



ADLINK
TECHNOLOGY INC.

STC-1050

Smart Touch Computer

User's Manual

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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

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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.



NOTE:

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



CAUTION:

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



WARNING:

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.



NOTE:

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

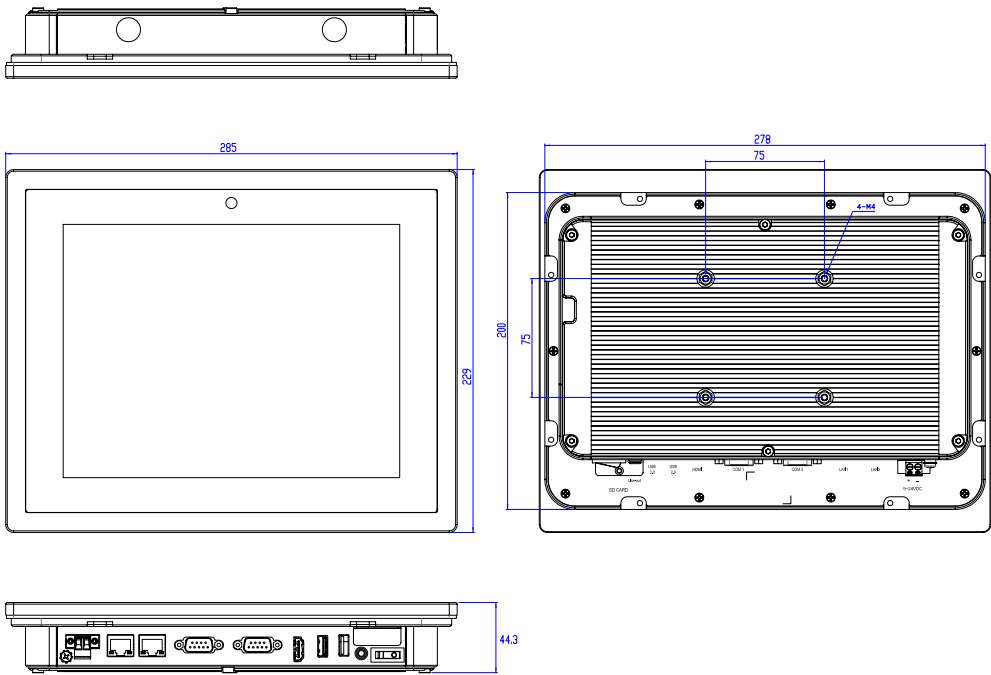
Please check that your package contains the items below. If you discover damaged or missing items, please contact your vendor.

- ▶ 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



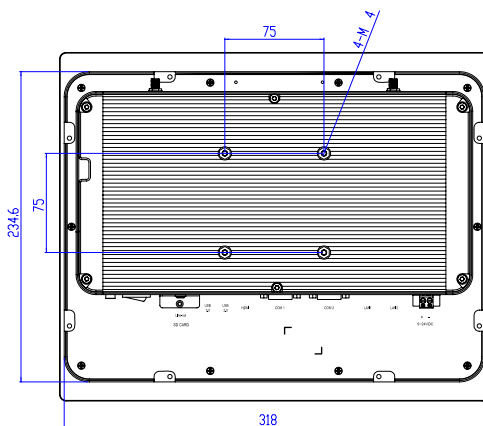
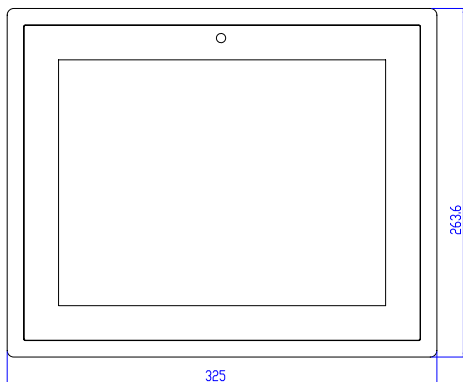
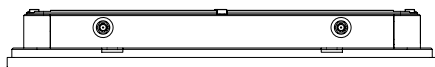
DO NOT install or apply power to equipment that is damaged or if there is missing/incomplete equipment. Retain the shipping carton and packing materials for inspection. Please contact your ADLINK dealer/vendor immediately for assistance. Obtain authorization from your dealer before returning any product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

