

EOS-1300 Series

EOS-1300/EOS-1310/EOS-1320/EOS-1330

4CH GigE Vision System

User's Manual



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Advance Technologies; Automate the World.



Revision History

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2.00 Nov. 4, 2016		Initial Release

Preface

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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.

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1 Introduction



The Adlink EOS-1300 4CH GigE vision system provides isolated, real-time DI/O, encoder, and support for PoE (Power over Ethernet) in a compact 232W x 180.8D x 82.8H mm construction. Leveraging 6th Generation Intel® Core™ i7 Processors, the EOS-1300 is suitable for multi-camera high resolution machine vision applications that require high computing power, and offers not only an internal USB port but also onboard SHA-256 security EEPROM to help manage copy protection and license authentication. Special DI/O features like De-bounce filter, FPGA based trigger I/O, and Encoder interlocking can be configured by software API maximum flexibility and significantly reduced TCO.

With its highly integrated DI/O function, GigE vision, and PoE technology, the EOS-1300 is the ideal choice for machine production or factory automation operations requiring compact size, 2 to 4 GigE-enabled cameras, and DI/O & Encoder control.



1.1 Features

- ▶ 6th Gen Intel® Core™ i7/i5/i3 processors
- FPGA-based DI/O, trigger I/O and encoder functions, fixed and low latency
- 232W x 180.8D x 82.8H mm (9.1 x 7.1 x 3.4 in) with frontmounted I/O
- Internal USB port and onboard SHA-256 License Security EEPROM for third party software protection
- Up to 4CH GigE vision camera with PoE (power over Ethernet) support

1.2 Specifications

	EOS-1300	EOS-1310	EOS-1320	EOS-1330	
System Core	System Core				
Processor	Intel®Core™ i7-6700	Intel®Core™ i5-6500	Intel® Core™ i3-6100	Intel® G3900	
Memory	DDR4 2133 40	DDR4 2133 4GB (up to 32 GB)			
OS					
Supported OS	W7P/W8.1/W1	0 64bit			
Graphics					
Display Port	2				
Camera Interfa	ace				
GigE Vision	4-CH Gigabit, IEEE 802.3af o PoE output: 8\	support for PoE compliant N/port	(power over E	thernet),	
I/O interface					
Ethernet	2 x Intel GbE p	2 x Intel GbE ports			
DI/O	Isolated 12 DI,	16 DO			
Encoder	Isolated 2CH A/B/Z encoder				
USB	4 x USB3.0 + 4 x USB2.0 + 1 x USB2.0 internal				
Series port	1 x RS-232/422/485, (COM1, adjusted by switch) 1 x RS-232, COM2				
Audio	7.1 channel audio via 5 jacks and S/PDIF output				
Power Supply	Power Supply				
DC input	24V DC				
Physical					
Dimension	232W x 180.8I	D x 82.8H mm ((9.1 x 7.1 x 3.2	in)	
Weight	3kg (6.6bs)				
Mount	DIN rail or wal	l-mount			
Environmenta	I				
Operating Temperature	0 to 55°C				
Storage Temperature	-20 to 85°C (-4	I°F to 185°F)			
Humidity	Approx. 90% (20°C (non-co	ndensing)		



	EOS-1300	EOS-1310	EOS-1320	EOS-1330
Vibration	Operating 0.5 Grms, 5-500 Hz, 3 axes w/HDD Operating 1 Grms, 5-500 Hz, 3 axes w/ SSD			C
Shock	Operating 20G, half sine 11 ms duration			
EMC	CE & FCC Class A			
Safety	CE/LVD, UL, CB			

Power Consumption			
Power off	1.2W (0.05A@24VDC)	In shutdown mode with DC input and only USB keyboard/mouse	
System idle	21W (0.86A@24VDC)	Under Windows Desktop with no application programs executed	
System full load		 Total PoE loading is 32W 	
	164W (6.81A@24VDC)	 Dummy load of 4.5W in con- nection to represent each USB 3.0 load 	
		 Dummy load of 2.5W in con- nection to represent each USB 2.0 load 	
		 HDD permanently accessed 	
		 CPU(i7-6700) @ 100% load- ing (by Burn-in test program) 	
Recommended power supply	180W		

1.3 Mechanical Drawings



All dimensions shown are in millimeters (mm) unless otherwise stated.



