STC-15W04

15.6" Industrial Smart Touch Computer

User's Manual



Manual Rev.:	0.40 Preliminary
Revision Date:	May 18, 2015
Part No:	50-1Z201-1000

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Advance Technologies; Automate the World.

Revision History

Revision	Release Date	Description of Change(s)
0.10	8/12/2014	Preliminary release
0.20	26/12/2014	Remove driver install section; update packing list; add OS support
0.30	7/4/2015	Update specifications, safety section
0.40	18/5/2015	Update ATEX Certificate No.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Preface

Copyright 2015 ADLINK Technology Inc.

This document contains proprietary information protected by copyright. All rights are reserved. No part of this manual may be reproduced by any mechanical, electronic, or other means in any form without prior written permission of the manufacturer.

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.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

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.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Table of Contents

Revision History ii

Preface iii

List of Figures vii

List of Tables ix

1 Introduction 1

1.1 Overview 1
1.2 Features 1
1.3 Package Contents 2
1.4 Block Diagram 3
1.5 Mechanical Dimensions 4

2 System Description 5

2.1 Specifications 5
2.2 I/O Panel Layout 7
2.3 Pin Definitions 8

3 Getting Started 13

3.1 Panel Mounting 13
3.2 Connecting Power 15
3.3 CFast Card Installation 16
3.4 CMOS Battery Replacement 17

4 BIOS 19

4.1 Introduction 19
4.2 Starting the BIOS 19
4.3 Main Setup 24
4.4 Advanced BIOS Setup 25
4.4.1 PCI Subsystem Settings 26

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.4.2 CPU Configuration 27
4.4.3 Thermal Configuration 29
4.4.4 IDE Configuration 32
4.4.5 USB Configuration 34
4.4.6 Super IO Configuration 36
4.4.7 IT8781F Hardware Monitor 38
4.4.8 PPM Configuration 39
4.5 Chipset Configuration 41
4.5.1 Host Bridge Configuratio 42
4.5.2 South Bridge Configuration 44
4.6 Boot Settings 46
4.7 Security Setup 49
4.8 Save & Exit Menu 50

Important Safety Instructions 55

Getting Service 59

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

List of Figures

Figure 1-1: STC-15W04 Block Diagram..... 3
Figure 1-2: STC-15W04 Dimensions 4
Figure 2-1: STC-15W04 Rear I/O Layout..... 7

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

This page intentionally left blank.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

List of Tables

Table 2-1: Specifications 5
Table 2-2: RJ-45 GbE Pin Definitions 8
Table 2-3: LAN LED Status Definitions 8
Table 2-4: USB 2.0 Port Pinout 9
Table 2-5: RS-485 Port Pinout 9
Table 2-6: CFast Socket Pin Definition 10
Table 2-7: DC Power Input Pinout 11

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

This page intentionally left blank.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

1 Introduction

1.1 Overview

The STC series of Smart Touch Computers is designed for industrial automation and other applications in harsh or hazardous 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; marine, oil and gas industries; automated buildings; transportation; hospitals; factories; and leisure facilities.

1.2 Features

- TFT flat panel display with 16.7M colors and LED backlight
- 15.6" display, 16:9 aspect ratio, 1366x768 resolution
- 300 nits (w/o touch screen attached), 500:1 typical contrast ratio
- Projected capacitive multi-touch display
- Intel® Atom™ Processor D2550 with Intel® NM10 Express Chipset
- DDR3 SO-DIMM up to 4GB
- 2x USB 2.0 ports, 2x GbE ports, 1x RS-485
- Externally accessible CFast card slot
- Supports panel mounting
- IP65 rated front panel
- 24 VDC power input

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

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-15W04 Smart Touch Computer
- Panel mount bracket kit
- 8GB CFast card with OS pre-installed



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.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

1.4 Block Diagram

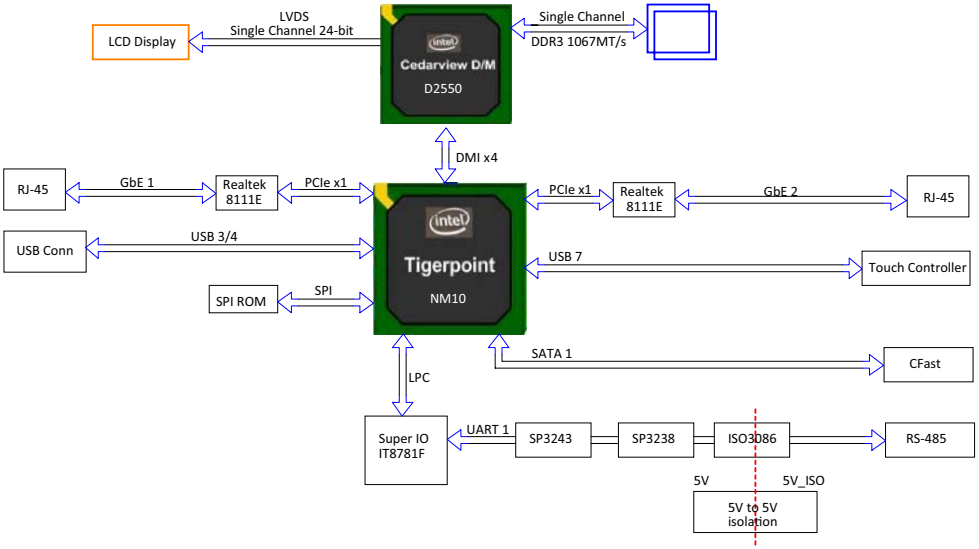
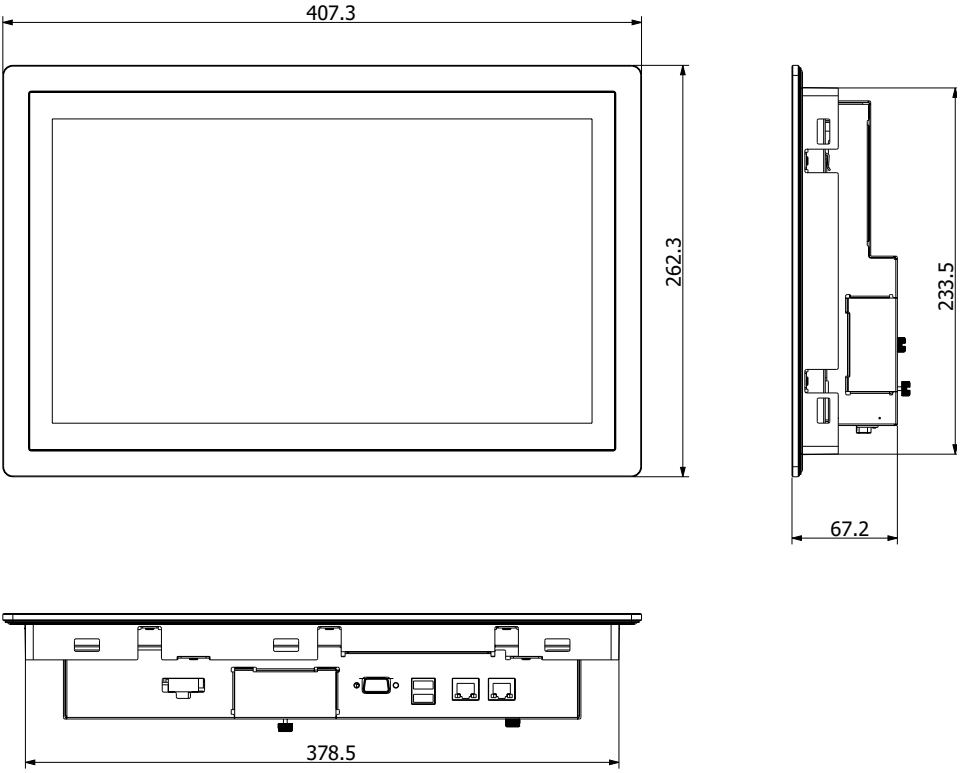


Figure 1-1: STC-15W04 Block Diagram

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

1.5 Mechanical Dimensions



Dimensions in mm

Figure 1-2: STC-15W04 Dimensions

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

2 System Description

2.1 Specifications

Display	
Display Size	15.6”
Resolution	1366x768 pixels
Brightness	300 nits (w/o touchscreen)
Contrast Ratio	500:1 typical
Touchscreen	Projected capacitive full-flat multi-touch display (glass)
System Components	
Processor	Intel® Atom™ Processor D2550
Chipset	Intel® NM10 Express Chipset
Memory	2GB DDR3 SO-DIMM (max. 4GB)
Storage	Industrial CFast card (default 8GB)
I/O	2x USB 2.0 ports 2x GbE ports (2x Realtek 8111E) 1x RS-485 port (isolated)
Operating System	Windows 7 Professional 32-bit (pre-installed)
Mechanical	
Construction	Anodized aluminum front bezel and steel chassis
Weight	5.5 kg (12.1 lb)
Dimensions	407.3 x 262.3 x 67.2 mm (WxHxD)
Mounting	Panel mount (cut-out: 380 x 235 mm)
Power	
Input Voltage	24VDC, connector with locking mechanism, protective earth connection
Power Consumption	40W