1.4 Mechanical Dimensions



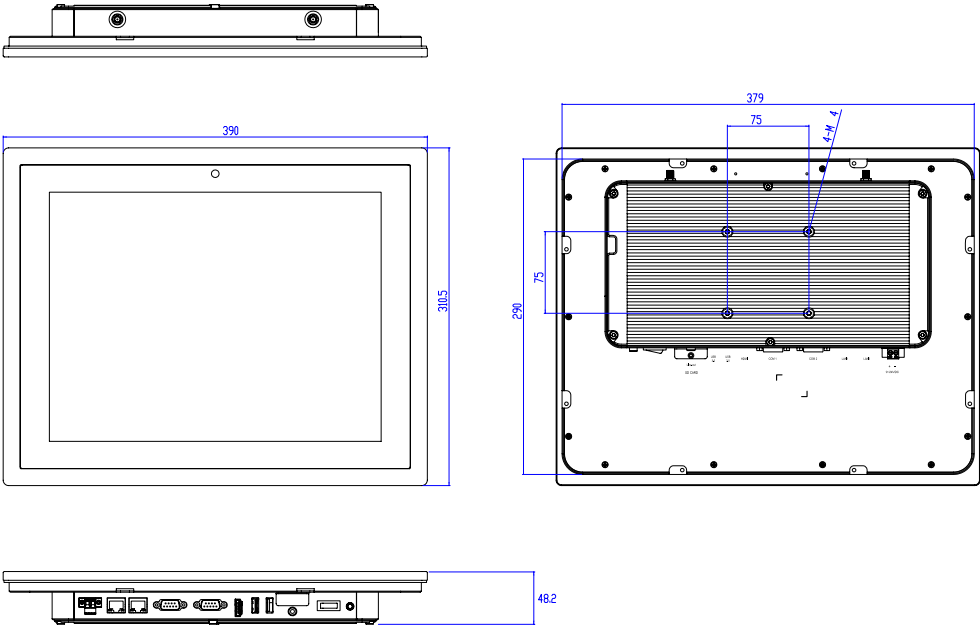
Dimensions in mm

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 1x SD card slot	1x SATA Slim slot or 2.5" SATA drive bay 1x SD card slot	
I/O	1x USB 2.0, Type A 2x GbE, RJ45 2x RS-232 (TX/RX only) 1x HDMI Port 1x audio port (line out) Webcam: 2.0M pixel		
Wireless Connectivity	802.11 b/g/n; Bluetooth 4.0 (STC-1005/1205 internal antenna, STC-1505 external antenna)		
Operating System	Windows Embedded Standard 7 Pre-Loaded 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 Panel mount		
Power			
Input Voltage	9-24V DC power input 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

