# STC-1050

Smart Touch Computer

**User's Manual**


**Manual Rev.:** 0.30

**Revision Date:** October 5, 2015

**Part No:** 50-1Z203-2000


**Advance Technologies; Automate the World.**

# Revision History

| Revision | Release Date | Description of Change(s) |
|---|---|---|
| 0.10 | 17/07/2015 | Preliminary release |
| 0.20 | 11/08/2015 | Update COM1/2 specification; add OS support; panel mount thickness support; power switch description |
| 0.30 | 05/10/2015 | Add FCC statement |

# Preface



**Disclaimer**

The information in this document is subject to change without prior notice in order to improve reliability, design, and function and does not represent a commitment on the part of the manufacturer.

In no event will the manufacturer be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or inability to use the product or documentation, even if advised of the possibility of such damages.

**Environmental Responsibility**

ADLINK is committed to fulfill its social responsibility to global environmental preservation through compliance with the European Union's Restriction of Hazardous Substances (RoHS) directive and Waste Electrical and Electronic Equipment (WEEE) directive. Environmental protection is a top priority for ADLINK. We have enforced measures to ensure that our products, manufacturing processes, components, and raw materials have as little impact on the environment as possible. When products are at their end of life, our customers are encouraged to dispose of them in accordance with the product disposal and/or recovery programs prescribed by their nation or company.

**Trademarks**

Product names mentioned herein are used for identification purposes only and may be trademarks and/or registered trademarks of their respective companies.

## Conventions

Take note of the following conventions used throughout this manual to make sure that users perform certain tasks and instructions properly.


Additional information, aids, and tips that help users perform tasks.


Information to prevent ***minor*** physical injury, component damage, data loss, and/or program corruption when trying to complete a task.


Information to prevent ***serious*** physical injury, component damage, data loss, and/or program corruption when trying to complete a specific task.

### Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.


**FCC Radiation Exposure Statement**
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

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# 1 Introduction

## 1.1 Overview

The STC-1005/1205/1505 series of Smart Touch Computers is designed for industrial automation and other applications in harsh environments requiring an IP65 compliant front bezel with projected capacitive multi-touch display. Typical applications include industrial control systems for the food and beverage industries; automated buildings; transportation; hospitals; factories; and leisure facilities.

## 1.2 Features

- 10.4”/12.1”/15” 4:3 TFT-LCD display
- 1024 x 768 resolution
- 5-wire resistive touch sensor and optional projected capacitive sensor
- 400/500 nits (w/o touch screen attached)
- Intel® Atom™ Processor E3845, quad core, 1.91GHz
- 2GB DDR3L soldered onboard
- 1x USB 2.0, 2x GbE, 2x RS-232, 1x HDMI Port
- Externally accessible SD card slot & SATA drive bay
- Supports VESA and panel mounting
- IP65 rated front panel
- 9-24V DC power input

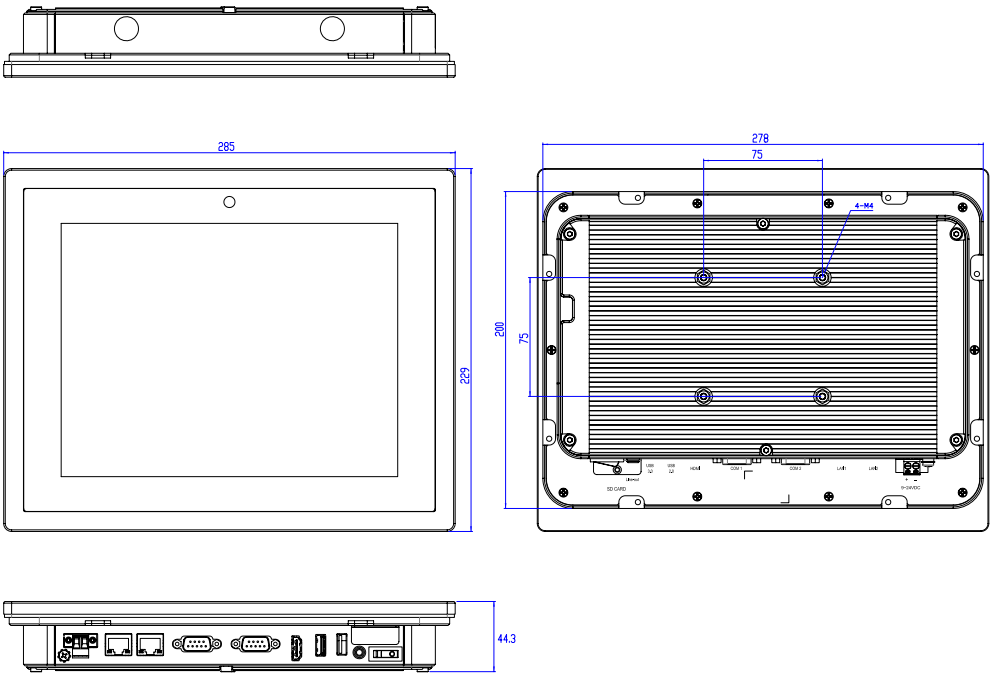
## 1.3 Package Contents

Please check that your package contains the items below. If you discover damaged or missing items, please contact your vendor.