Table 2-1: Specifications

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Environmental	
Temperature	Operating: 0°C to 50°C Storage: -20°C to 60°C
Relative Humidity	95% non-condensing
Vibration	EN 60068-2-6 (1G, 10Hz~500Hz
Shock	IEC 60068-2-27 (15G, 11ms)
Ingress Rating	IP65 front panel, IP20 rear enclosure
Certifications & Compliance	CB (IEC 61010-2-201), UL/cUL (UL 508 & CSA-C22.2 No. 142), CID2 (ISA 12.12.01 & CSA C22.2 No. 213), ATEX (EN 60079-0:2012+A11:2013, EN 60079-15:2010), IEC Ex (IEC 60079-15, IEC 60079-0)
EMC	CE (EN 61000-6-2, EN 61000-6-4) FCC (Part 15 Subpart B)

Table 2-1: Specifications (cont'd)

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

2.2 I/O Panel Layout

Bottom View

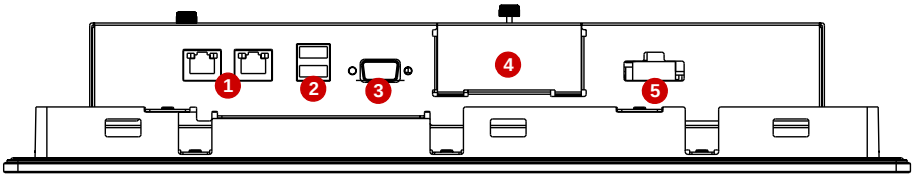


Figure 2-1: STC-15W04 Rear I/O Layout

1	GbE ports
2	USB 2.0 ports
3	RS-485 port (isolated)
4	CFast card slot access
5	24 VDC power inlet (w/ polarization protection, protective earth connection)
6	CMOS battery access

Rear View

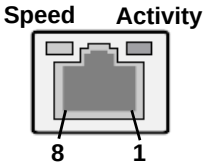


2.3 Pin Definitions

RJ-45 Gigabit Ethernet Connectors

Pin #	10BASE-T/100BASE-TX	1000BASE-T
1	TX+	GBE1/2_MDI0+
2	TX-	GBE1/2_MDI0-
3	RX+	GBE1/2_MDI1+
4	—	GBE1/2_MDI2+
5	—	GBE1/2_MDI2-
6	RX-	GBE1/2_MDI1-
7	—	GBE1/2_MDI3+
8	—	GBE1/2_MDI3-

Table 2-2: 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 2-3: LAN LED Status Definitions

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

USB Connector

Pin #	Signal Name
1	Vcc
2	UV0-
3	UV0+
4	GND

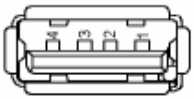
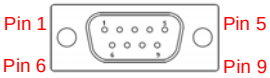


Table 2-4: USB 2.0 Port Pinout

RS-485 Port (isolated)



Pin No	RS-485
Pin1	DATA+
Pin2	DATA-
Pin3	NC
Pin4	NC
Pin5	GND
Pin6	NC
Pin7	NC
Pin8	NC
Pin9	NC

Table 2-5: RS-485 Port Pinout

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

CFast Socket

Pin #	Signal Name
Ground	S1
SATA_TX-P	S2
SATA_TX-N	S3
Ground	S4
SATA_RX-N	S5
SATA_RX-P	S6
Ground	S7
CFast_CDI	P1
Ground	P2
NC	P3
NC	P4
NC	P5
NC	P6
Ground	P7
CFast_LED1	P8
CFast_LED2	P9
NC	P10
NC	P11
NC	P12
P3V3	P13
P3V3	P14
Ground	P15
Ground	P16
CFast_CDO	P17

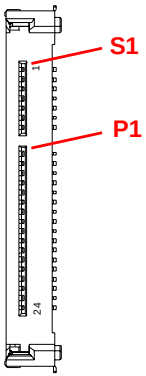
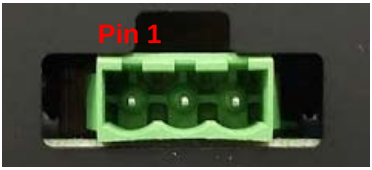


Table 2-6: CFast Socket Pin Definition

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

DC Power Input Connector



Pin #	Signal
1	Vin-
2	Earth Ground
3	Vin+

Table 2-7: DC Power Input Pinout

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

This page intentionally left blank.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

3 Getting Started

3.1 Panel Mounting

The STC-15W04 can be panel mounted using the 10 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.

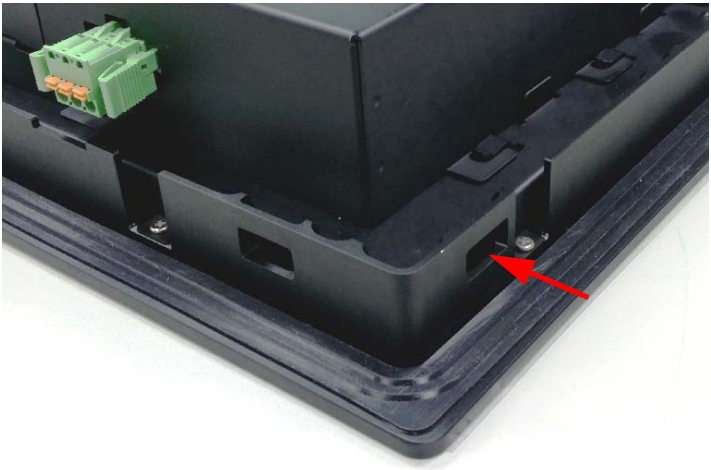


NOTE:

The mounting brackets can accommodate a maximum panel thickness of 4mm.

1. Cut the panel opening using the appropriate cutout dimensions: 380 x 235 mm.
2. 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 7.).
3. Place the device into the panel cutout.
4. Insert the mounting brackets into the slots on the sides of the device as shown below.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000





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.

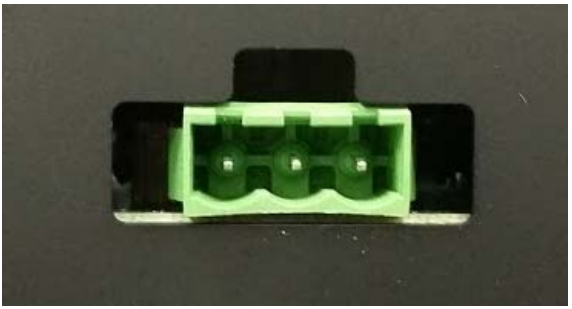
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

3.2 Connecting Power

Insert the positive and negative leads from the power supply as marked on the chassis into the pluggable terminal block included with the device.



Insert the pluggable terminal block into the 3-pole connector on the I/O panel of the device. The device will power up when the power supply is turned on.



WARNING:

Make sure the power supply is turned OFF when handling the power leads.

3.3 CFast Card Installation

To install or remove the CFast card, loosen the captive screw until it is possible to remove the CFast slot cover.



NOTE:

Do not completely remove the screw, as this will make it more difficult to remove the slot cover.

Insert or remove the CFast card as required.



Replace the slot cover and tighten the scew.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

3.4 CMOS Battery Replacement

To change the CMOS backup battery, loosen the captive screw until it is possible to remove the battery socket cover.



NOTE:

Do not completely remove the screw, as this will make it more difficult to remove the slot cover.

Replace the CMOS battery with one of the same type (CR2450).



Replace the slot cover and tighten the scew.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4 BIOS

4.1 Introduction

The following chapter describes basic navigation for the AMI EFI BIOS setup utility.

4.2 Starting the BIOS

To enter the setup screen, follow these steps:

1. Power on the motherboard
2. Press the < Delete > key on your keyboard when you see the following text prompt:
   < Press DEL to run Setup >
3. After you press the < Delete > key, the main BIOS setup menu displays. You can access the other setup screens from the main BIOS setup menu, such as Chipset and Power menus.



Note: In most cases, the < Delete > key is used to invoke the setup screen. There are several cases that use other keys, such as < F1 >, < F2 >, and so on.

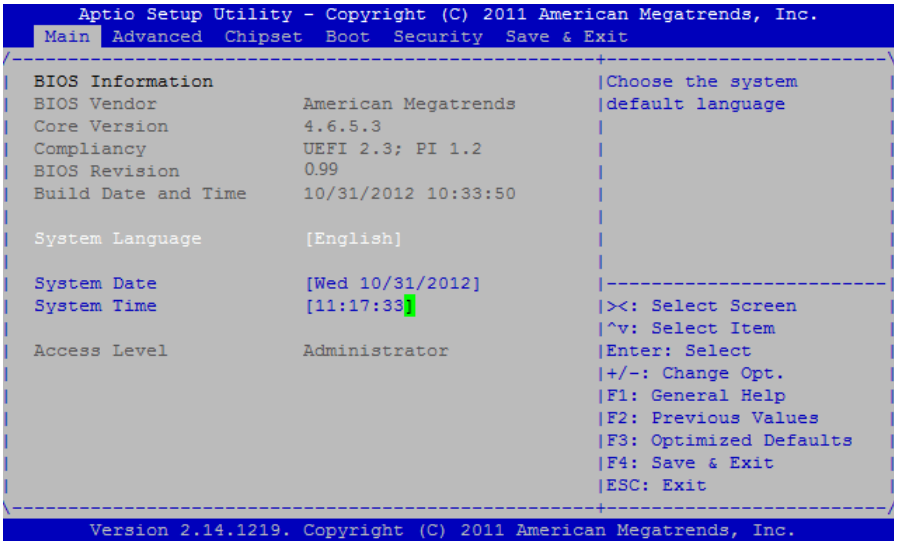
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Setup Menu

The main BIOS setup menu is the first screen that you can navigate. Each main BIOS setup menu option is described in this user's guide.