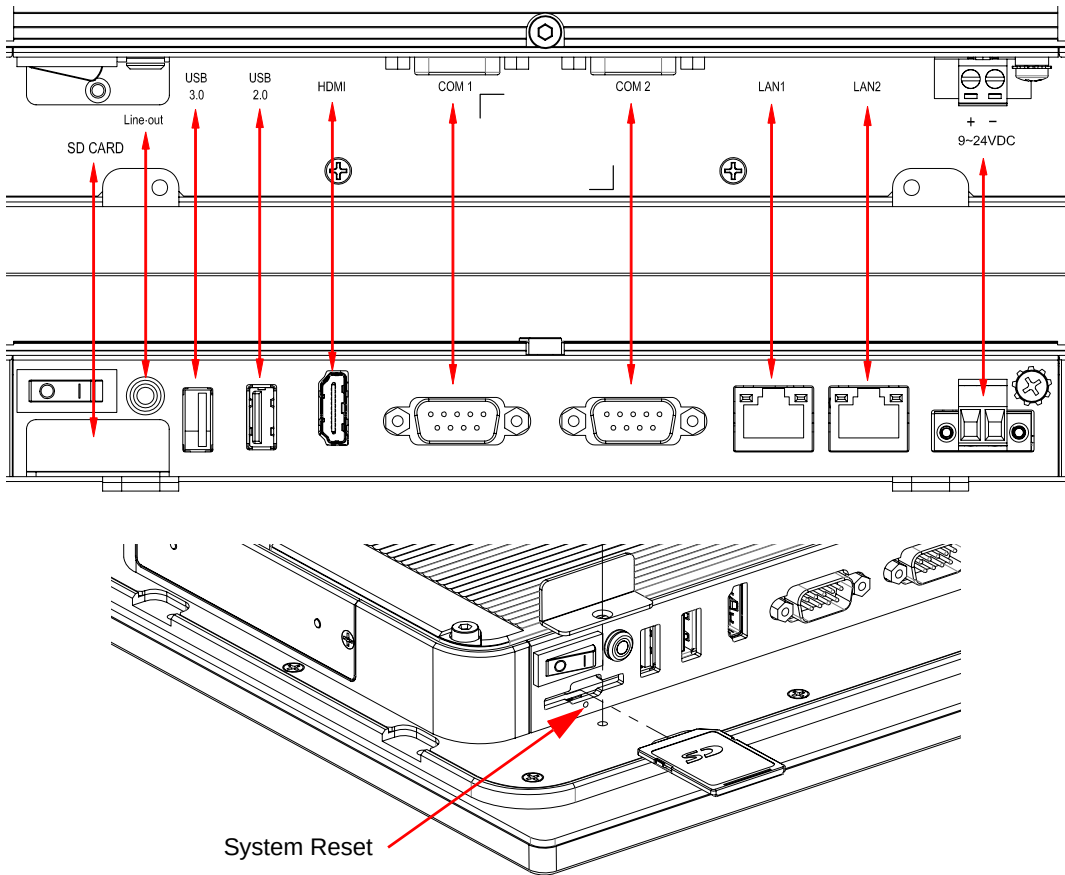


Figure 2-1: STC-1005/1205/1505 Rear I/O Layout

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

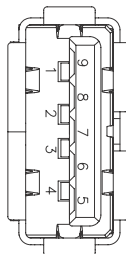


Table 2-1: USB 3.0 Port Pinout

USB 2.0 Connector

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

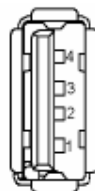
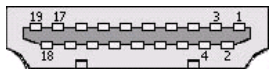


Table 2-2: USB 2.0 Port Pinout

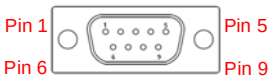
HDMI Connector



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)



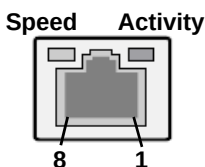
Pin No	RS-232
Pin1	-
Pin2	RX
Pin3	TX
Pin4	-
Pin5	GND
Pin6	-
Pin7	-
Pin8	-
Pin9	-

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

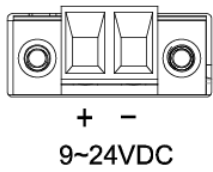


Table 2-7: DC Power Input Pinout

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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.