Figure 1-1: Top View



Figure 1-2: Front View





Figure 1-3: Rear View





1.4 Front Panel I/O Connectors



Figure 1-5: Front Panel I/O

 $\ensuremath{\text{I/O}}$ connectors and controls on the EOS-1300 front panel, as labeled, are as follows

- LED Indicators
- Power button
- Reset button
- DC power connector
- GigE camera port
- ► I/O 1, DB-26P Digital I/O connector
- Audio connectors, 7.1 channel audio via 5 jacks and S/PDIF output
- ► LAN ports, no PoE function
- ▶ USB2.0 ports
- Display ports
- ► USB3.0 ports
- ► COM1 and COM2, Serial ports
- ▶ I/O 2, DB-37P Digital I/O and Encoder Connector

1.4.1 LED Indicators

In addition to the LED of the power button, LEDs on the front panel indicating operations as follows.

LED	Color	Lit	Off
PWR Status	Amber	System is operating	System is in sleep (S1/S3), hibernate (S4), or power off (S5) state
HDD	Green	SATA hard drive is active	N/A

Table 1-1: LED Indicator Legend

1.4.2 Power Button

Push button with blue LED indicator. System is turned on when button is pressed, and the power LED lit. If the system hangs, depressing the button for 5 seconds powers down the unit.



1.4.3 Reset Button

Executes hard reset.

1.4.4 DC Power Connector

Consists of V+, chassis ground, and V- pins. V+ and V- pins accept DC power input and chassis ground pin enhances EMC compatibility. The DC power input accepts 24 VDC input.



Figure 1-6: Power Supply Connector Pin Assignments

Pin	Signal
1	V+(DC_IN)
2	GND(CHGND)
3	V- (DGND)

Table 1-2: DC Power Supply Connector Signals

1.4.5 GigE Camera Port

CH1 to CH4 connect GigE cameras and support PoE (Power over Ethernet) functions, with support as follows.

- 4x fully-integrated Gigabit Ethernet Media Access Control (MAC) and physical layer (PHY) ports
- IEEE 802.3.af compliant for up to 8 W/channel with power up to 48 V over existing CAT-5e Ethernet infrastructure with no need for modification
- Standard IEEE 802.3 Ethernet interface for 1000BASE-T, 100BASE-TX, and 10BASE-T applications
- Smart PoE function provides manual power down of PoE supply with software API
- ▶ 9 kB jumbo frame support



Figure 1-7: GigE Camera Port

Pin	Signal
1	MDI0+ (PoE_DC48V)
2	MDI0- (PoE_DC48V)
3	MDI1+ (PoE_DC0V)
4	MDI2+ (PoE_DC48V)
5	MDI2- (PoE_DC48V)
6	MDI1- (PoE_DC0V)
7	MDI3+ (PoE_DC0V)



PinSignal8MDI3- (PoE_DC0V)

Table 1-3: GigE Camera Port Pin Assignments

LED	Color	Activity	
LED1 (Speed)	Green/ Yellow	Unlit	10Mbps
		Green	100Mbps
		Yellow	1000Mbps
LED2 (Active/Link)	Green	Unlit	Ethernet port is disconnected
		Lit	Ethernet port is connected with no activity
		Flashing	Ethernet port is connected and active

Table 1-4: LED Indicator Legend

1.4.6 Digital I/O and Encoder Connectors (I/O1 and I/O2)

I/O1 is a DB-26P connector receiving 8CH isolated digital input (DI CH0 to 7) and 8CH isolated digital output (DO CH0 to 7). DI/O channels 0 to 3 can be configured to trigger I/O via API (see EOS-1300 Function Library Reference document).