The Main BIOS setup menu screen has two main frames. The left frame displays all the options that can be configured. "Grayed" options cannot be configured, "Blue" options can be.

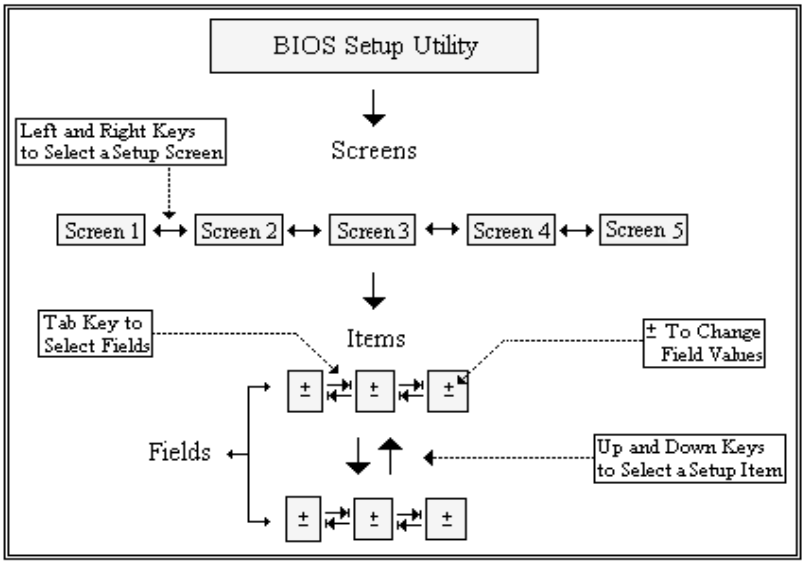
The right frame displays the key legend. Above the key legend is an area reserved for a text message. When an option is selected in the left frame, it is highlighted in white. Often a text message will accompany it.



Navigation

The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000



NOTE: There is a hot key legend located in the right frame on most setup screens.

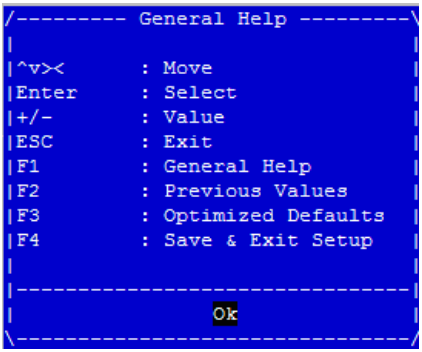
The < F8 > key on your keyboard is the Fail-Safe key. It is not displayed on the key legend by default. To set the Fail-Safe settings of the BIOS, press the < F8 > key on your keyboard. It is located on the upper row of a standard 101 keyboard. The Fail-Safe settings allow the motherboard to boot up with the least amount of options set. This can lessen the probability of conflicting settings.

Hotkey Descriptions

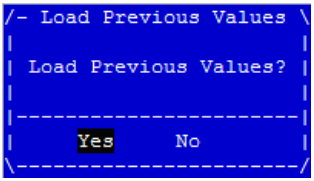
Enter The < Enter > key allows you to display or change the setup option listed for a particular setup item. The < Enter > key can also allow you to display the setup sub-screens.

F1 The < F1 > key allows you to display the General Help screen. Press the < F1 > key to open the General Help screen.

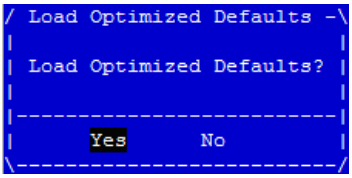
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000



F2 The < F2 > key on your keyboard is the previous values key. It is not displayed on the key legend by default. To set the previous values settings of the BIOS, press the < F2 > key on your keyboard. It is located on the upper row of a standard 101 keyboard. The previous values settings allow the motherboard to boot up with the least amount of options set. This can lessen the probability of conflicting settings.

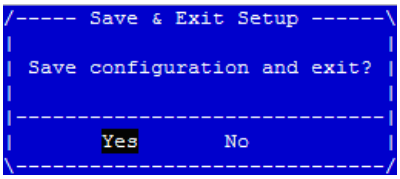


F3 The < F3 > key on your keyboard is the optimized defaults key. To set the optimized defaults settings of the BIOS, press the < F3 > key on your keyboard. It is located on the upper row of a standard 101 keyboard. The optimized defaults settings allow the motherboard to boot up with the optimized defaults of options set. This can lessen the probability of conflicting settings.



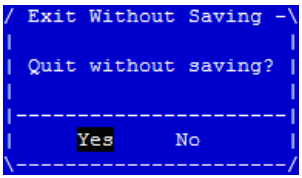
F4 The < F4 > key allows you to save any changes you have made and exit Setup. Press the < F10 > key to save your changes. The following screen will appear:

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000



Press the < Enter > key to save the configuration and exit. You can also use the < Arrow > key to select Cancel and then press the < Enter > key to abort this function and return to the previous screen.

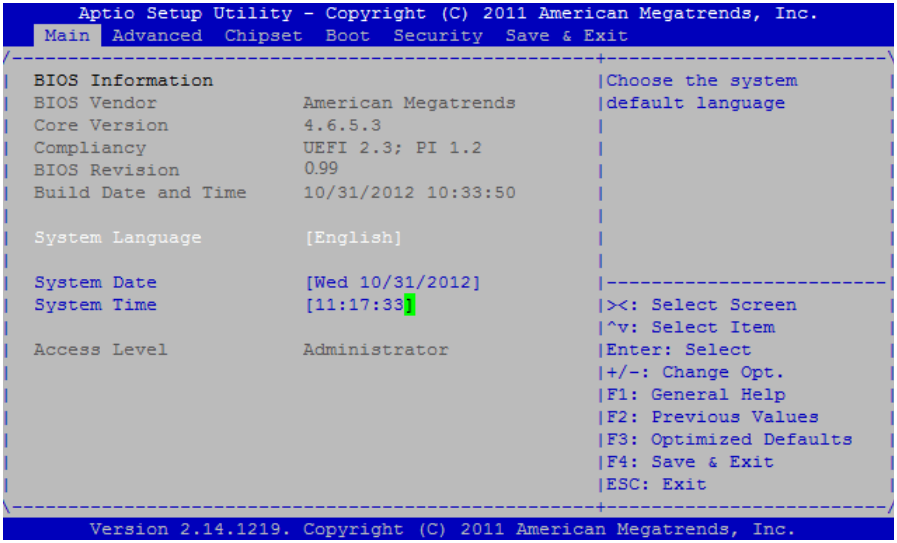
ESC The < Esc > key allows you to discard any changes you have made and exit the Setup. Press the < Esc > key to exit the setup without saving your changes. The following screen will appear:



Press the < Enter > key to discard changes and exit. You can also use the < Arrow > key to select Cancel and then press the < Enter > key to abort this function and return to the previous screen.

4.3 Main Setup

When you first enter the Setup Utility, you will enter the Main setup screen. You can always return to the Main setup screen by selecting the Main tab. There are two Main Setup options. They are described in this section. The Main BIOS Setup screen is shown below.



System & Board Info

The Main BIOS setup screen reports BIOS version, BIOS build date and time, and total memory.

System Time/System Date

Use this option to change the system time and date. Highlight System Time or System Date using the < Arrow > keys. Enter new values using the keyboard. Press the < Tab > key or the < Arrow > keys to move between fields. The date must be entered in MM/DD/YY format. The time is entered in HH:MM:SS format.