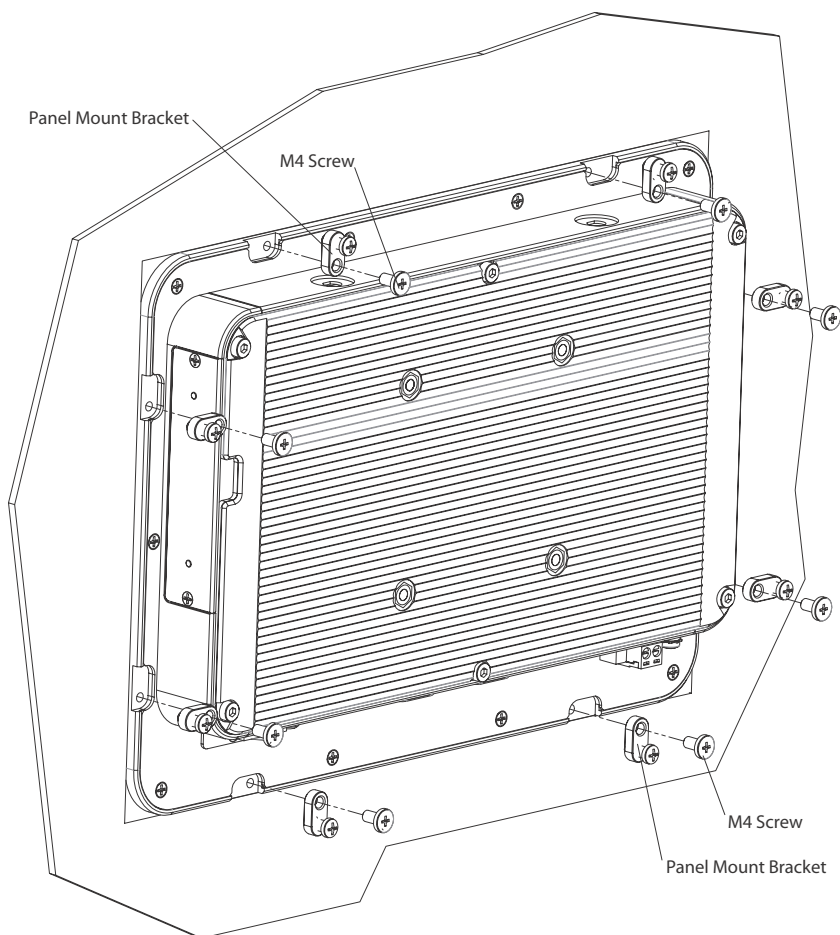
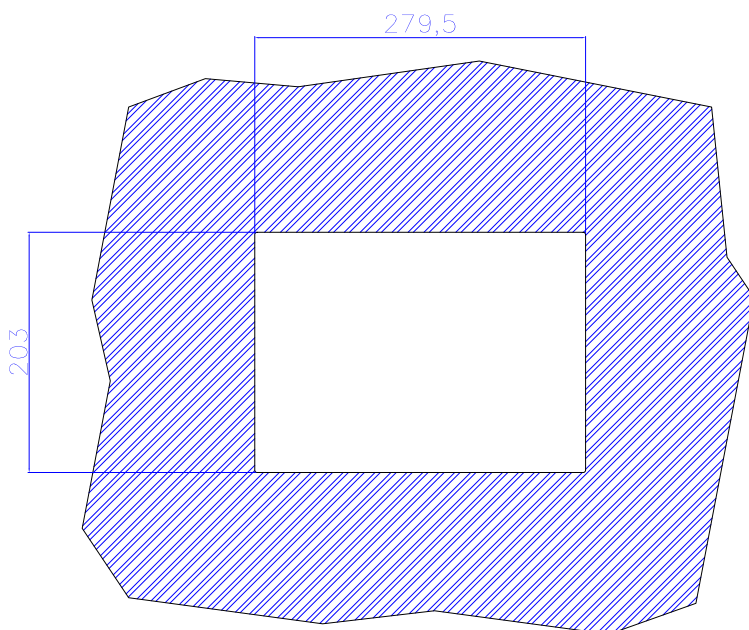