- STC-1005/1205/1505 Smart Touch Computer
- 19 VDC power adapter (input: 100-240 VAC, 1.5A, 50-60Hz)
- Panel mount bracket kit
- SATA drive mounting screws

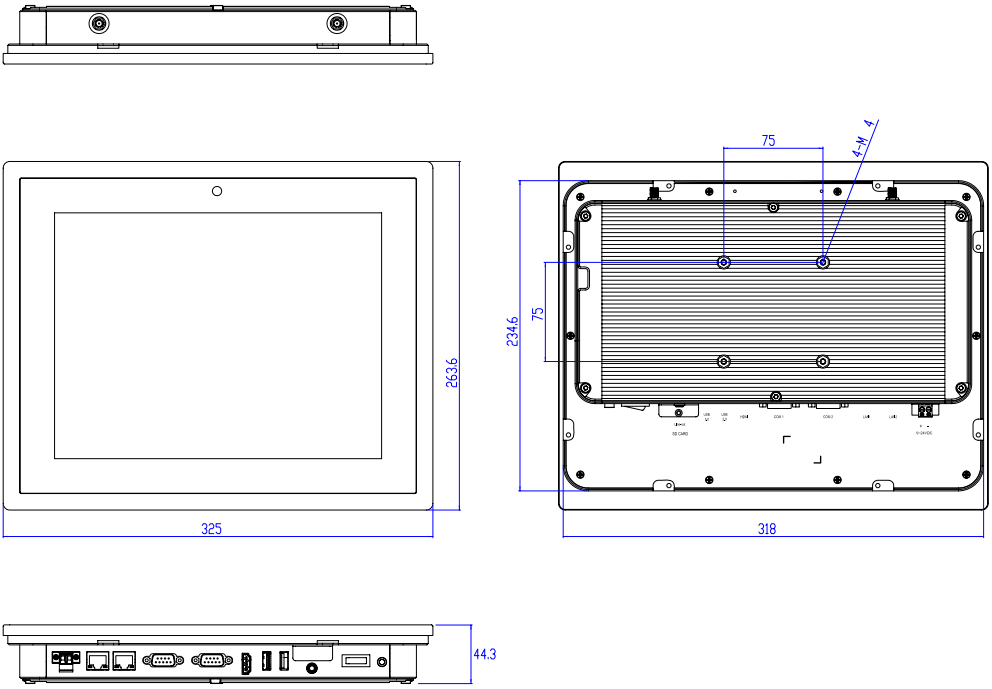

**DO NOT** install or apply power to equipment that is damaged or if there is missing/incomplete equipment. Retain the shipping carton and packing materials for inspection. Please contact your ADLINK dealer/vendor immediately for assistance. Obtain authorization from your dealer before returning any product to ADLINK.