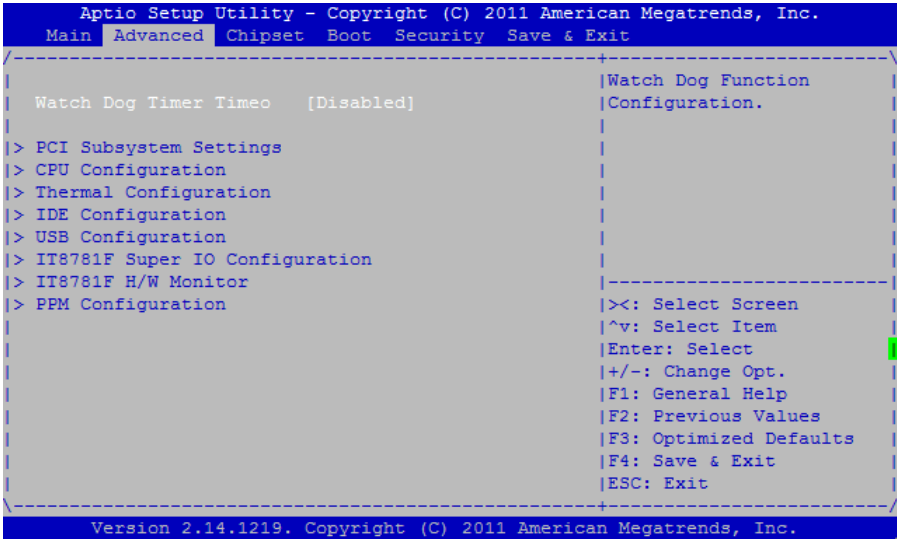
NOTE: The time is in 24-hour format. For example, 5:30 A.M. appears as 05:30:00, and 5:30 P.M. as 17:30:00.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.4 Advanced BIOS Setup

Select the Advanced tab from the setup screen to enter the Advanced BIOS Setup screen. You can select any of the items in the left frame of the screen, such as SuperIO Configuration, to go to the sub menu for that item. You can display an Advanced BIOS Setup option by highlighting it using the < Arrow > keys. The Advanced BIOS Setup screen is shown below.

The sub menus are described on the following pages.

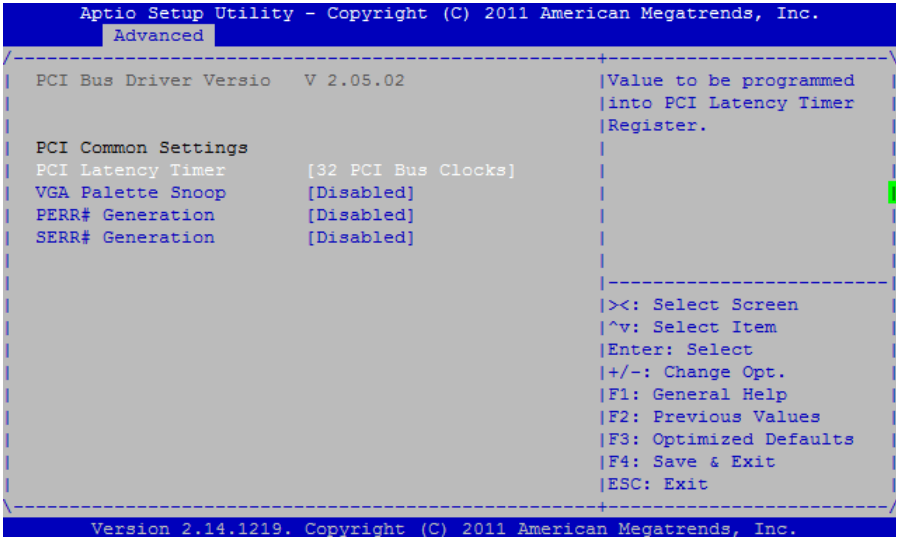


Watchdog Timer Timeout

Watchdog function configuration. Set this value to **Disabled, 30 sec, 60 sec, 120 sec**.

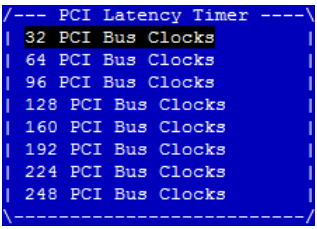
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.4.1 PCI Subsystem Settings



PCI Latency Timer

Value to be programmed into PCI Latency Timer Register. Options: 32 PCI Bus Clocks, 64 PCI Bus Clocks, 96 PCI Bus Clocks, 128 PCI Bus Clocks, 160 PCI Bus Clocks, 192 PCI Bus Clocks, 224 PCI Bus Clocks, 248 PCI Bus Clocks.



VGA Palette Snoop

Enables or Disables VGA Palette Registers Snooping. Set this value to **Disabled, Enabled**

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

PERR# Generation

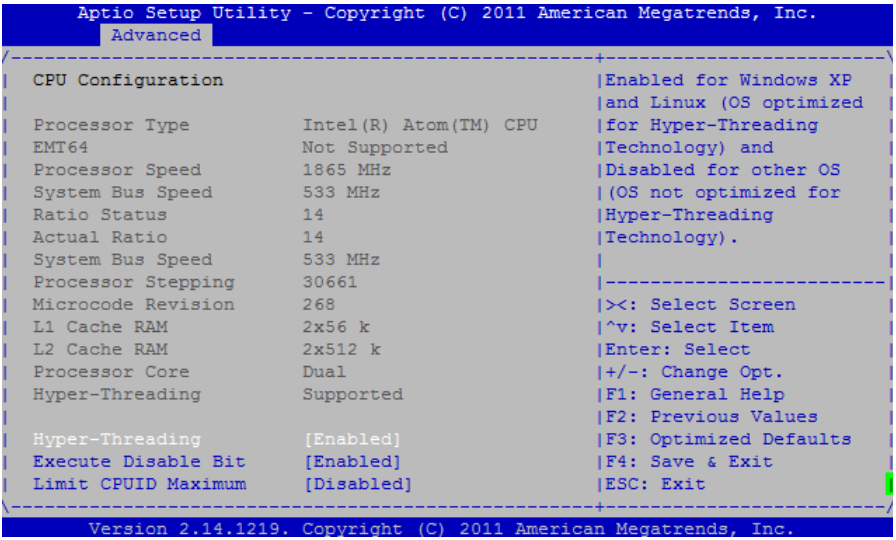
Enables or Disables PCI Device to Generate PERR#. Set this value to **Disabled, Enabled**

SERR# Generation

Enables or Disables PCI Device to Generate SERR#. Set this value to **Disabled, Enabled**

4.4.2 CPU Configuration

You can use this screen to select options for the CPU Configuration Settings. Use the up and down < Arrow > keys to select an item. Use the < + > and < - > keys to change the value of the selected option. A description of the selected item appears on the right side of the screen. The settings are described on the following pages. An example of the CPU Configuration screen is shown below.



Hyper-Threading

Enables/disables Hyper-Threading Technology. Enable for Windows XP and Linux (OS optimized for Hyper-Threading

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Technology) and disable for other OS (OS not optimized for Hyper-Threading Technology.

Execute Disable Bit

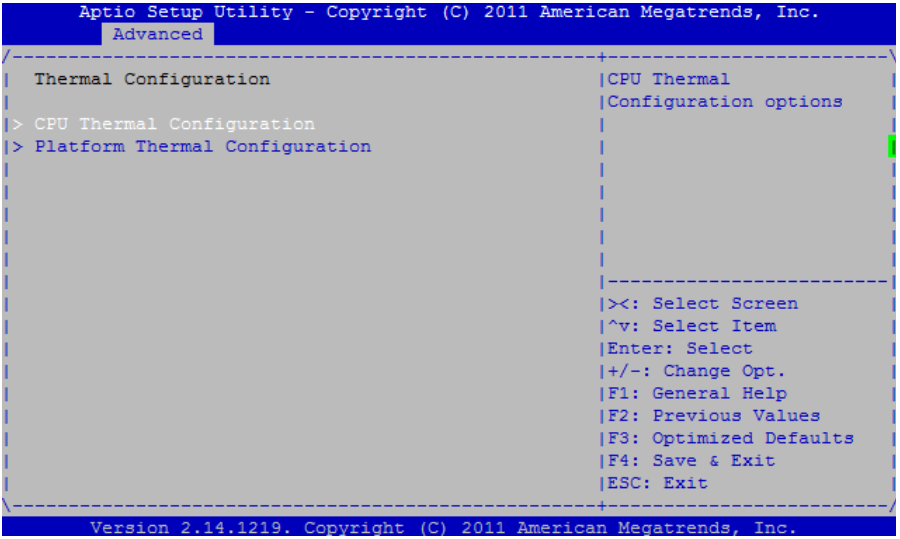
Execute Disable Bit can prevent certain classes of malicious buffer overflow attacks when combined with a supporting OS (Windows Server 2003 SP1, Windows XP SP2, SuSE Linux 9.2, RedHat Enterprise 3 Update 3.) Set this value to **Disabled, Enabled**.