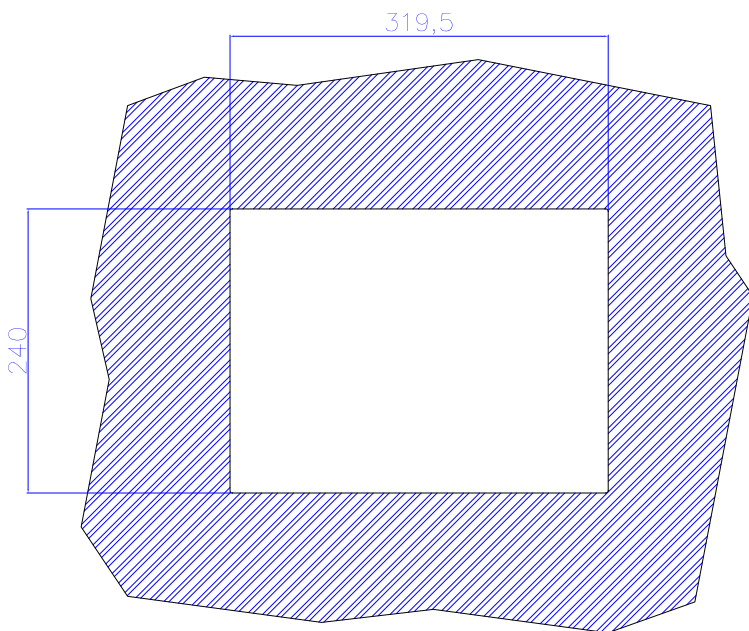
Figure 3-1: Panel Mount Installation

Panel Mount Cutout Dimensions



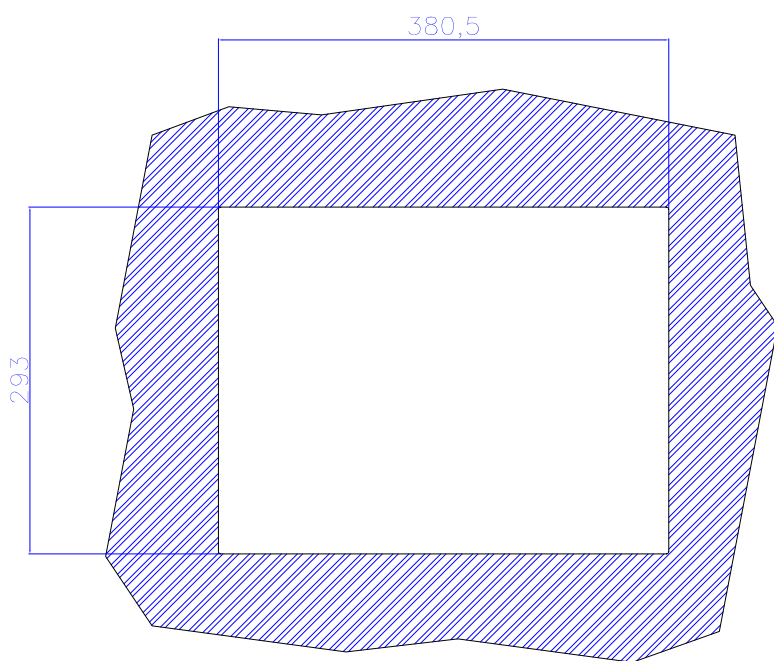
Dimensions in mm

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.

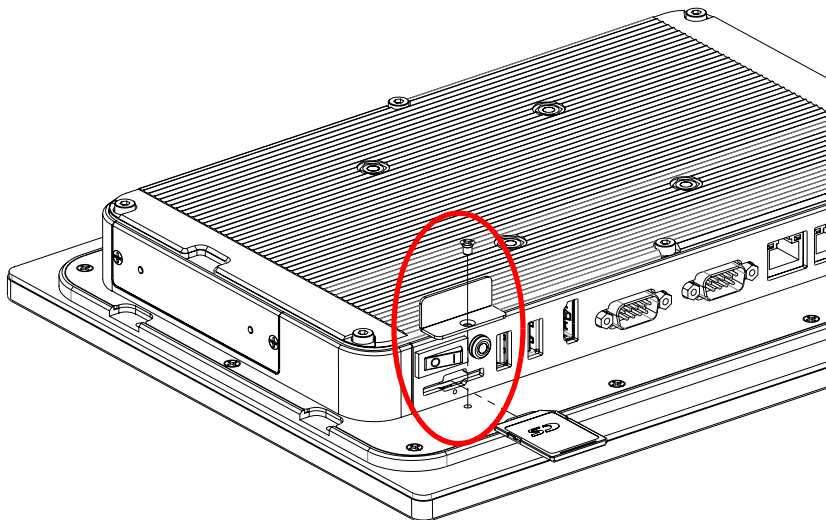


Figure 3-5: SD Card Installation (STC-1005 shown)

Replace the slot cover and tighten the screw.

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.