## 1.4 Mechanical Dimensions



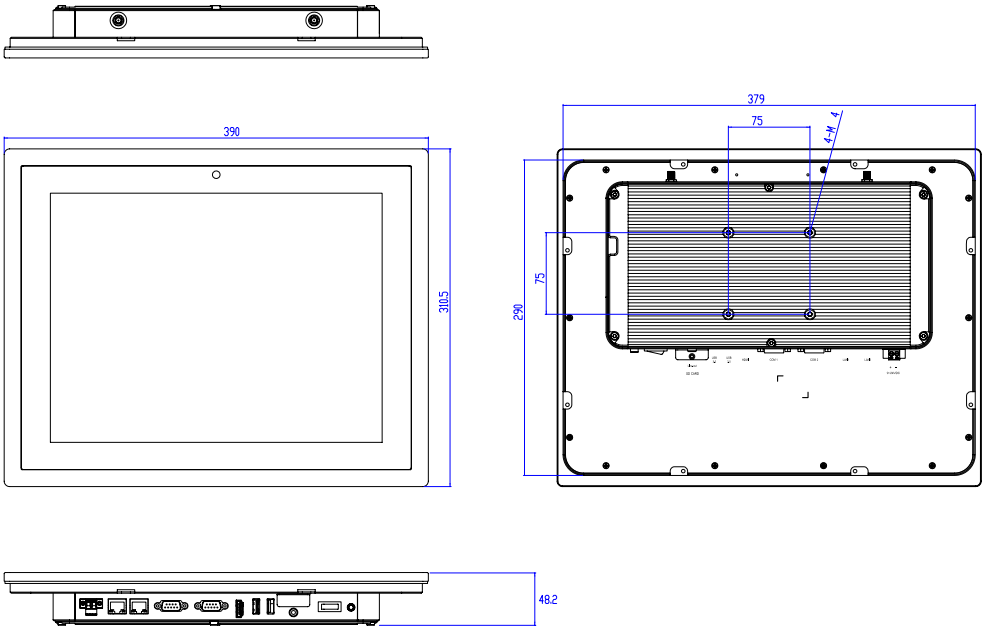

Dimensions in mm

**Figure 1-1: STC-1005 Dimensions**




Dimensions in mm

**Figure 1-2: STC-1205 Dimensions**




Dimensions in mm

**Figure 1-3: STC-1505 Dimensions**

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# 2 System Description

## 2.1 Specifications

| | | | |
|---|---|---|---|
| **Display** | | | |
| **Display Size** | 10.4" | 12.1" | 15" |
| **Resolution** | 1024x 768 pixels | | |
| **Brightness** | 500 nits (w/o touch) | | 400 nits (w/o touch) |
| **Contrast Ratio** | 1000:1 | 700:1 | |
| **Touchscreen** | 5-wire resistive touch sensor / projective capacitive sensor (optional) | | |
| **System Components** | | | |
| **Processor** | Intel® Atom™ Processor E3845, quad core, 1.91GHz | | |
| **Memory** | 2GB DDR3L soldered onboard | | |
| **Storage** | 1x SATA Slim slot<br>1x SD card slot | 1x SATA Slim slot or 2.5" SATA drive bay<br>1x SD card slot | |
| **I/O** | 1x USB 2.0, Type A<br>2x GbE, RJ45<br>2x RS-232 (TX/RX only)<br>1x HDMI Port<br>1x audio port (line out)<br>Webcam: 2.0M pixel | | |
| **Wireless Connectivity** | 802.11 b/g/n; Bluetooth 4.0<br>(STC-1005/1205 internal antenna,<br>STC-1505 external antenna) | | |
| **Operating System** | Windows Embedded Standard 7 Pre-Loaded<br>Windows Embedded 8.1 (optional) | | |
| **Mechanical** | | | |
| **Construction** | Aluminum front bezel and chassis | | |
| **Weight** | 2.5kg | 4.5kg | 6.0kg |
| **Dimensions (HxWxD)** | 285 x 229 x 44.3 mm | 325 x 263.6 x 44.6 mm | 390 x 310.5 x 48.5 mm |
| **Mounting** | VESA mount, MIS-D 75mm<br>Panel mount | | |
| **Power** | | | |
| **Input Voltage** | 9-24V DC power input<br>1x 2 Pin DC power input, terminal block | | |
| **Power Consumption** | 30W | 32W | 34W |

| Environmental & Certifications | |
|---|---|
| **Operating Temperature** | -20°C to 60°C |
| **Storage Temperature** | -20°C to 60°C |
| **Relative Humidity** | 10% to 90 % @ 40°C (non-condensing) |
| **Vibration Operating** | 1G random 5 to 500Hz |
| **Shock Operating** | 10G acceleration part to part, 11ms |
| **Ingress Rating** | IP65 rated front panel |
| **Certifications & Compliance** | CE, FCC, CB (IEC 60950-1) |

## 2.2 I/O Panel Layout

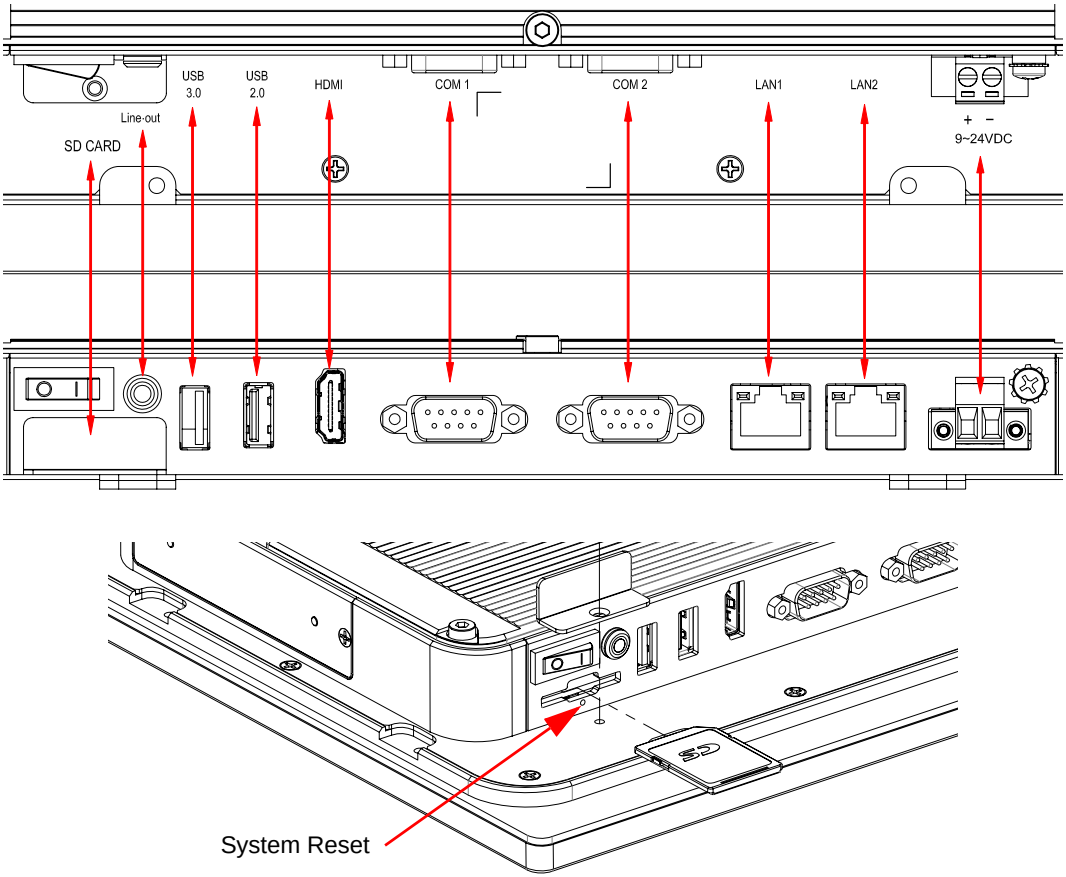



**Figure 2-1: STC-1005/1205/1505 Rear I/O Layout**

## 2.3 Pin Definitions

### USB 3.0 Connectors

| Pin # | Signal Name |
|---|---|
| 1 | VCC |
| 2 | Data- |
| 3 | Data+ |
| 4 | GND |
| 5 | RX_N |
| 6 | RX_P |
| 7 | GND |
| 8 | TX_N |
| 9 | TX_P |