Limit CPUID Maximum

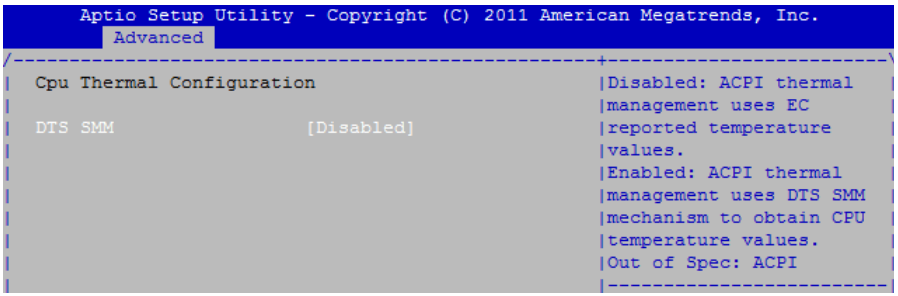
Disabled for Windows XP. Set this value to **Disabled, Enabled**.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.4.3 Thermal Configuration



CPU Thermal Configuration

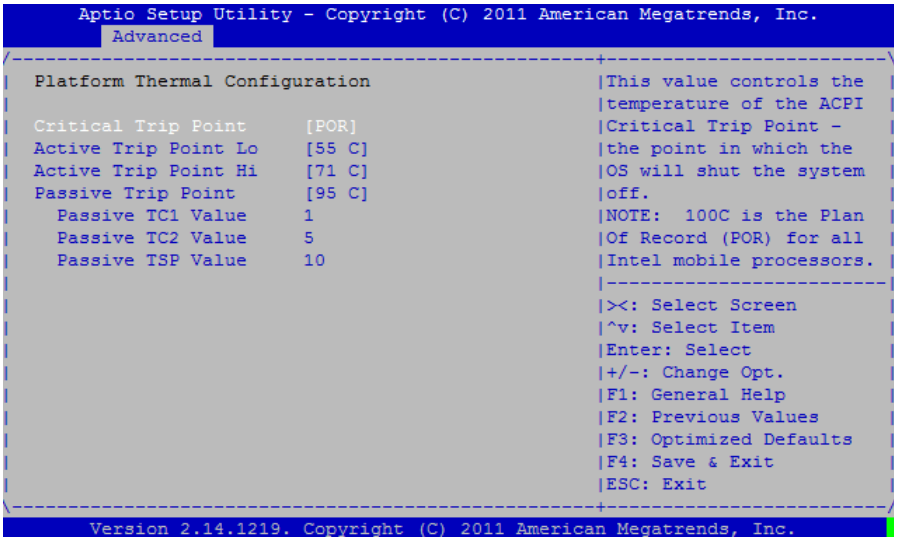


DTS SMM

Disabled: ACPI thermal management uses EC reported temperature values. **Enabled:** ACPI thermal management uses DTS SMM mechanism to obtain CPU temperature values. Out of Spec: ACPI Thermal Management uses EC reported temperature values and DTS SMM is used to handle Out of Spec condition. Set this value to Disabled, Enabled, Critical Temp Reporting (out of spec).

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Platform Thermal Configuration



Critical Trip Point

This value controls the temperature of the ACPI Critical Trip Point - the point at which the OS will shut the system off. **Note:** 100C is the Plan Of Record (POR) for all Intel mobile processors. Set this value to **POR, 15C, 23C, 31C, 39C, 47C, 55C, 63C, 71C, 79C, 87C, 95C, 103C, 111C, 119C, 127C**.

Active Trip Point Lo Fan Speed

This value controls the temperature of the ACPI Active Trip Point - the point in which the OS will turn the processor fan on low. Set this value to **Disabled, 15C, 23C, 31C, 39C, 47C, 55C, 63C, 71C, 79C, 87C, 95C, 103C, 111C, 119C**.

Active Trip Point Hi Fan Speed

This value controls the temperature of the ACPI Active Trip Point - the point in which the OS will turn the processor fan on high. Set this value to **Disabled, 15C, 23C, 31C, 39C, 47C, 55C, 63C, 71C, 79C, 87C, 95C, 103C, 111C, 119C**.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Passive Trip Point

This value controls the temperature of the ACPI Passive Trip Point - the point in which the OS will begin throttling the processor. Set this value to **Disabled, 15C, 23C, 31C, 39C, 47C, 55C, 63C, 71C, 79C, 87C, 95C, 103C, 111C, 119C**.

Passive TC1 Value

This value sets the TC1 value for the ACPI Passive Cooling Formula. Set this value to between 1 and 16.

Passive TC2 Value

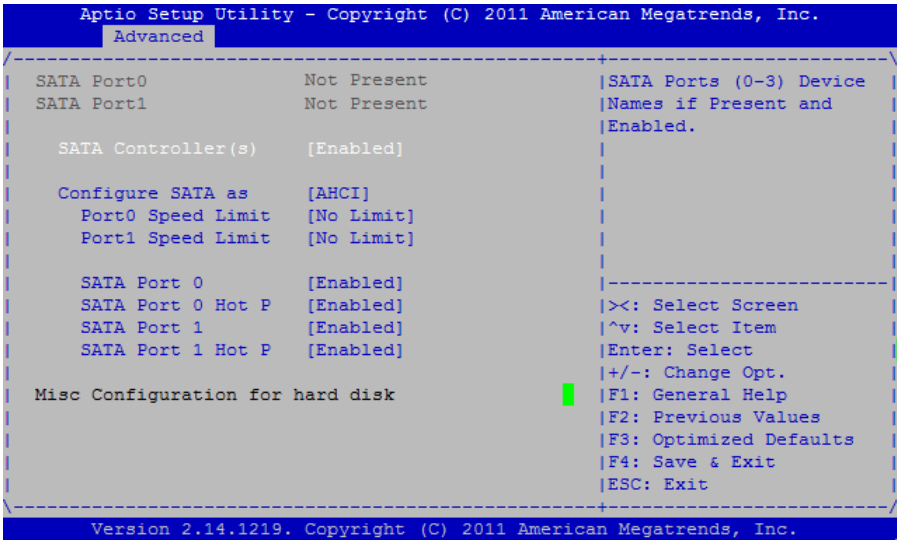
This value sets the TC2 value for the ACPI Passive Cooling Formula. Set this value to between 1 and 16.

Passive TSP Value

This item sets the TSP value for the ACPI Passive Cooling Formula. It represents in tenths of a second how often the OS will read the temperature when passive cooling is enabled. Set this value to between 2 and 32.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.4.4 IDE Configuration



SATA Controller(s)

Enable/Disable SATA Device.

Configure SATA as

Select a configuration for the SATA Controller. Set this value to **IDE, AHCI.**

Port0 Speed Limit

Select the Port0 AHCI Speed Limit. Set this value to **No Limit, GEN1 Rate, GEN2 Rate**.

Port1 Speed Limit

Select the Port0 AHCI Speed Limit. Set this value to **No Limit, GEN1 Rate, GEN2 Rate**.

SATA Port 0

Enable or Disable the SATA Port. Set this value to **Disabled, Enabled**.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

SATA Port 0 Hot Plug

Designates this port as Hot Pluggable. Set this value to **Disabled, Enabled**.

SATA Port 1

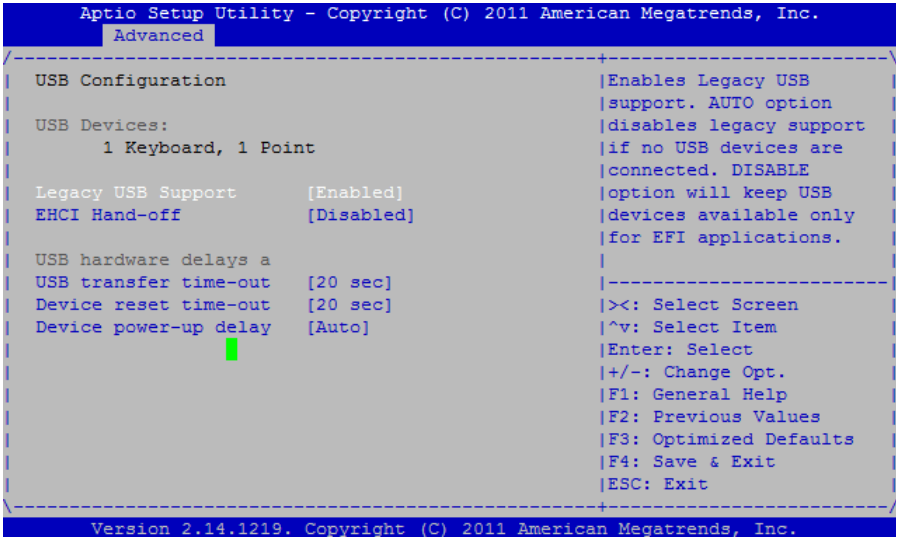
Enable or Disable the SATA Port. Set this value to **Disabled, Enabled**.

SATA Port 1 Hot Plug

Designates this port as Hot Pluggable. Set this value to **Disabled, Enabled**.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.4.5 USB Configuration



Legacy USB Support

Enables legacy USB support. Auto option disables legacy support if no USB devices are connected. Disable option will keep USB devices available only for EFI applications. Options: **Enable/Disable/Auto**.

EHCI Hand-off

This is a workaround of OSes without EHCI hand-off support. The EHCI ownership change should be claimed by the EHCI driver. Options: **Enabled, Disabled**.

USB transfer time-out

The time-out value for Control, Bulk, and Interrupt transfers. Set this value to **1 sec, 5 sec, 10 sec, 20 sec**.

Device reset time-out

USB mass storage device Start Unit command time-out. Set this value to **10 sec, 20 sec, 30 sec, 40 sec**.