Figure 1-8: I/O1, DB-26P Digital I/O Connector

Pin	Signal	Pin	Signal
1	IDI_0H	14	IDO_2
2	IDI_1H	15	IDO_2_COM
3	IDI_2H	16	IDO_3
4	IDI_3H	17	IDO_3_COM
5	IDI_0_1_2_3L	18	IDI_4_5_6_7L
6	IDI_4H	19	IDO_4
7	IDI_5H	20	IDO_4_COM
8	IDI_6H	21	IDO_5
9	IDI_7H	22	IDO_5_COM
10	IDO_0	23	IDO_6
11	IDO_0_COM	24	IDO_6_COM
12	IDO_1	25	IDO_7
13	IDO_0_COM	26	IDO_7_COM

Table 1-5: I/O1, DB-26P Connector Pin Assignments

I/O2 is a DB-37P connector receiving 4CH isolated digital input (DI CH8 to 11), 8CH isolated digital output (DO CH8 to 15), with 2CH isolated Encoder General Purpose input/output application with isolation requirement recommended.



Figure 1-9: I/O2, DB-37P Digital I/O and Encoder Connector



Pin	Signal	Pin	Signal
1	IDI_8H	20	IDI_9H
2	IDI_10H	21	IDI_11H
3	IDI_8_9_10_11L	22	IDO_8
4	IDO_8_COM	23	IDO_9
5	IDO_9_COM	24	IDO_10
6	IDO_10_COM	25	IDO_11
7	IDO_11_COM	26	IDO_12
8	IDO_12_COM	27	IDO_13
9	IDO_13_COM	28	IDO_14
10	IDO_14_COM	29	IDO_15
11	IDO_15_COM	30	EA1+
12	EA0+	31	EA1-
13	EA0-	32	EB1+
14	EB0+	33	EB1-
15	EB0-	34	EZ1+
16	EZ0+	35	EZ1-
17	EZ0-	36	N/A
18	N/A	37	N/A
19	N/A		

Table 1-6: I/O2 DB-37P Connector Pin Assignments

DI/O and Encoder Electrical Specifications

12CH Isolation DI	
Logic high	5 to 24V
Logic low	0 to 0.8V
Input resistance	2.4kΩ @ 1W
Isolation voltage	1.5kV DC channel 0 to 11
Maximum delay	Opto-isolator turn on: 15µs Opto-isolator turn off: 150µs
Recommended input current	5mA

16CH Isolation D0			
Logic high	Max. 30V		
Logic low	Max. 3.5V @ 100mA		
Sink/Source current	Max. 100mA		
Isolation voltage	1.5kV DC channel 0 to 15		
Maximum delay	Opto-isolator turn on: 25µs Opto-isolator turn off: 300µs		

2CH Encoder			
Input voltage	5V ± 5%		
Encoder frequency	Max. 50kHz		
Encoder input	EA/EB		
Encoder index	EZ		
Isolation voltage	1.5kV DC channels 0 to 1		

1.4.7 Serial ports (COM1 and COM2)

COM1 supports RS-232/422/485 based on switch setting on the mainboard, with RS-232 the default, and COM2 supports RS-232 only.



Figure 1-10: COM1 and COM2 Connectors



Pin	Signal			
	RS232	RS422	RS485	
1	DCD#	TXD422-	485DATA-	
2	RXD	TXD422+	485DATA+	
3	TXD	RXD422+	N/S	
4	DTR#	RXD422-	N/S	
5	GND	N/S	N/S	
6	DSR#	N/S	N/S	
7	RTS#	N/S	N/S	
8	CTS#	N/S	N/S	
9	RI#	N/S	N/S	



Setting COM1

COM1 can be set to RS-232/422/485 using switch SWS1M1, located on the mainboard as shown.



Figure 1-11: SWS1M1 Switch



Figure 1-12: SWS1M1 Switch Location

Switch settings are as follows.

	1	2
RS-232 (Default)	ON	OFF
RS-422	ON	ON
RS-485	OFF	ON

Table 1	-8:	SWS1M1	Switch	Setting
---------	-----	--------	--------	---------

1.4.8 LAN Ports

Two LAN Ethernet controllers based on Intel® i219LM/i211AT both support up to 1Gb/s.