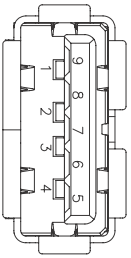


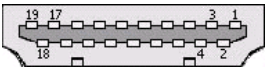

**Table 2-1: USB 3.0 Port Pinout**

### USB 2.0 Connector

| Pin # | Signal Name |
|---|---|
| 1 | Vcc |
| 2 | Data- |
| 3 | Data+ |
| 4 | GND |


**Table 2-2: USB 2.0 Port Pinout**

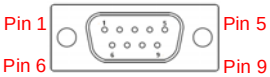
## HDMI Connector




| Pin # | Signal | Pin # | Signal |
|---|---|---|---|
| 1 | TMDS Data2+ | 2 | TMDS Data2 Shield |
| 3 | TMDS Data2– | 4 | TMDS Data1+ |
| 5 | TMDS Data1 Shield | 6 | TMDS Data1– |
| 7 | TMDS Data0+ | 8 | TMDS Data0 Shield |
| 9 | TMDS Data0– | 10 | TMDS Clock+ |
| 11 | TMDS Clock Shield | 12 | TMDS Clock– |
| 13 | CEC | 14 | Reserved |
| 15 | SCL | 16 | SDA |
| 17 | DDC/CEC Ground | 18 | +5 V Power |
| 19 | Hot Plug Detect | | |

**Table 2-3: HDMI Port Pinout**

## COM1/2 Ports (RS-232 TX/RX only)



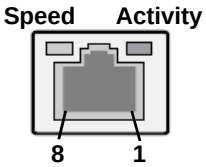

| Pin No | RS-232 |
|---|---|
| Pin1 | - |
| Pin2 | RX |
| Pin3 | TX |
| Pin4 | - |
| Pin5 | GND |
| Pin6 | - |
| Pin7 | - |
| Pin8 | - |
| Pin9 | - |

**Table 2-4: COM1/2 Port Pinouts**

## RJ-45 Gigabit Ethernet Connectors

| Pin # | 10BASE-T/100BASE-TX | 1000BASE-T |
|---|---|---|
| 1 | TX+ | MDI0+ |
| 2 | TX- | MDI0- |
| 3 | RX+ | MDI1+ |
| 4 | — | MDI2+ |
| 5 | — | MDI2- |
| 6 | RX- | MDI1- |
| 7 | — | MDI3+ |
| 8 | — | MDI3- |

**Table 2-5: RJ-45 GbE Pin Definitions**




| Status | | Speed LED (Green/Orange) | Activity LED (Yellow) |
|---|---|---|---|
| Network link is not established or system powered off | | OFF | OFF |
| 10 Mbps | Link | OFF | ON |
| | Active | OFF | Blinking |
| 100 Mbps | Link | Green | ON |
| | Active | Green | Blinking |
| 1000 Mbps | Link | Orange | ON |
| | Active | Orange | Blinking |

**Table 2-6: LAN LED Status Definitions**

## DC Power Input Connector

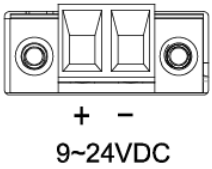



**Table 2-7: DC Power Input Pinout**

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# 3 Getting Started

## 3.1 Panel Mounting

The STC-1005/1205/1505 can be panel mounted using the 8 brackets included with the device. Make sure there is adequate space behind the panel for ventilation, and that the panel material and thickness can support the weight of the device.

NOTE:

The mounting brackets can accommodate a maximum panel thickness of 2 mm.

1. Cut the panel opening using the appropriate cutout dimensions shown below.
2. Install the panel mount brackets onto the back of the device as shown in Figure 3-1 below.
3. Attach I/O cables to the device before installing into the panel if rear access will be limited after installation (see “I/O Panel Layout” on page 9.).
4. Place the device into the panel cutout.
5. Hand-tighten the mounting brackets with a Phillips-head screwdriver to secure it to the panel. Do not overtighten the brackets to avoid damaging the device enclosure.

CAUTION:

Do not overtighten the brackets as this may damage the device enclosure.Always tighten the mounting brackets BY HAND to secure it to the panel.

