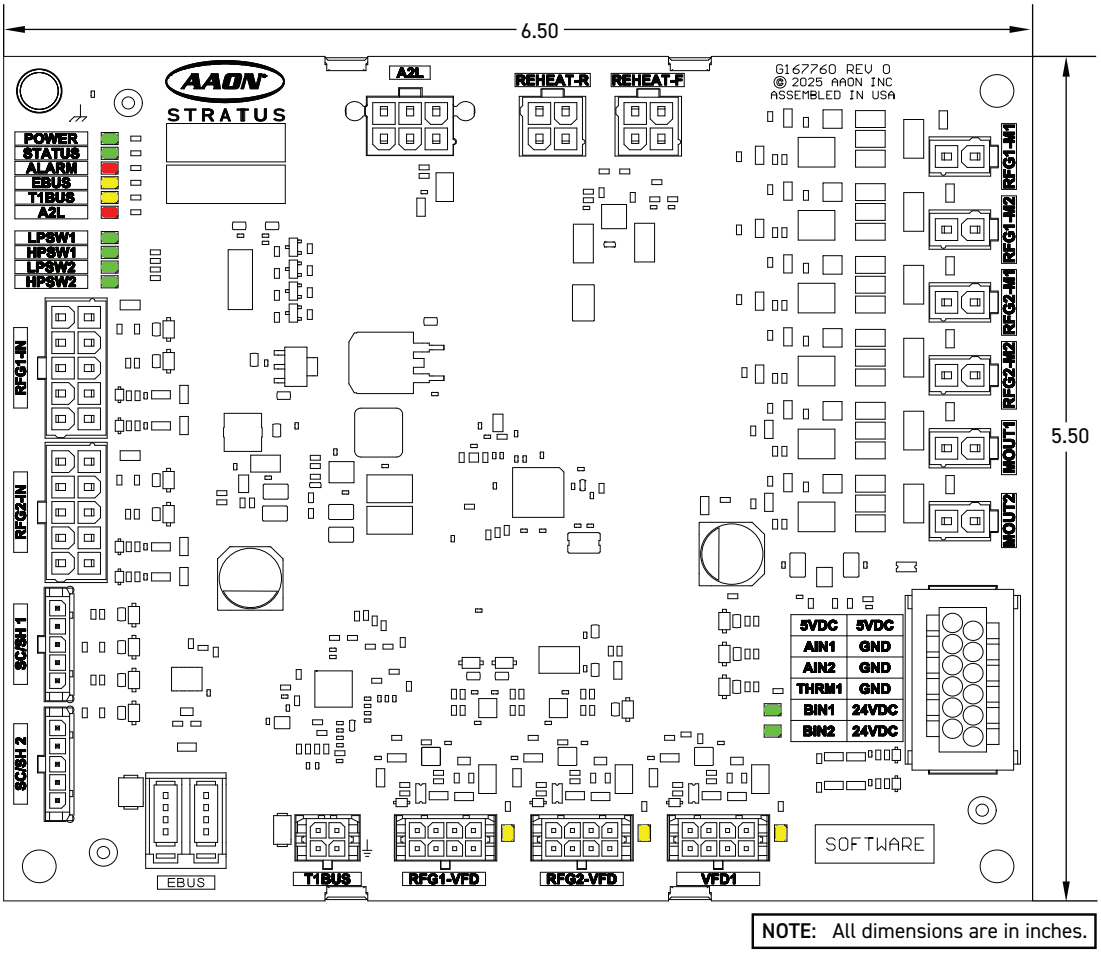


NOTE: All dimensions are in inches.