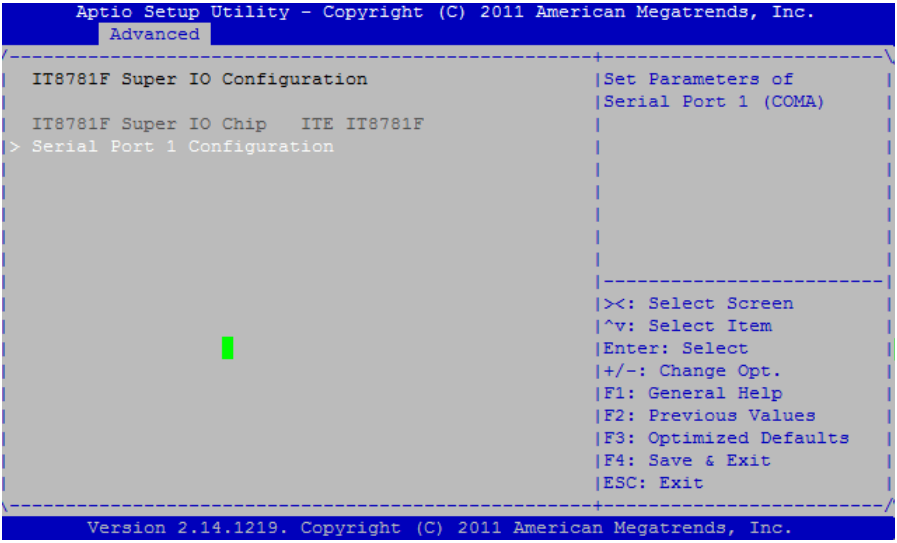
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Device power-up delay

Maximum time the device will take before it properly reports itself to the Host Controller. 'Auto' uses default value: for a Root port it is 100 ms, for a Hub port the delay is taken from Hub descriptor. Set this value to **Auto, Manual**.

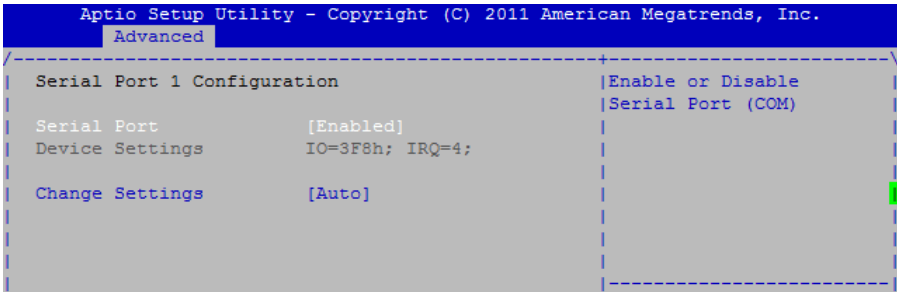
Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.4.6 Super IO Configuration



Serial Port 1 Configuration

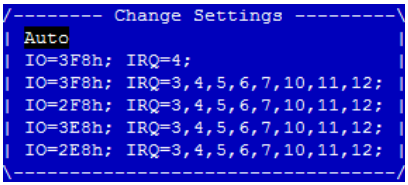
Set Parameters of Serial Port 1 (COM A). Options: **Enabled/ Disabled**. A sample screen is shown below.



LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

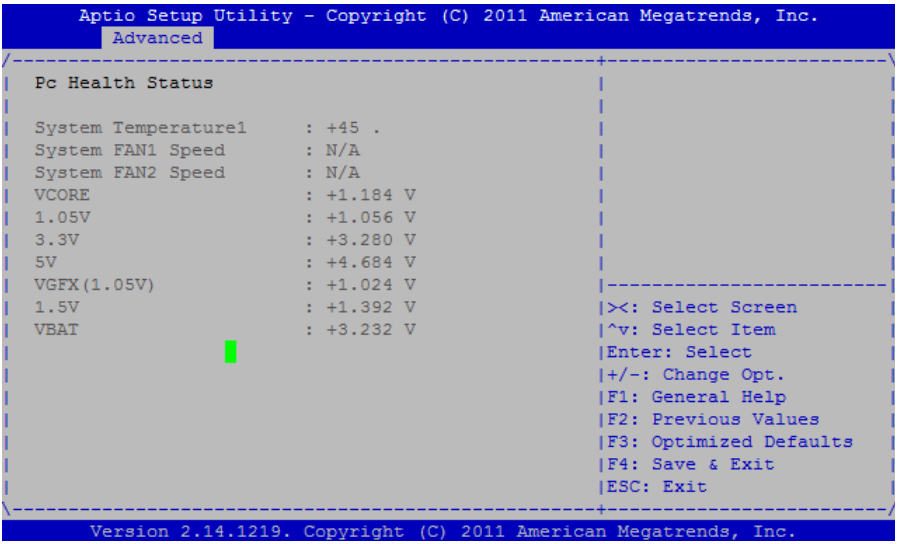
Change Settings

This option specifies the base I/O port address and interrupt request address. Set this value to below screen options:



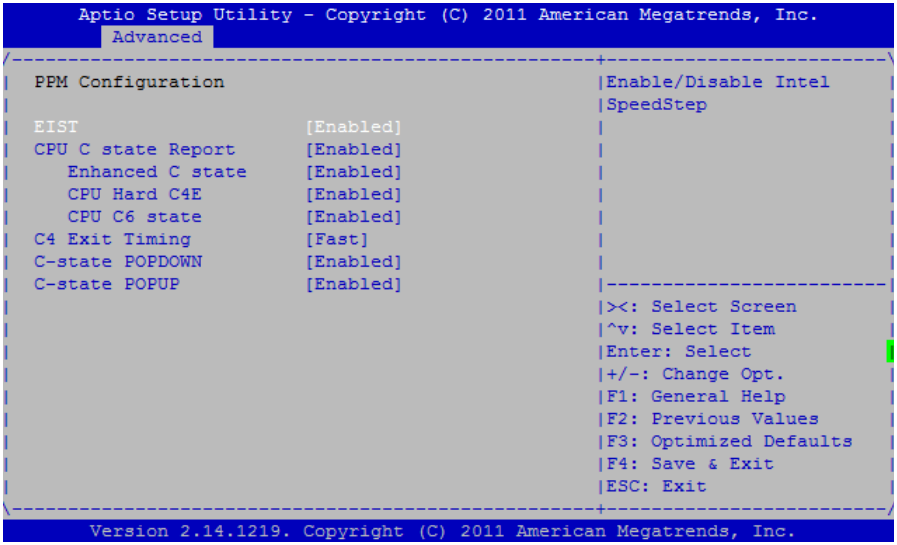
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.4.7 IT8781F Hardware Monitor



LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.4.8 PPM Configuration



EIST

Enable/Disable Intel SpeedStep. Set this value to **Disabled, Enabled**.

CPU C state Report

Enable/Disable CPU C state report to OS . Set this value to **Disabled, Enabled**.

Enhanced C state

Enable/Disable Enhanced CPU C state. Set this value to **Disabled, Enabled**.

CPU Hard C4E

Enable/Disable CPU Hard C4E function. Set this value to **Disabled, Enabled**.

CPU C6 state

Enable/Disable CPU C6 state. Set this value to **Disabled, Enabled**.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

C4 Exit Timing

This option controls a programmable time for the CPU voltage to stabilize when exiting from a C4 state. Set this value to **Default, Fast, Slow**.

C-state Popdown

Disabling the option, prevents automatic return to a previous C3 or C4 state. Set this value to **Disabled, Enabled**.

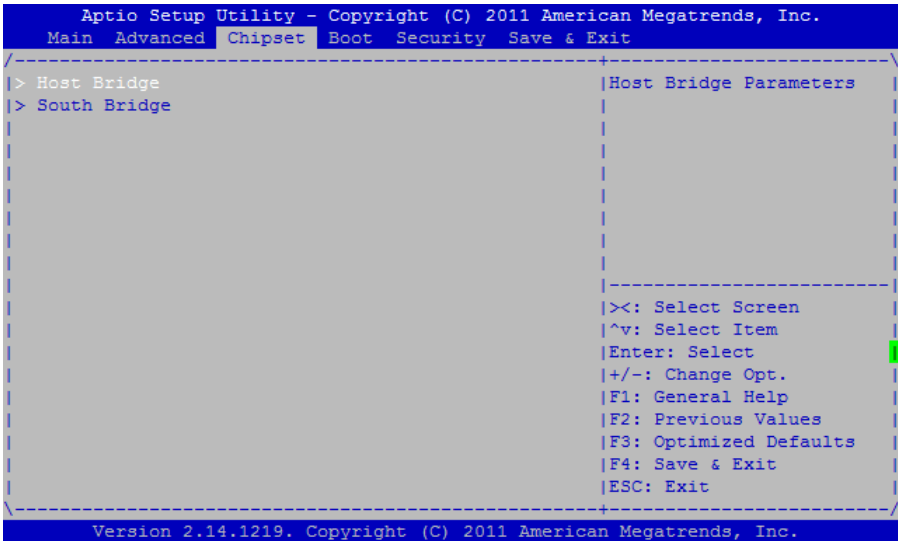
C-state Popup

When enabled, SB observes bus master request, will take system from a C3/C4 state to a C2 state and auto enables bus masters. Set this value to **Disabled, Enabled**.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