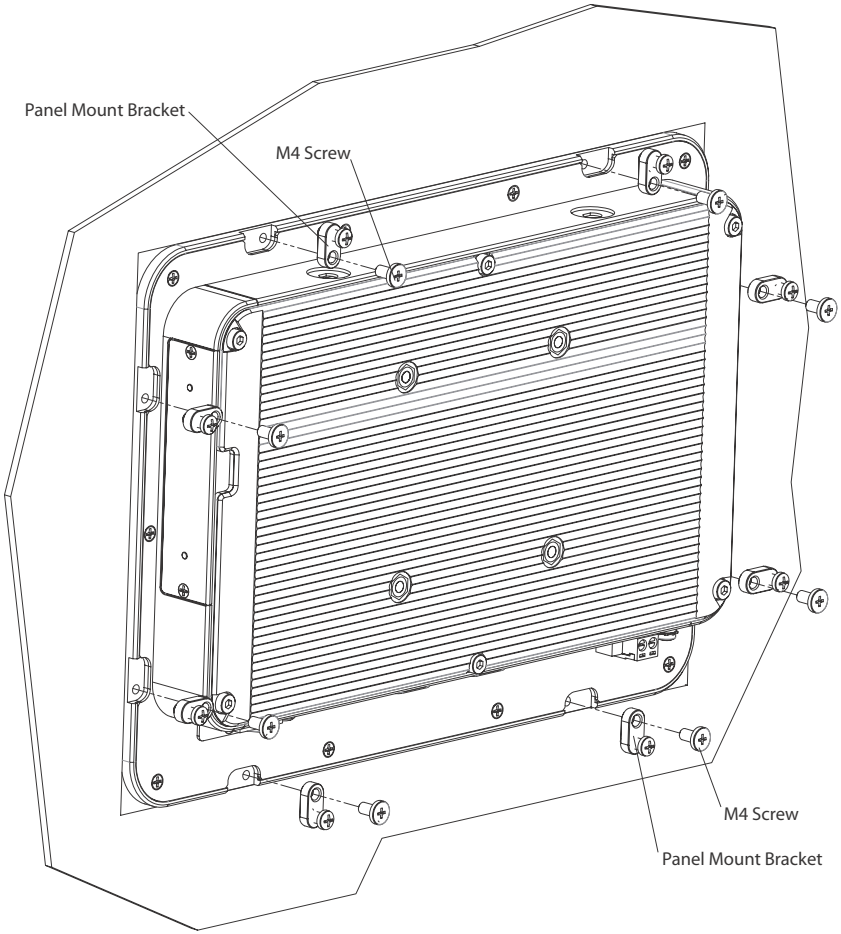
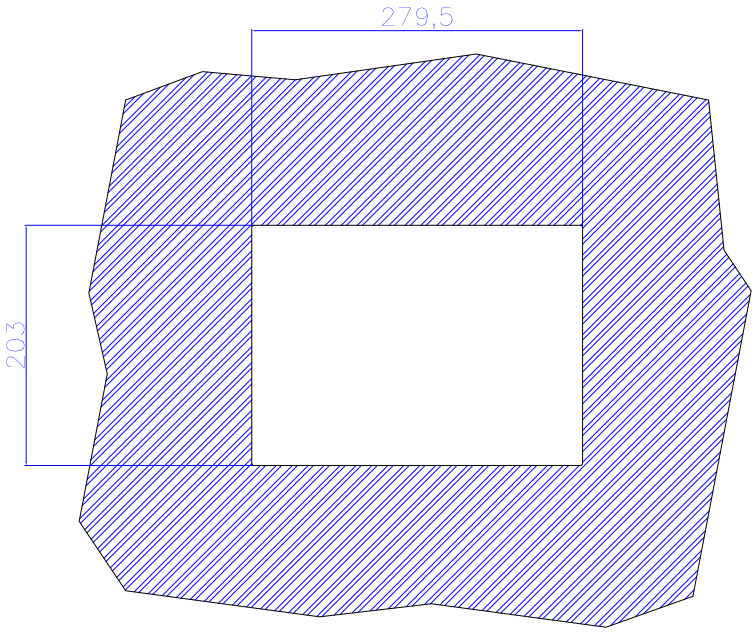