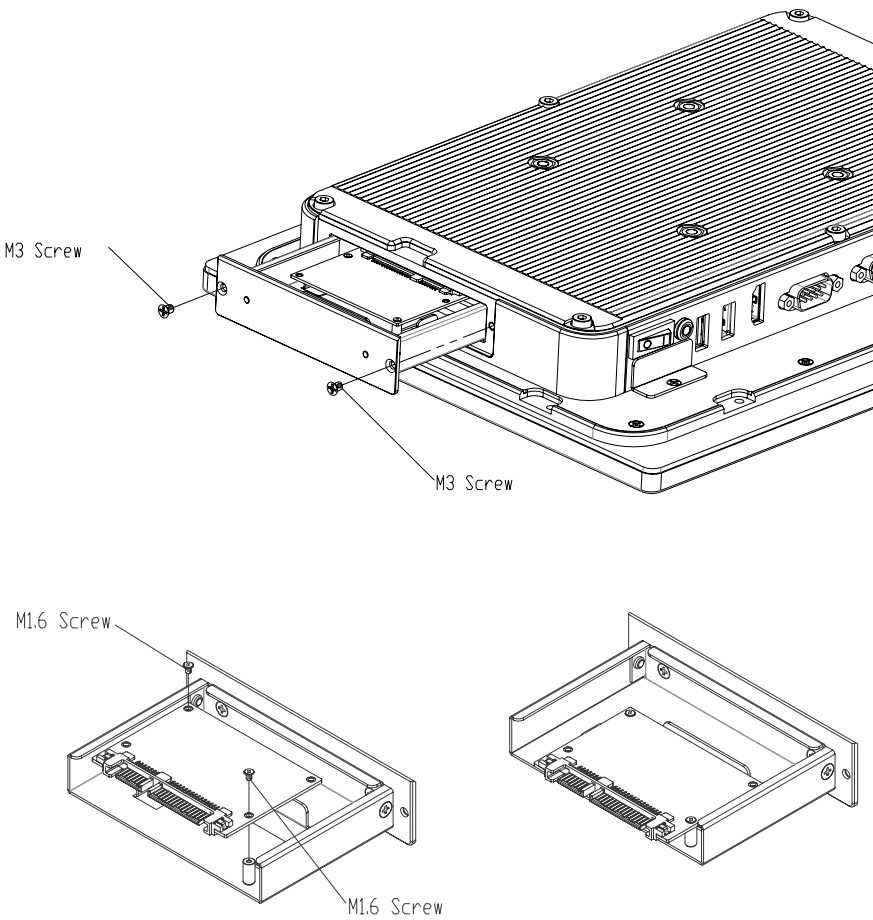


Figure 3-6: STC-1005 SATA Slim Drive Installation

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.

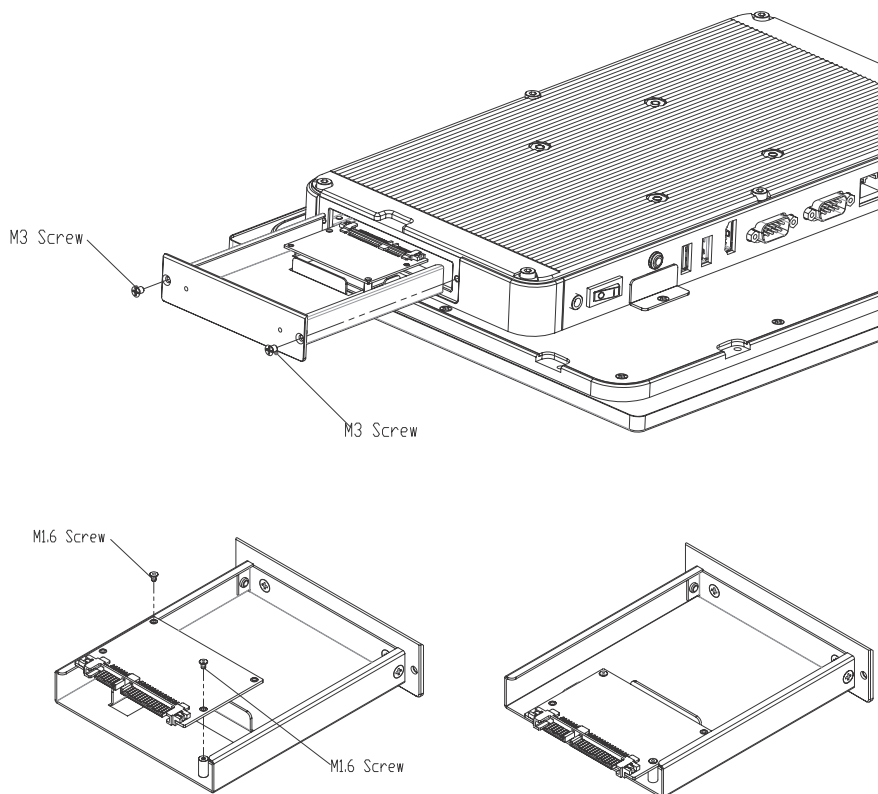


Figure 3-7: STC-1205/1505 SATA Slim Drive Installation (STC-1205 shown)

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.