INSTALLATION

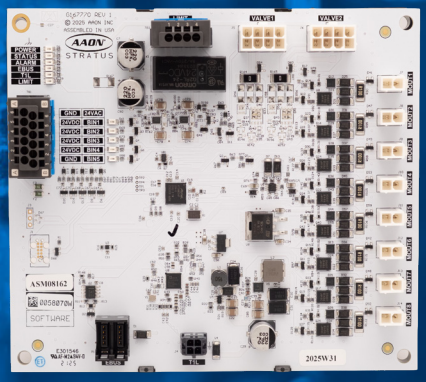
Mounting

The Stratus Cooling I-O Board is designed to be mounted by using the four mounting holes in the enclosure base and the included mounting screws (#8 x 1" sheet metal screws).

The Stratus Cooling I-O Board needs to be installed in an environment which can maintain a temperature range of -31°F to 158°F not to exceed 95% RH levels (Non-Condensing). It is important to mount the device in a location that is free from extreme high or low temperatures, moisture, dust, and dirt. Be careful not to damage the electronic components when mounting the module.

Scan the code for additional product information

STRATUS HEATING I-O BOARD ASM08162



AAON Controls is involved in the design and selection of the sensors used with AAON units to ensure integration between sensors, controllers, software, and mechanical equipment.

PHYSICAL

Highly customizable heating solutions

The Stratus Heating I-O Board is an input/output board made to collaborate with the Stratus Unit Manager. Designed with heating requirements in mind, the Stratus Heating I-O Board provides the following functionality:

- ModGas Valves
- Ignition Proof Status
- SCR Electric Signals
- Heat Enables
- Inducer Fan Low Speed
- BACnet Passthroughs

Electrical and Environmental	
Operating Power	23-26 VDC 24 VDC Nominal
Operating Temperature	-31°F to 158°F -35°C to 70°C
Power Consumption	10W Nominal 90W Maximum
Operating Humidity	0-95% RH Non-Condensing
Inputs	5 Binary Inputs (Configurable)
Connections	8 MOUTs (Configurable) 2 Valve Ports 2 E-BUS Ports 1 T1L Port 1 Limit Switch Port

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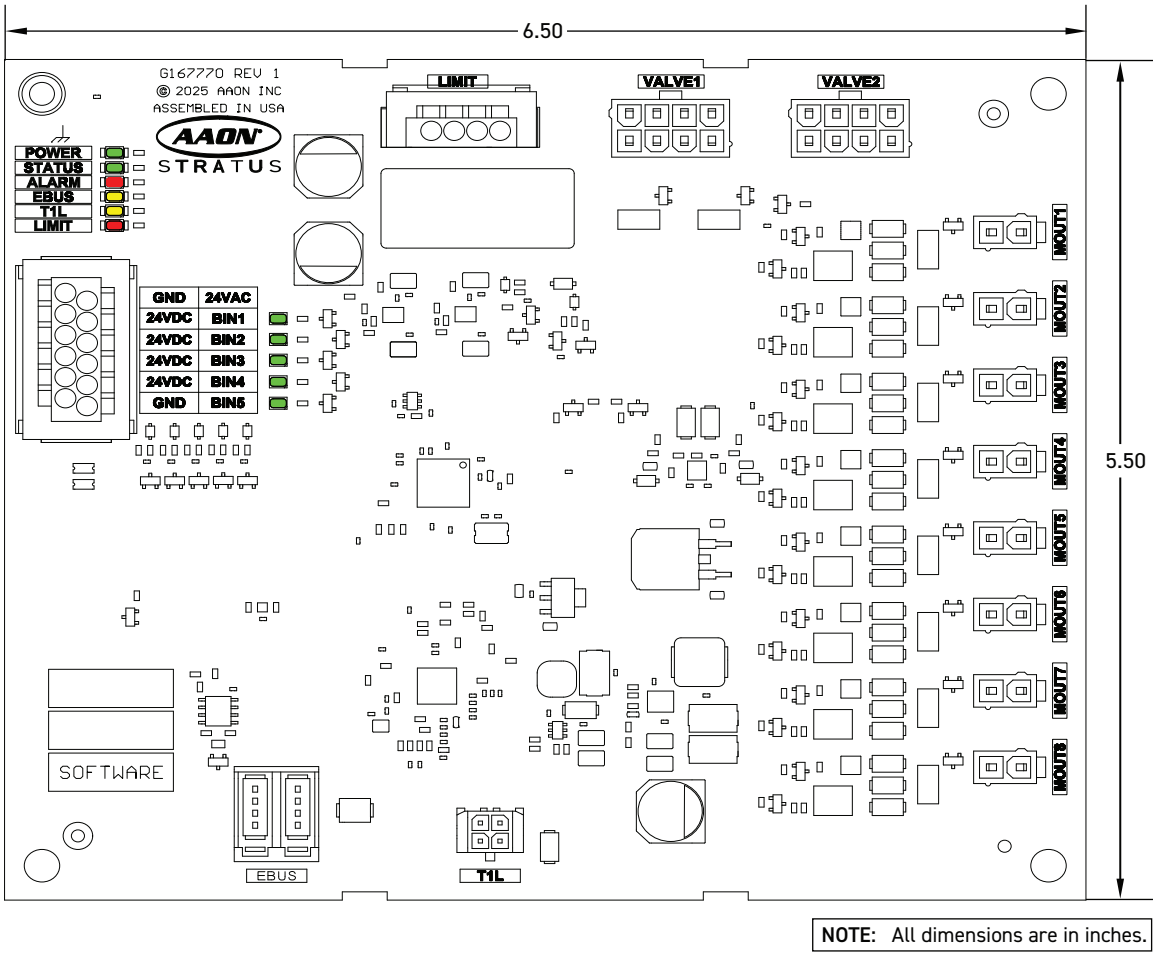