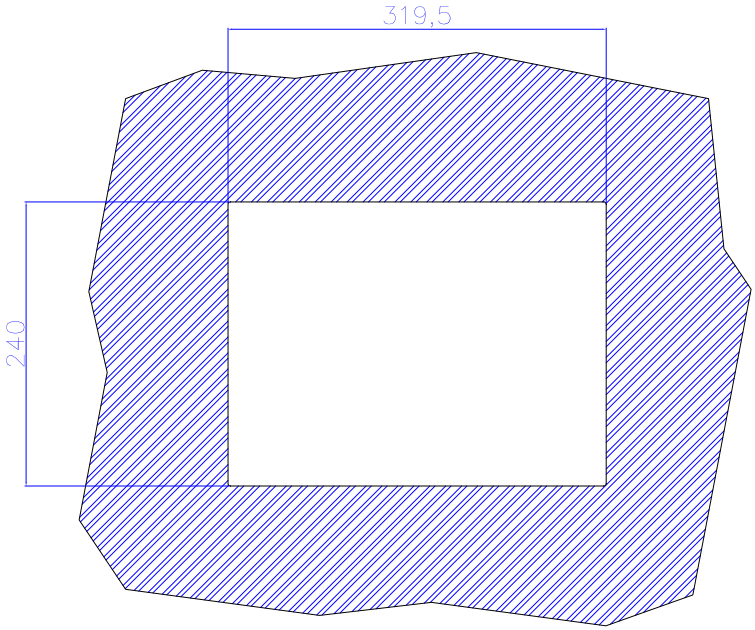

**Figure 3-1: Panel Mount Installation**

## Panel Mount Cutout Dimensions



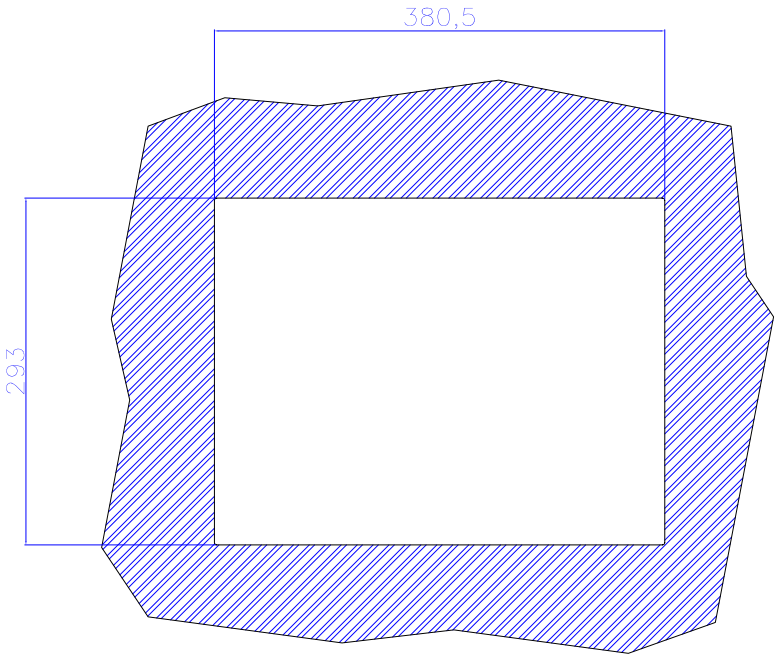

Dimensions in mm

**Figure 3-2: STC-1005 Panel Mount Cutout Dimensions**




Dimensions in mm

**Figure 3-3: STC-1205 Panel Mount Cutout Dimensions**




Dimensions in mm

**Figure 3-4: STC-1505 Panel Mount Cutout Dimensions**

## 3.2 SD Card Installation

To install or remove the SD card, loosen the screw securing the SD card slot cover. Insert or remove the SD card as required.

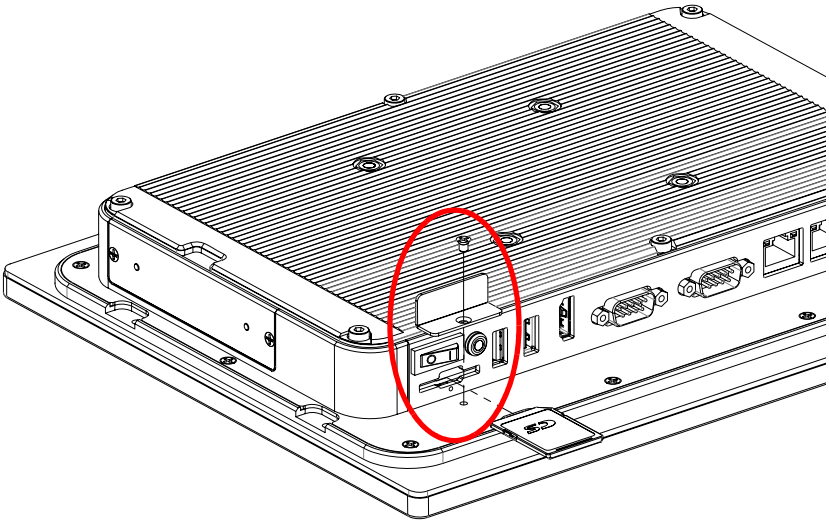


**Figure 3-5: SD Card Installation (STC-1005 shown)**

Replace the slot cover and tighten the scew.

## 3.3 STC-1005 SATA Slim Drive Installation

To install or replace a SATA Slim drive in the STC-1005, loosen the screws securing the drive bay bracket from the device as shown. Install the drive with the screws provided.