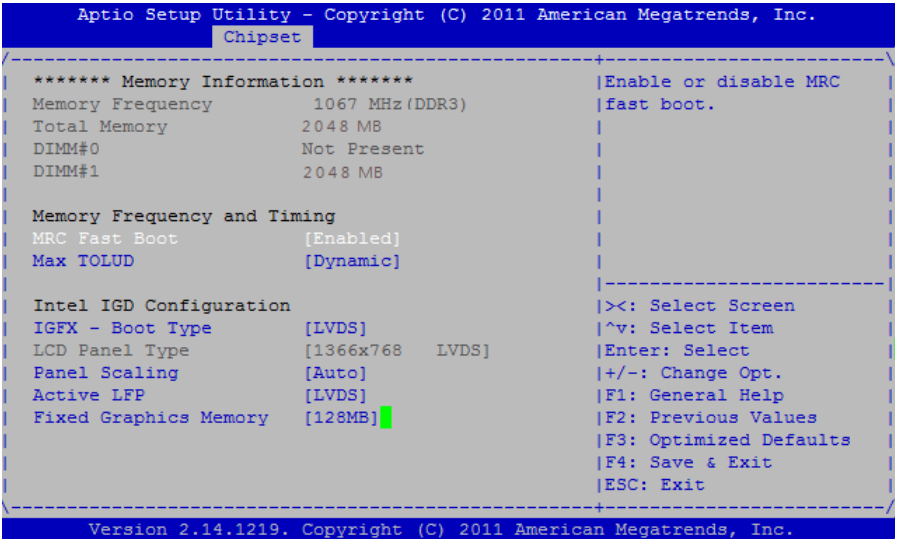
4.5 Chipset Configuration

Select the Chipset tab from the setup screen to enter the Chipset BIOS Setup screen. You can select any of Chipset BIOS Setup options by highlighting it using the < Arrow > keys. The Chipset BIOS Setup screen is shown below.



LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.5.1 Host Bridge Configuratio



MRC Fast Boot

Enable or disable MRC fast boot. Set this value to **Disabled, Enabled.**

Max TOLUD

Maximum Value of TOLUD. Dynamic assignment would adjust TOLUD automatically based on largest MMIO length of installed graphic controller. Set this value to **Dynamic, 1GB, 1.25GB, 1.5GB, 1.75GB, 2GB, 2.25GB, 2.5GB, 2.75GB, 3GB, 3.25GB**.

IGFX - Boot Type

Select the Video Device which will be activated during POST. This has no effect if external graphics present. Set this value to **VBIOS Default, CRT, LVDS, CRT+LVDS**.

LCD Panel Type

Select LCD panel used by Internal Graphics Device by selecting the appropriate setup item. This value is locked at 1366x768 LVDS.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Panel Scaling

Select the LCD panel scaling option used by the Internal Graphics Device. Set this value to **Auto, Force Scaling, Off, Maintain Aspect Ratio**.

Active LFP

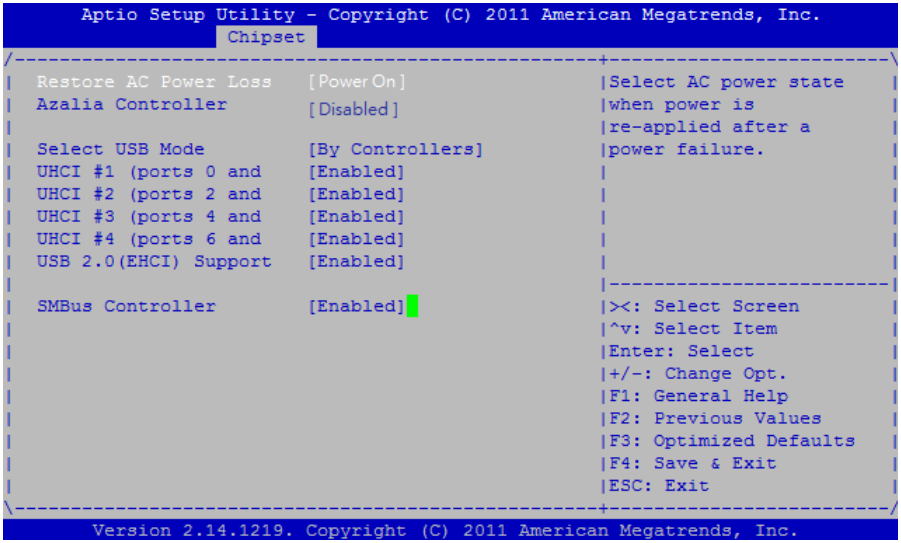
Select the Active LFP Configuration. **No LVDS:** VBIOS does not enable LVDS. **Int-LVDS:** VBIOS enables LVDS driver by Integrated encoder. **SDVO LVDS:** VBIOS enables LVDS driver by SDVO encoder. **eDP Port-A:** LFP Driven by Int-DisplayPort encoder from Port-A. **eDP Port-D:** LFP Driven by Int-Display-Port encoder from Port-D (through PCH). Set this value to **No LVDS, LVDS, EDP**.

Fixed Graphics Memory

Configure Fixed Graphics Memory Size. Set this value to **128MB, 256MB**.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.5.2 South Bridge Configuration



Restore AC Power Loss

Select AC power state when power is re-applied after a power failure. Set this value to **Power Off, Power On, Last State**.

Azalia Controller

Select a OnBoard Azalia Configuration. Set this value to **Disabled, HD Audio**.

Select USB Mode

Select USB mode to control USB ports. Set this value to **By Ports, By Controllers.**

UHCI #1 (ports 0 and 1)

Control the USB UHCI (USB 1.1) functions. Disable from highest to lowest controller. Set this value to **Disabled, Enabled**.

UHCI #2 (ports 2 and 3)

Control the USB UHCI (USB 1.1) functions. Disable from highest to lowest controller. Set this value to **Disabled, Enabled**.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

UHCI #3 (ports 4 and 5)

Control the USB UHCI (USB 1.1) functions. Disable from highest to lowest controller. Set this value to **Disabled, Enabled**.

UHCI #4 (ports 6 and 7)

Control the USB UHCI (USB 1.1) functions. Disable from highest to lowest controller. Set this value to **Disabled, Enabled**.

USB 2.0(EHCI) Support

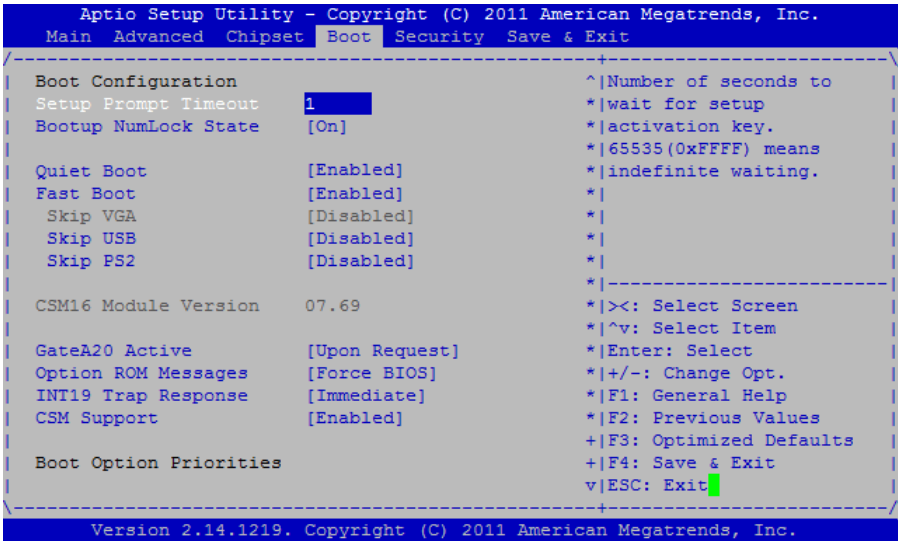
Enable or Disable USB 2.0 (EHCI) Support. Set this value to **Disabled, Enabled**.

SMBus Controller

The SMBus controller. Options: Enabled/Disabled.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.6 Boot Settings



Setup Prompt Timeout

Set this number of seconds to wait for setup activation key. 1~65535 (0xFFFF) means indefinite waiting.

Bootup NumLock State

Set this value to allow the Number Lock setting to be modified during boot up. **Off** - This option does not enable the keyboard Number Lock automatically. To use the 10-key numeric keypad on the keyboard, press the Number Lock key located on the upper left-hand corner of the 10-key pad. The Number Lock LED on the keyboard will light up when the Number Lock is engaged. **On** - Set this value to allow the Number Lock on the keyboard to be enabled automatically when the computer system is booted up. This allows the immediate use of 10-key numeric keypad located on the right side of the keyboard. To confirm this, the Number Lock LED light on the keyboard will be lit.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Quiet Boot

- **Disabled** - Set this value to allow the computer system to display the POST messages.
- **Enabled** - Set this value to allow the computer system to display the OEM logo.

Fast Boot

Enables or disables boot with initialization of a minimal set of devices required to launch active boot option. Has no effect for BBS boot options. Set this value to **Disabled, Enabled**.

Skip VGA

If Enabled, BIOS will skip EFI VGA driver. This value is locked at Disabled.

Skip USB

If Enabled, USB devices will not be available until after OS boot. If Disable, USB device will be available before OS boot. Set this value to **Disabled, Enabled**.