INSTALLATION

Mounting

The Stratus Heating I-O Board is designed to be mounted by using the four mounting holes in the enclosure base and the included mounting screws (#8 x 1" sheet metal screws).

The Stratus Heating I-O Board needs to be installed in an environment which can maintain a temperature range of -31°F to 158°F not to exceed 95% RH levels (Non-Condensing). It is important to mount the device in a location that is free from extreme high or low temperatures, moisture, dust, and dirt. Be careful not to damage the electronic components when mounting the module.

Scan the code for additional product information

STRATUS OUTDOOR AIR I-O BOARD ASM08165

AAON Controls is involved in the design and selection of the sensors used with AAON units to ensure integration between sensors, controllers, software, and mechanical equipment.

PHYSICAL

Highly configurable outdoor air solutions

The Stratus Outdoor Air I-O Board is an input/output board tailor made to work in conjunction with the Stratus Unit Manager. Designed specifically considering the challenges of outdoor air, the Stratus Outdoor Air I-O Board provides the following functionality:

- OA/RTN Air Damper
- Exhaust Air Damper
- ERV Bypass Damper
- Outside Air Temperature
- Return Air Temperature
- Supply Airflow Switch
- Return Airflow Switch
- Exhaust Airflow Switch
- Dirty Filter Switch
- Building Pressure Sensor
- Exhaust Pressure Sensor

Electrical and Environmental	
Operating Power	23-26 VDC 24 VDC Nominal
Operating Temperature	-31°F to 158°F -35°C to 70°C
Power Consumption	10W Nominal 90W Maximum
Operating Humidity	0-95% RH Non-Condensing
Inputs	2 Analog Inputs (Configurable) 4 Binary Inputs (Configurable)
Outputs	3 Analog Outputs
Connections	3 Limit Switch Ports 3 Damper Ports 4 E-BUS Ports 1 T1L Port