Pin	10BASE-T/100BASE-TX	1000BASE-T
1	TX+	LAN_MDI0+
2	TX-	LAN_MDI0-
3	RX+	LAN_MDI1+
4	N/A	LAN_MDI2+
5	N/A	LAN_MDI2-
6	RX-	LAN_MDI1-
7	N/A	LAN_MDI3+
8	N/A	LAN_MDI3-

Table 1-9: LAN Port Pin Definitions

LED	Activity	
	Off	No Link
LED1 (Active/Link)	Orange	Link Active
(/ tetrve/ Ellink)	Blinking	Data Activity
	Off	10 Mb connection
LED2 (Speed)	Green	100 Mb connection
(Opeed)	Orange	1 Gb connection

Table	1-10:	LAN	Port I	LED	Legend
-------	-------	-----	--------	-----	--------

1.4.9 DisplayPort Connectors

Two DisplayPort v1.1 connections support up to 3840x2160 @ 30Hz.



Figure 1-14: DisplayPort Connector

Pin	Signal	Pin	Signal
1	CN_DP0_P	2	GND
3	CN_DP0_N	4	CN_DP1_P
5	GND	6	CN_DP1_N
7	CN_DP2_P	8	GND
9	CN_DP2_N	10	CN_DP3_P
11	GND	12	CN_DP3_N
13	CN_CAD-L	14	CN_CEC
15	CN_AUX_P	16	GND
17	CN_AUX_N	18	DDP_HPD
19	GND	20	P3V3

1.4.10 USB Ports

4 USB 3.0 and 4 USB 2.0 ports each provide 5V power for connected devices.





Figure 1-15: USB 2.0

Pin	Signal
1	Vcc
2	UV0-
3	UV0+
4	GNE

Table 1-12: USB 2.0 Pin Assignments



Figure 1-16: USB 3.0

Pin	Signal
1	USB3.0_P5VA
2	USB2_CMAN
3	USB2_CMAP
4	GND
5	USB3A_CMRXN
6	USB3A_CMRXP
7	GND

Pin	Signal
8	USB3A_CMTXN
9	USB3A_CMTXP

Table 1-13: USB 3.0 Pin Assignments

1.5 DI/O and Encoder Sample Circuits

1.5.1 Isolated Digital Input Circuits

The input can accept voltages up to 24V, with extra $2.4k\Omega$ input resistors (Rs). Connections between outside signals are as follows.



Figure 1-17: Digital Input Sample Application Circuit

1.5.2 Isolated Digital Output Circuits

Outputs 0 to 15 provide up to 100mA current (maximum). These outputs are typically connected (directly or indirectly) to other devices, such as a trigger input, PLC input, relay, or indicator light.





Figure 1-18: Digital Output Sample Application Circuit for Sink Type





1.5.3 Isolated Encoder Input Circuits

Encoder inputs can connect to either a single-ended or differential encoder. Using an encoder allows input and output delay values to be specified in pulse counts rather than real time units.



Figure 1-20: Encoder Input Sample Application Circuit for Line Driver



Figure 1-21: Encoder Input Sample Application Circuit for Open Collector



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2 Getting Started

2.1 Unpacking Checklist

Before unpacking, check the shipping carton for any damage. If the shipping carton and/or contents are damaged, inform your dealer immediately. Retain the shipping carton and packing materials for inspection. Obtain authorization from your dealer before returning any product to ADLINK. Ensure that the following items are included in the package.

- ► EOS-1300
- Quick Start Guide

2.2 Adaptors & Additional Accessories

Device adaptors and other optional accessories should only be obtained through your ADLINK dealer. For more information, see "Getting Service" on page 73.

2.3 Installing Memory

1. Remove the top cover thumbscrews by hand or screwdriver.





2. Remove the top cover.



3. Insert the memory module into the DDR4 SO-DIMM socket and press down until the module is properly seated and the retaining clips close on the module.