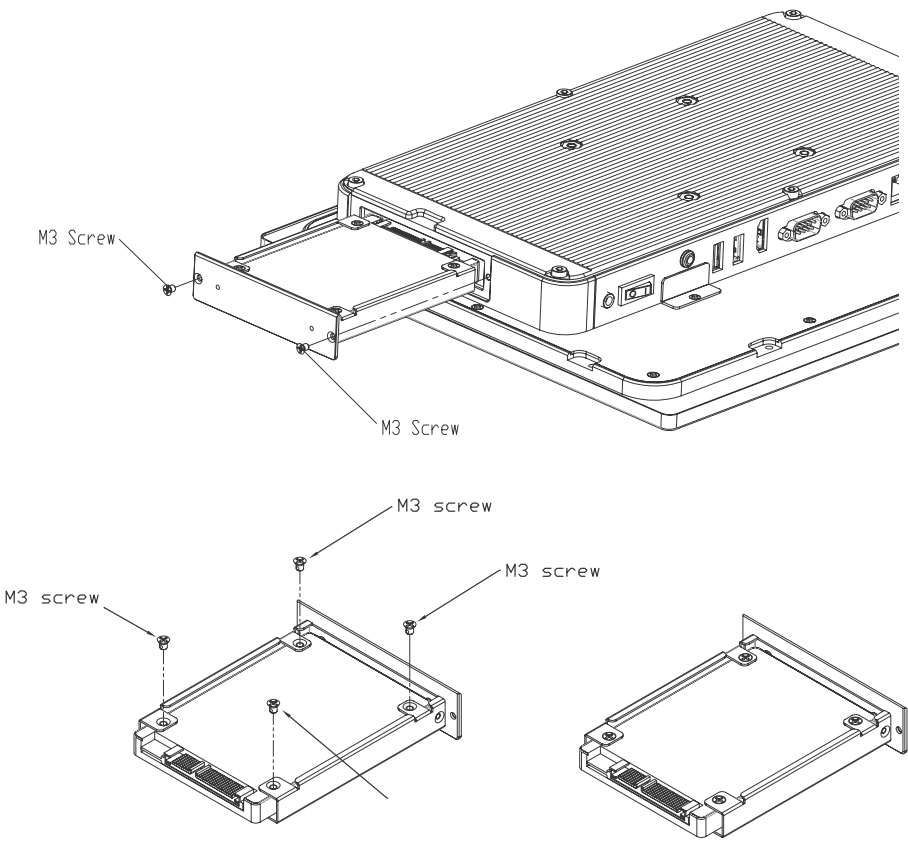
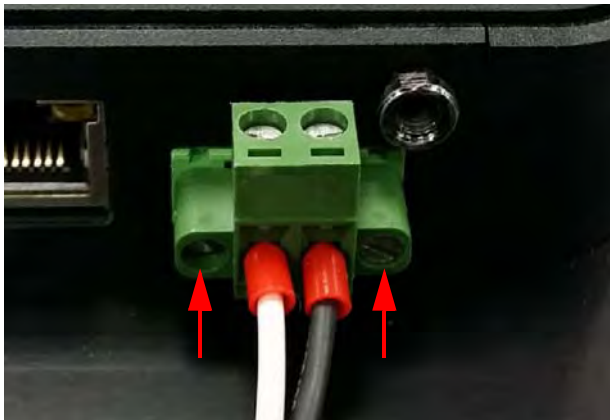


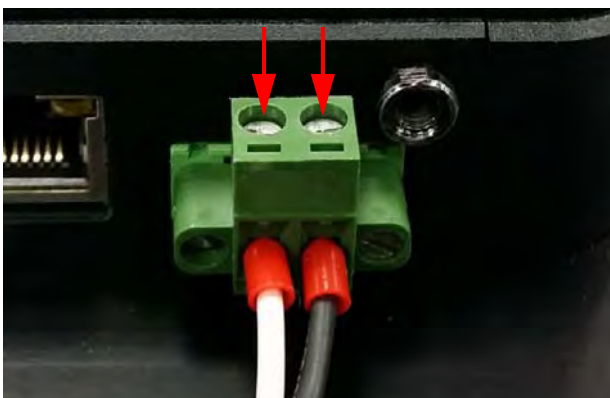
Figure 3-8: STC-1205/1505 2.5" SATA Drive Installation (STC-1205 shown)

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.