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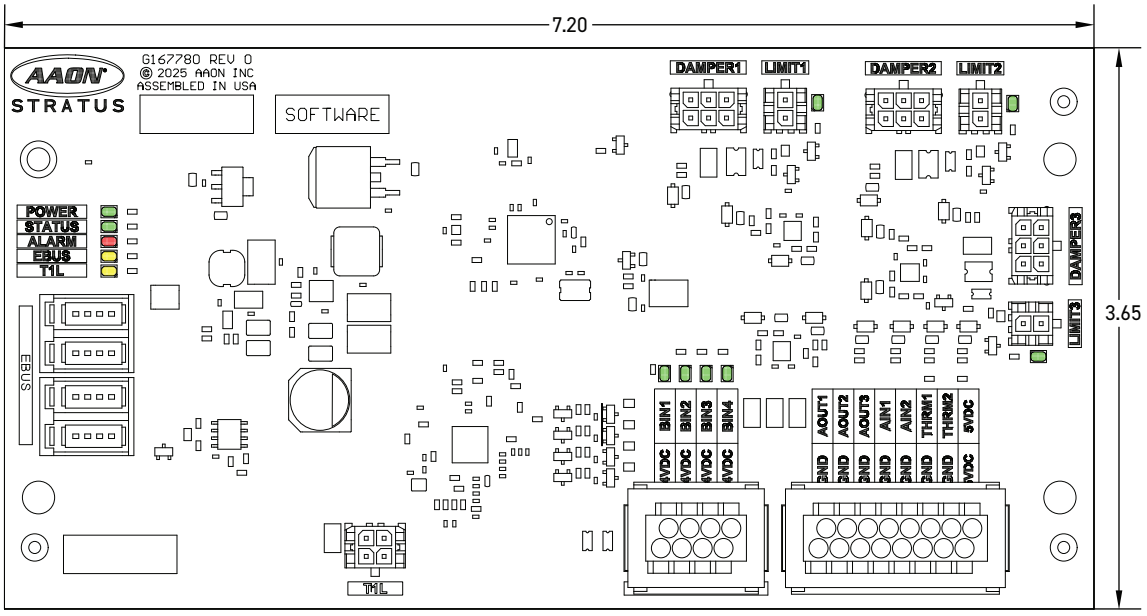


NOTE: All dimensions are in inches.

INSTALLATION

Mounting

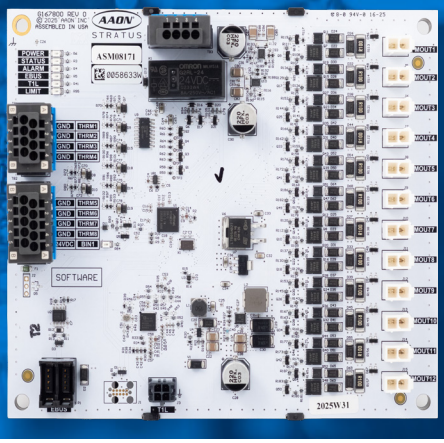
The Stratus Outside Air I-O Board is housed in a plastic enclosure. The enclosure itself must first be mounted before the board can be mounted within.

The Stratus Outside Air I-O Board is designed to be mounted within the enclosure by using the four mounting holes in the enclosure and the included mounting screws (#8 x 1" sheet metal screws).

The Stratus Outside Air I-O Board needs to be installed in an environment which can maintain a temperature range of -31°F to 158°F not to exceed 95% RH levels (Non-Condensing). It is important to mount the device in a location that is free from extreme high or low temperatures, moisture, dust, and dirt. Be careful not to damage the electronic components when mounting the module.

Scan the code for additional product information

STRATUS PREHEAT I-O BOARD ASM08171



AAON Controls is involved in the design and selection of the sensors used with AAON units to ensure integration between sensors, controllers, software, and mechanical equipment.

PHYSICAL

Versatile preheat solutions with extensive configuration options

The Stratus Preheat I-O Board is an input/output board specifically tailored to work in tandem with the Stratus Unit Manager. Designed specifically with configurability and preheat in mind, the Stratus Preheat I-O Board provides the following configurable options:

- Stage Enables
- PWM SCR Signal
- Entering Air Temperatures
- Leaving Air Temperatures
- BACnet Passthroughs