2.4 Installing a Hard Disk or SS Drive

- 1. Remove the top cover as detailed previously.
- 2. Unplug the SATA cable.



3. Remove the two screws from the case underside.





4. Remove the two screws fixing the drive bracket.



5. Withdraw the bracket and remove the four bracket screws.


6. Remove and/or replace the drive, secure the drive, and note the orientation.







- 7. Replace the four bracket screws.
- 8. Replace and secure the SSD or HDD bracket, and fasten the fixing screws.
- 9. Replace the case underside screws.
- 10. Insert and secure the SATA cable.
- 11. Replace the top cover.

2.5 Installing the Internal USB Dongle

- 1. Remove the top cover as detailed previously.
- 2. Plug the USB dongle into the USB port.



2.6 Installing Wall-mount Brackets

Secure the provided wall-mount brackets in the four screw holes in the underside of the chassis, as shown.





2.7 Installing DIN Rail Bracket

Secure the provided DIN rail bracket via the two screw holes on the rear side of the chassis, as shown.



2.8 Cooling Considerations

To maximize the efficiency of fan-based heat dissipation, maintain a minimum 3cm (1.2 inches) clearance from the top vents and 5cm (2 inches) from the side vents.



2.9 Driver Installation



Due to lack of controller support under Windows 7, successful OS installation may be prevented. For available solutions, please contact your ADLINK representative.

Download requisite drivers, as follows, for your system from http:// www.adlinktech.com and install.

- ► Chipset
- Graphics
- IRST
- ► LAN
- Audio
- USB3
- ► KMDF (Only if Windows 7 is installed)
- ► ME
- ► Serial I/O (Only if Windows 8.1/10 is installed)
- ► DI/O

Appendix A BIOS Setup



BIOS options in the manual are for reference only, and are subject to configuration.

The Basic Input/Output System (BIOS) is a program that provides a basic level of communication between the processor and peripherals. In addition, the BIOS also contains codes for various advanced features applied to the EOS-1300. The BIOS setup program includes menus for configuring settings and enabling features of the EOS-1300 series. Most users do not need to use the BIOS setup program, as the EOS-1300 ships with default settings that work well for most configurations.

Enter BIOS setup by selecting DEL when the system is powered on the POST (Power On Self Test) message is displayed.The EOS-1300 controller supports one-time Boot Menu allowing selection of boot device. Enter the Boot Menu by selecting F7 at POST.

47	 BIOS options listed are for reference only.
\mathbf{v}	 Different configurations can affect BIOS behav- ion
NOTE:	IOr.
	 Displayed material may reflect only the BIOS version corresponding to initial release and may
	differ from that of the purchased motherboard.



A.1 Main

Aptio Setup Util Main Advanced Security Boo	ity – Copyright (C) 2016 America t Save & Exit	n Megatrends, Inc.
System Information Project Version Build Date and Time	EOS-1300 1.08.10 06/23/2016 16:28:56	▲ System Management
Processor Information Brand String Frequency Processor ID Stepping Number of Processors GT Info	Intel(R) Core(TM) i3-6100 CPU @ 3.70GHz 3700 MHz 506E3 R0/S0/N0 2Core(s) / 4Thread(s) GT2 (1050 MHz)	
IGFX VBIOS Version Total Memory PCH Information Name	1036 16384 МВ SKL РСН-Н	++: Select Screen †4: Select Item Enter: Select +/-: Change Opt. F1: General Help
FCH SKU Stepping LAN PHY Revision ME FH Version ME Firmware SKU	31/D1 B2 11.0.0.1202 Consumer SKU	F3: Optimized Defaults F4: Save & Exit ESC: Exit
Access Level	Administrator	Magataendo Tao