Skip PS2

If Enabled, PS2 devices will be skipped. Set this value to **Disabled, Enabled**.

GateA20 Active

This option is useful when any RT code is executed above 1MB.

- **Upon Request** - GA20 can be disabled using BIOS services.
- **Always** - Don't allow disabling of GA20.

Option ROM Messages

Set display mode for option ROM. Options: Force BIOS, Keep Current.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Interrupt 19 Capture

Allows option ROM to trap Int 19. Options: Enabled/Disabled.

CSM Support

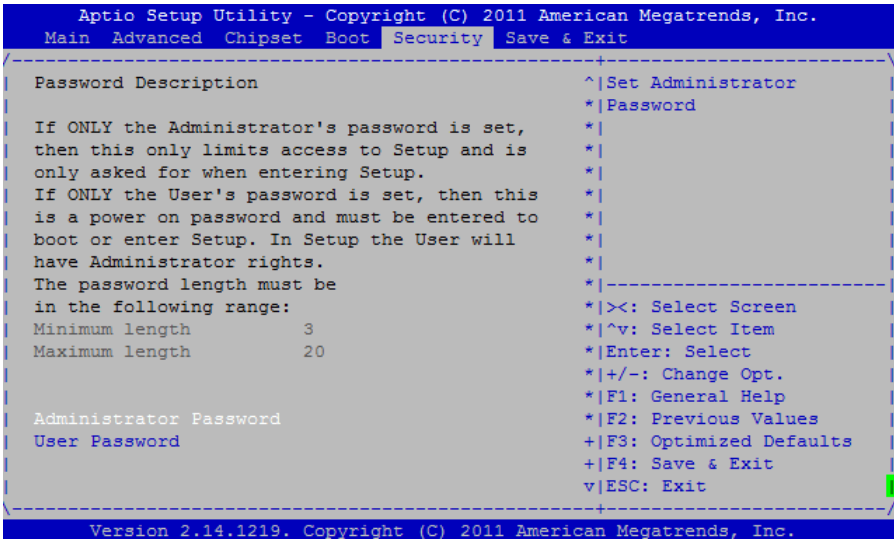
Enable, Disable CSM Support. If Auto is selected, based on OS, CSM will be enable, disable automatically. Options: Enable, Disable, Auto.

Boot Option Priorities

Set the system boot order.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.7 Security Setup



Administrator, User Password

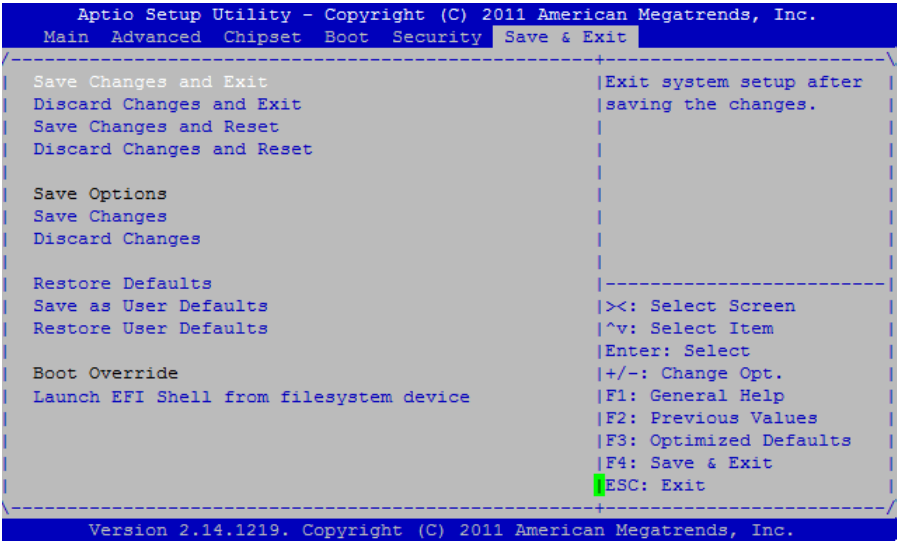
If only the administrator's password is set, then this only limits access to setup and is only asked for when entering setup.

If only the user's password is set, then this is a power on password and must be entered to boot or enter setup. In setup the user will have administrator rights.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

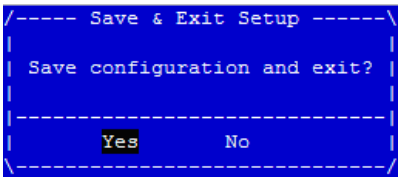
4.8 Save & Exit Menu

Select the Save & Exit tab from the setup screen to enter the Save & Exit BIOS Setup screen. You can display an Exit BIOS Setup option by highlighting it using the < Arrow > keys. The Save & Exit BIOS Setup screen is shown below.



Save Changes and Exit

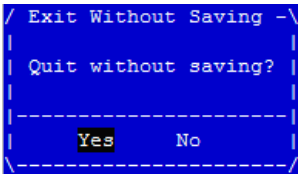
Exit system setup after saving the changes.



LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

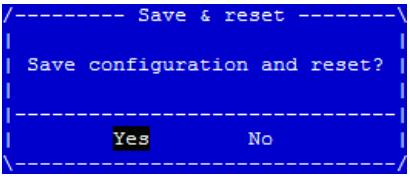
Discard Changes and Exit

Exit system setup without saving any changes.



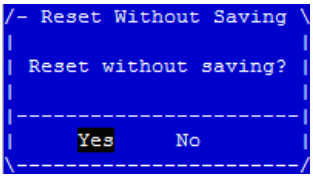
Save Changes and Reset

Reset the system after saving the changes.



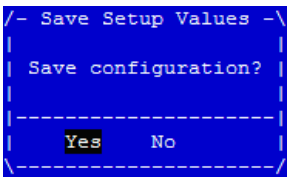
Discard Changes and Reset

Reset system setup without saving any changes.



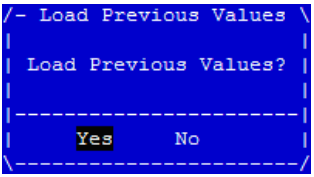
Save Changes

Save changes done so far to any of the setup options.



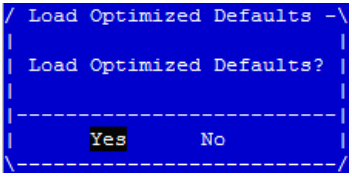
Discard Changes

Discard changes done so far to any of the setup options.



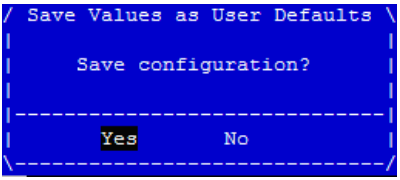
Restore Defaults

Restore/Load Defaults values for all the setup options.



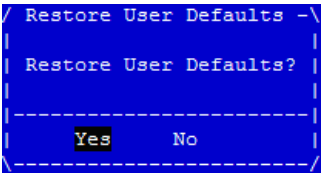
Save as User Defaults

Save the changes done so far as user defaults..



Restore User Defaults

Save changes done so far to any of the setup options.



LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Launch EFI Shell from file system device

Attempts to Launch EFI Shell application (Shell.efi) from one of the available file system devices.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

This page intentionally left blank.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

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.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

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.

Attention: Risque d'explosion si la pile est remplacée par un type incorrect. Jetez les piles usagées selon les instructions.

- 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.
- For use on the flat surface of a Type 1 enclosure.
- For use in Pollution Degree 2 Environment.



For use in a controlled environment. Refer to manual specifications for environmental conditions.

Attention: Pour utilisation dans un environnement contrôlé. Consulter aux conditions environnementales dans le manuel.



Explosion Hazard: Batteries must only be changed in an area known to be non-hazardous.

Attention: Risque d'explosion - les batteries doit être changé seulement dans une zone connue qui as aucun danger.

- For use in Class I, Division 2, Group A, B, C and D Hazardous Locations.
- Schedule of limitations:
  - Devices have not been evaluated to the enclosure requirements for the required protection methods. They

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

are Ex Components that are intended to be installed in a tool accessible enclosure that provides a degree of protection not less than IP54 per requirements of EN 60079-15. Or complete minimum IP54 enclosure evaluation shall be done in accordance to EN 60079-0:2012+A11:2013 and EN 60079-15:2010 standards.

- ▷ Subject devices are for use in a 0°C to 50°C environment. During temperature test, the highest measured temperature within the device was 120.7°C at 50°C service temperature.
- ▷ Devices have been evaluated as a Low Power Apparatus regarding clearances, creepage distances and separation requirements; the devices are intended for installation in an area of not more than pollution degree 2 in accordance with IEC 60664-1.
- ▷ Rated cable temperature must be greater or equal to 75°C in ambient temperature 0°C to 50°C.
- ▷ The input and earthing cables size is specified as14 AWG. The cross-sectional area for both input and earthing conductor shall be at least 2.08 mm².

- ▶ ATEX Certificate No.: DEMKO 15 ATEX 1390U Rev. 0
- ▶ Protection Method:  II 3G Ex nA IIC Gc

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

This page intentionally left blank.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

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

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

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

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000