Electrical and Environmental	
Operating Power	23-26 VDC 24 VDC Nominal
Operating Temperature	-31°F to 158°F -35°C to 70°C
Power Consumption	10W Nominal 90W Maximum
Operating Humidity	0-95% RH Non-Condensing
Inputs	1 Binary Input (Configurable) 8 Thermistor Inputs (Configurable)
Connections	12 MOUTs (Configurable) 2 EBUS Ports 1 T1L Port 1 Limit Switch Port

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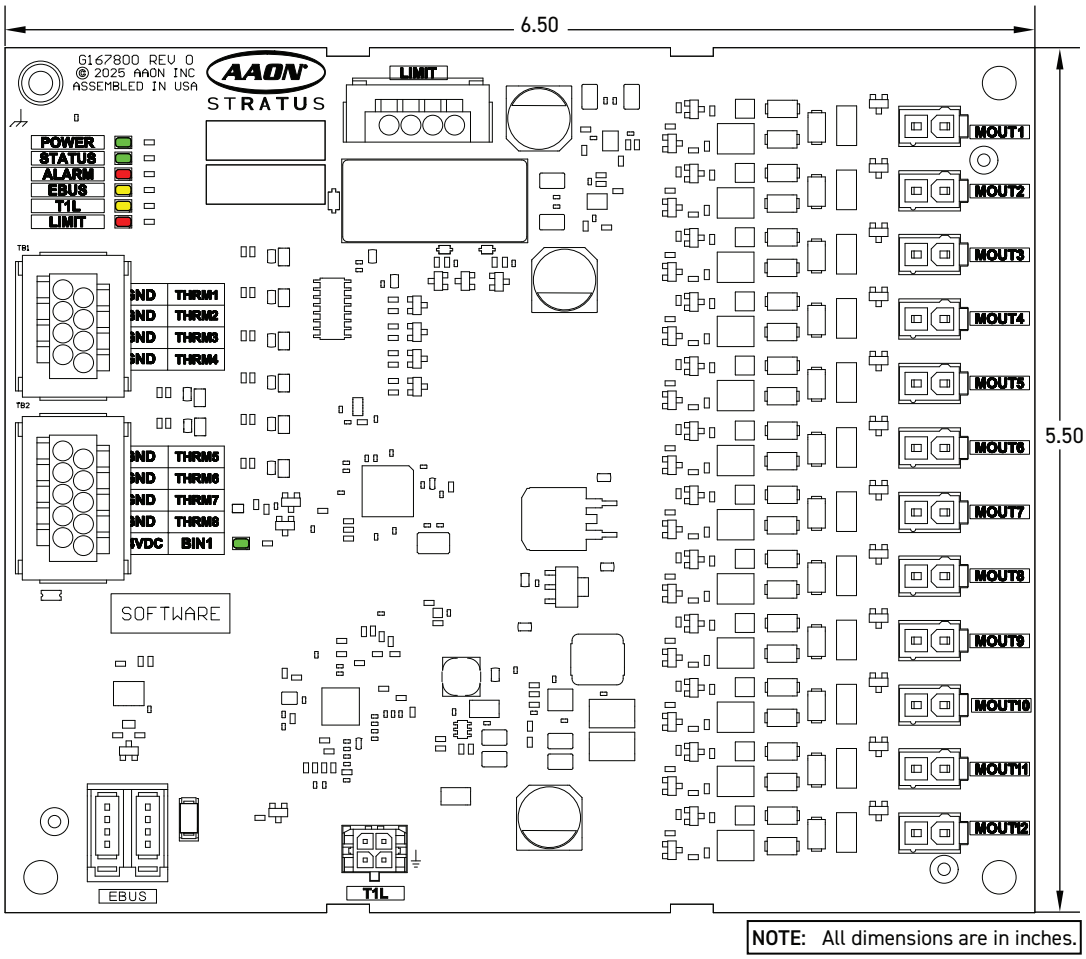

INSTALLATION

Mounting

The Stratus Preheat I-O Board is designed to be mounted by using the four mounting holes in the enclosure base and the included mounting screws (#8 x 1" sheet metal screws).