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.

ADLINK Technology, Inc.

Address: 9F, No.166 Jian Yi Road, Zhonghe District
New Taipei City 235, Taiwan
新北市中和區建一路 166 號 9 樓
Tel: +886-2-8226-5877
Fax: +886-2-8226-5717
Email: service@adlinktech.com

Ampro ADLINK Technology, Inc.

Address: 5215 Hellyer Avenue, #110
San Jose, CA 95138, USA
Tel: +1-408-360-0200
Toll Free: +1-800-966-5200 (USA only)
Fax: +1-408-360-0222
Email: info@adlinktech.com

ADLINK Technology (China) Co., Ltd.

Address: 上海市浦东新区张江高科技园区芳春路 300 号 (201203)
300 Fang Chun Rd., Zhangjiang Hi-Tech Park
Pudong New Area, Shanghai, 201203 China
Tel: +86-21-5132-8988
Fax: +86-21-5132-3588
Email: market@adlinktech.com

ADLINK Technology Beijing

Address: 北京市海淀区上地东路 1 号盈创动力大厦 E 座 801 室(100085)
Rm. 801, Power Creative E, No. 1 Shang Di East Rd.
Beijing, 100085 China
Tel: +86-10-5885-8666
Fax: +86-10-5885-8626
Email: market@adlinktech.com

ADLINK Technology Shenzhen

Address: 深圳市南山区科技园南区高新南七道 数字技术园
A1 栋 2 楼 C 区 (518057)
2F, C Block, Bldg. A1, Cyber-Tech Zone, Gao Xin Ave. Sec. 7
High-Tech Industrial Park S., Shenzhen, 518054 China
Tel: +86-755-2643-4858
Fax: +86-755-2664-6353
Email: market@adlinktech.com

LiPPERT ADLINK Technology GmbH

Address: Hans-Thoma-Strasse 11, D-68163
Mannheim, Germany
Tel: +49-621-43214-0
Fax: +49-621 43214-30
Email: emea@adlinktech.com

ADLINK Technology, Inc. (French Liaison Office)

Address: 6 allée de Londres, Immeuble Ceylan
91940 Les Ulis, France
Tel: +33 (0) 1 60 12 35 66
Fax: +33 (0) 1 60 12 35 66
Email: france@adlinktech.com

ADLINK Technology Japan Corporation

Address: 〒101-0045 東京都千代田区神田鍛冶町 3-7-4
神田 374 ビル 4F
KANDA374 Bldg. 4F, 3-7-4 Kanda Kajicho,
Chiyoda-ku, Tokyo 101-0045, Japan
Tel: +81-3-4455-3722
Fax: +81-3-5209-6013
Email: japan@adlinktech.com

ADLINK Technology, Inc. (Korean Liaison Office)

Address: 137-881 서울시 서초구 서초대로 326, 802 (서초동, 모인터빌딩)
802, Mointer B/D, 326 Seocho-daero, Seocho-Gu,
Seoul 137-881, Korea
Tel: +82-2-2057-0565
Fax: +82-2-2057-0563
Email: korea@adlinktech.com

ADLINK Technology Singapore Pte. Ltd.

Address: 84 Genting Lane #07-02A, Cityneon Design Centre
Singapore 349584
Tel: +65-6844-2261
Fax: +65-6844-2263
Email: singapore@adlinktech.com

ADLINK Technology Singapore Pte. Ltd. (Indian Liaison Office)

Address: #50-56, First Floor, Spearhead Towers
Margosa Main Road (between 16th/17th Cross)
Malleswaram, Bangalore - 560 055, India
Tel: +91-80-65605817, +91-80-42246107
Fax: +91-80-23464606
Email: india@adlinktech.com

ADLINK Technology, Inc. (Israeli Liaison Office)

Address: 27 Maskit St., Corex Building
PO Box 12777
Herzliya 4673300, Israel
Tel: +972-54-632-5251
Fax: +972-77-208-0230
Email: israel@adlinktech.com

ADLINK Technology, Inc. (UK Liaison Office)

Tel: +44 774 010 59 65
Email: UK@adlinktech.com