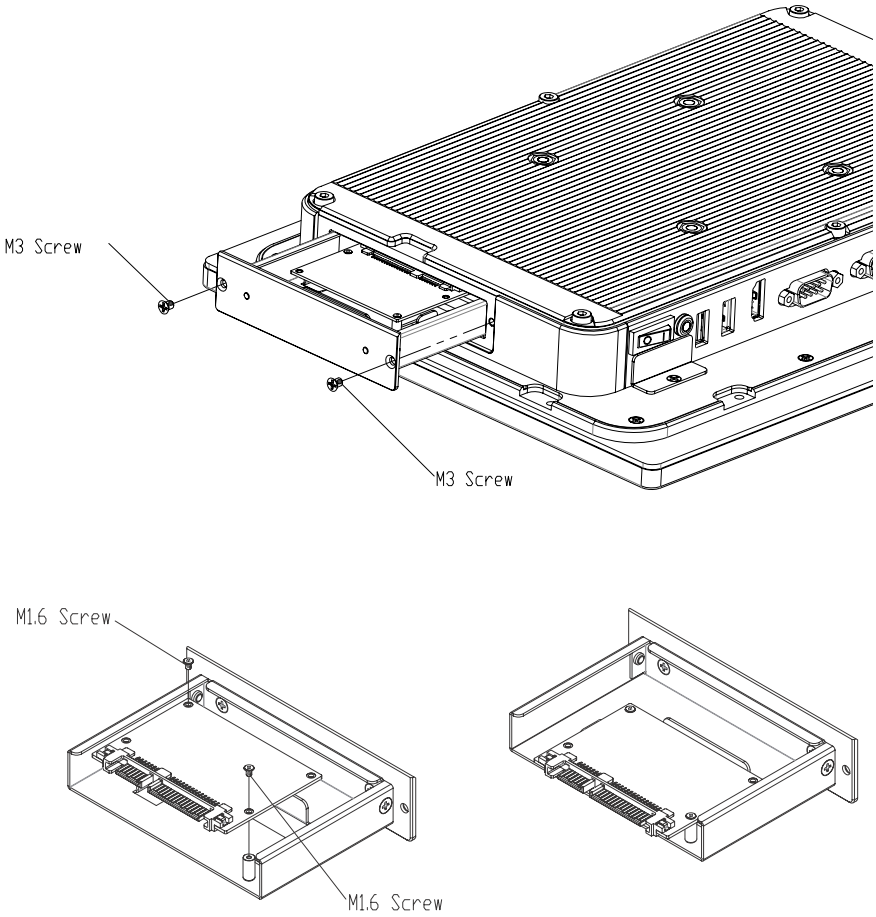



**Figure 3-6: STC-1005 SATA Slim Drive Installation**

## 3.4 STC-1205/1505 SATA Slim Drive Installation

To install or replace a SATA Slim drive in the STC-1205/1505, loosen the screws securing the drive bay bracket from the device as shown. Install the drive with the screws provided.

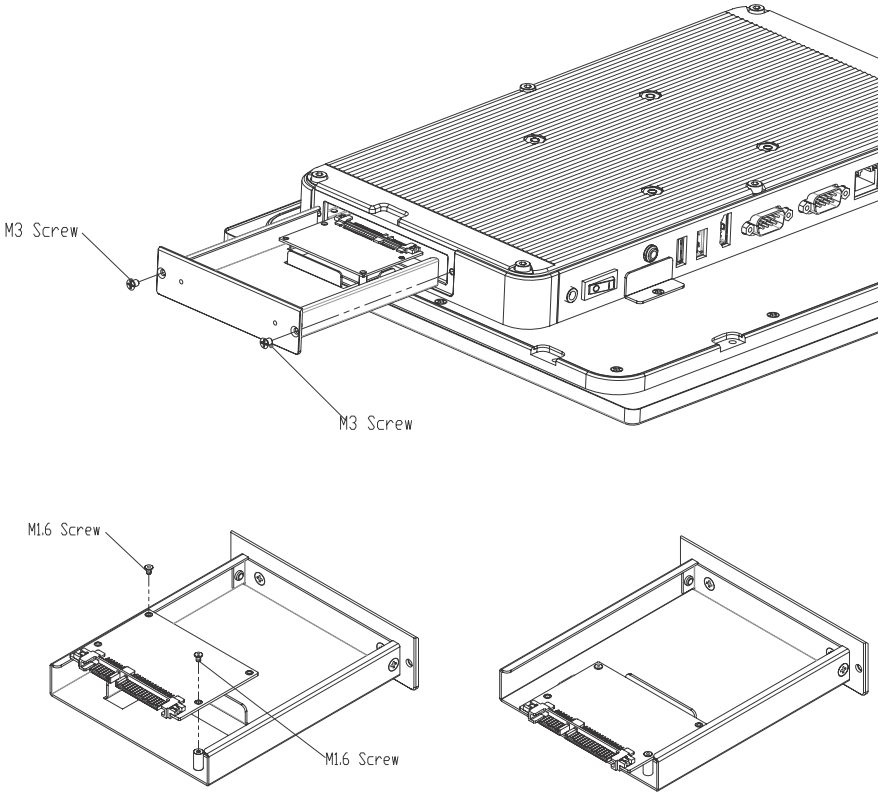



**Figure 3-7: STC-1205/1505 SATA Slim Drive Installation (STC-1205 shown)**

## 3.5 STC-1205/1505 2.5” SATA Drive Installation

To install or replace a 2.5” SATA drive in the STC-1205/1505, loosen the screws securing the drive bay bracket from the device as shown. Install the drive with the screws provided.