The Stratus Preheat I-O Board needs to be installed in an environment which can maintain a temperature range of -31°F to 158°F not to exceed 95% RH levels (Non-Condensing). It is important to mount the device in a location that is free from extreme high or low temperatures, moisture, dust, and dirt. Be careful not to damage the electronic components when mounting the module.

Scan the code for additional product information

STRATUS SPACE AND TEMPERATURE SENSOR ASM08196

AAON Controls is involved in the design and selection of the sensors used with AAON units to ensure integration between sensors, controllers, software, and mechanical equipment.

PHYSICAL

Validating Information Provided by the sensors to the Unit Controllers

The Stratus Space Temperature Sensor is used to sense Space Temperature and Space Humidity. The sensor is supplied with electronics mounted in a case assembly, with a mounting bracket, and two mounting screws.

The sensor connects to the Stratus Power/Comm unit via a T1L cable of required length (sold separately). The T1L cable should not run in conduit with other AC line voltage wiring or any conductors carrying highly inductive loads.

Environmental Requirements

The Stratus Space Temperature Sensor needs to be installed in an environment that does not exceed a temperature greater than 120°F or less than 40°F and does not exceed 95% relative humidity levels (non-condensing).

Electrical and Environmental	
Sensor Element	Type III Thermistor 10K OHM @ 77°F Digital Sensing Device
Sensor Reading Range	40°F to 120°F
Ambient Temperature Limits	-40°F to 180°F
Accuracy	Temp +/- 0.8°F
Display	112 x 64 Monochrome Graphical LCD w/LED Back light
Connection	E-BUS
Weight	3.2 oz

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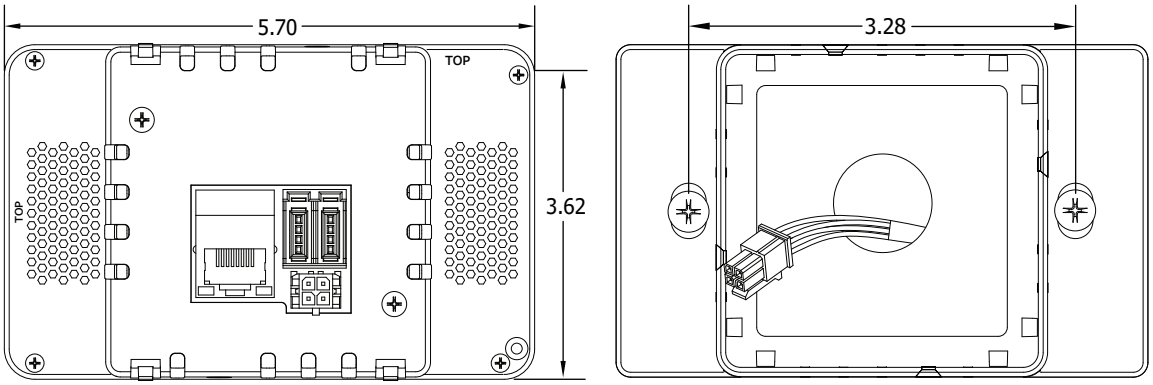

Back of the Front Plate

Front of the Wall Mount

NOTE: All dimensions are in inches.

INSTALLATION

Mounting

Caution: Do not touch the front face of the sensor while plugging in the T1L cable. Touching the front face of the sensor while plugging in the cable may prevent proper initialization and keep the sensor from working properly.

The Stratus Space Sensor is designed to be mounted horizontally. The sensor is mounted by placing the mounting bracket on the wall aligned to the electrical box and fastening the bracket using two 6-32 x 1" mounting screws. The T1L cable is then plugged into the T1L connector located on the back of the Stratus Space Sensor and the Stratus Space Sensor is placed into the mounting bracket. The Space Sensor can then be secured into place with one or two screws. The sensor should be mounted on the wall in an area that does not have drafts or is exposed to direct sunlight.

Scan the code for additional product information