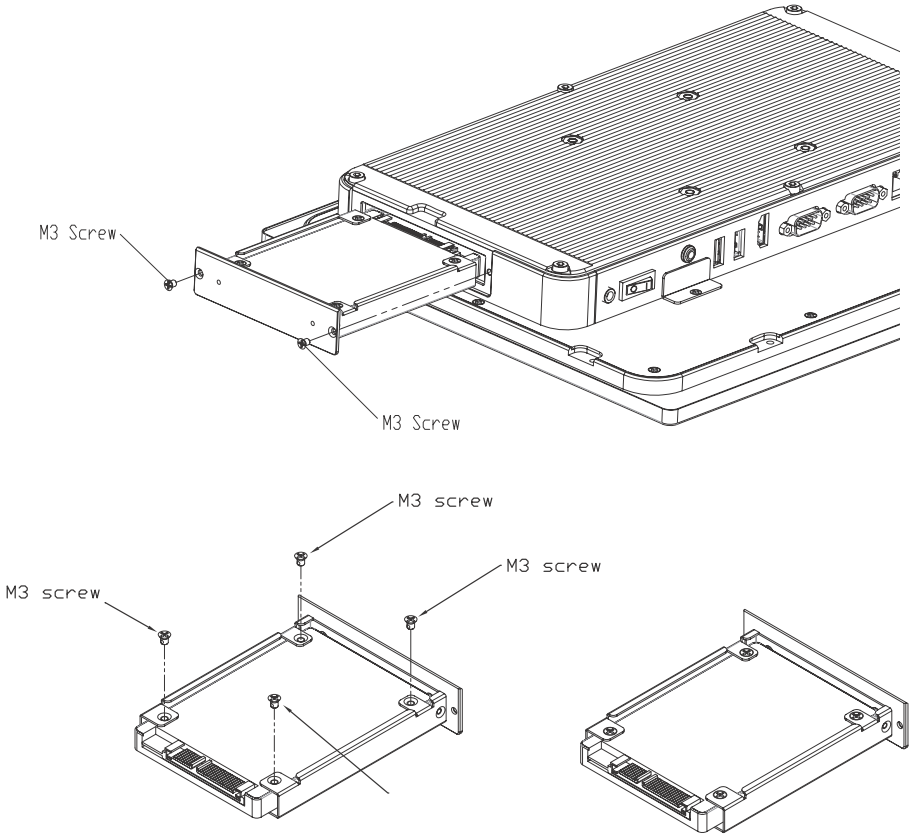
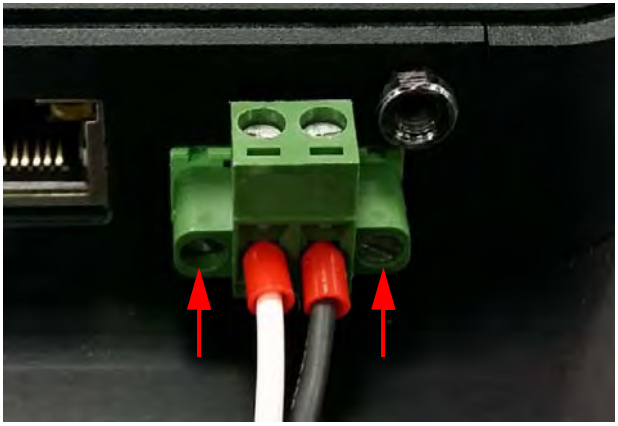


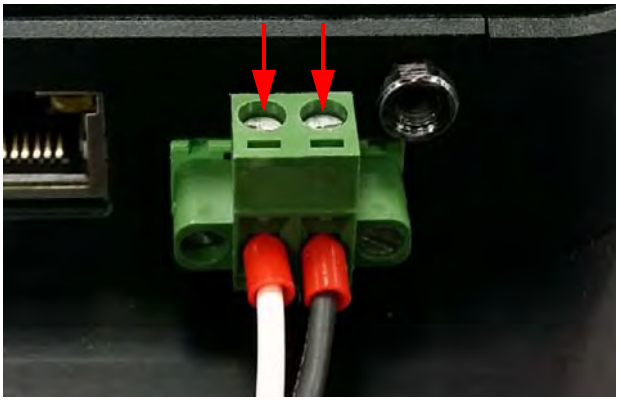

**Figure 3-8: STC-1205/1505 2.5” SATA Drive Installation (STC-1205 shown)**

## 3.6 Connecting Power

An AC power adapter (19VDC, 65W) is included with the STC-1005/1205/1505. To connect power to the device, insert the pluggable terminal block on the end of the power supply into the DC power inlet as shown below. Secure the terminal block by tightening the two screws as indicated.



To connect a different DC power supply to the device, loosen the screws securing the power leads to the terminal block indicated below and connect the desired power supply with polarity as shown.



WARNING:

Make sure the power supply is turned OFF when inserting the terminal block or handling the power leads.

## Powering Up the System

When DC power is turned on, the system will automatically boot up. The power switch on the IO panel is an ATX switch.To shut down the system, use the Windows shutdown procedure. To boot the system after a soft shutdown, use the ATX switch or disconnect and reconnect DC power.

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# Important Safety Instructions

For user safety, please read and follow all **instructions**, **WARNINGS**, **CAUTIONS,** and **NOTES** marked in this manual and on the associated equipment before handling/operating the equipment.

- Read these safety instructions carefully.
- Keep this user's manual for future reference.
- Read the specifications section of this manual for detailed information on the operating environment of this equipment.
- When installing/mounting or uninstalling/removing equipment:
  - Turn off power and unplug any power cords/cables.
- To avoid electrical shock and/or damage to equipment:
  - Keep equipment away from water or liquid sources;
  - Keep equipment away from high heat or high humidity;
  - Keep equipment properly ventilated (do not block or cover ventilation openings);
  - Make sure to use recommended voltage and power source settings;
  - Always install and operate equipment near an easily accessible electrical socket-outlet;
  - Secure the power cord (do not place any object on/over the power cord);
  - Only install/attach and operate equipment on stable surfaces and/or recommended mountings; and,
  - If the equipment will not be used for long periods of time, turn off and unplug the equipment from its power source.

A Lithium-type battery may be provided for backup power.


Risk of explosion if battery is replaced with one of an incorrect type. Dispose of used batteries appropriately.

- Never attempt to fix the equipment. Equipment should only be serviced by qualified personnel.
- Equipment must be serviced by authorized technicians when:
  - The power cord or plug is damaged;
  - Liquid has penetrated the equipment;
  - It has been exposed to high humidity/moisture;
  - It is not functioning or does not function according to the user's manual;
  - It has been dropped and/or damaged; and/or,
  - It has an obvious sign of breakage.

# Getting Service

Contact us should you require any service or assistance.


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