Aptio Setup Utilit Main Advanced Security Boot	y <mark>– Copyright (C) 2016 America</mark> Save & Exit	an Megatrends, Inc.
Brand String Frequency Processor ID Stepping Number of Processors GT Info	Intel(R) Core(TM) 13-6100 CPU @ 3.70GHz 3700 MHz 506E3 RO/SO/NO 2Core(s) / 4Thread(s) GT2 (1050 MHz)	Set the Time. Use Tab to switch between Time elements.
IGFX VBIOS Version Total Memory PCH Information	1036 16384 MB	
Name PCH SKU Stepping LAN PHY Revision	SKL PCH−H PCH−H Desktop H110 SKU 31/D1 B2	++: Select Screen 11: Select Item Enter: Select
ME FW Version ME Firmware SKU	11.0.0.1202 Consumer SKU	+/−: Change Opt. F1: General Help F2: Previous Values
Access Level System Management	Administrator	F3: Optimized Defaults F4: Save & Exit ESC: Exit
System Date System Time	[Wed 07/27/2016] [16:20:50]	•
Version 2.17.1255	. Copyright (C) 2016 American	Megatrends, Inc.

System Information

Shows current system project version, build date and time.

Processor Information

Shows current system brand string, frequency, processor id, stepping, number of processors, GT info, IGFX VBIOS version, and total memory.

PCH Information

Shows current system Name, PCH SKU, stepping, LAN PHY revision, ME FW version and ME firmware SKU.



System Time/System Date

Changes system time and date. Highlight System Time or System Date using up or down Arrow keys. Enter new values using the keyboard then Enter. Use Tab to move between fields.

A.1.1 System Management

Aptio Setup Utility – Copyright (C) 2016 American Main	Megatrends, Inc.
System Management	Board Information
Version: 1.00	
Overview ▶ Board Information	
System Health F Temperatures and Fan Speed P Power Consumption Runtime Statistics F Flags	
Hardware Controls ▶ Power Up ▶ Smart Fan	<pre>++: Select Screen f1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.1255. Copyright (C) 2016 American Me	egatrends, Inc.

Board Information

Aptio Setup Utility - Main	- Copyright (C) 2016 Ame	rican Megatrends, Inc.
Board Information		
SEMA Firmware Build Date SEMA Bootloader Build Date Hardware Version Serial Number Manufacturing Date Last Repair Date MAC TD	BMC EOS-1300 1v2 Apr 20 2016 bl_EOS-1300 4v2 Mar 18 2016 7A104-0A20-120E GS19EA1004 2016/07/01 0000/00/00 00306416F12C	
SEMA Features: Uptime & Power Cycles Counter System Restart Event 1024 Bytes User-Flash Watchdog Temperatures Voltage Monitor Display Backlight control Power-Up Watchdog Power Monitor (current sense) Boot Counter 12V Input-Voltage		<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.1255. (Copyright (C) 2016 Ameri	can Megatrends, Inc.



Aptio Setup Utility – Copyright (Main	(C) 2016 American	Megatrends, Inc.
Aptio Setup Utility - Copyright (Main System Restart Event 1024 Bytes User-Flash Matchdog Temperatures Voltage Monitor Display Backlight control Power-Up Watchdog Power Monitor (current sense) Boot Counter 12V Input-Voltage dmR Resnes for Input-Voltage Dual-BIOS I2C bus 1 I2C bus 2 Programmable CPU fan Programmable CPU fan Programmable System fan AT/ATX mode ACPI Thermal Trigger Power-Up to last state Backlight restore DTS offset registers programmable Smart Fan3 TIVA GPIOS support TIVA BMC	(C) 2016 American	<pre>#egatrends, Inc. ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.1255. Copyright (C)) 2016 American Me	gatrends, Inc.

Shows current system SEMA firmware, SEMA firmware build date, SEMA bootloader, SEMA bootloader build date, hardware version, serial number, manufacturing date, last repair date, MAC ID and SEMA features.

Temperatures and Fan Speed

Main	Aptio Setup Utility –	Copyright	(C) 2016	i American	Megatrends,	Inc.
Temperatures	and Fan Speed					
CPU Temperatu Current Startup Min	re	40.5C 21C 17C				
Max Board Tempera Current Startup Min Max	tures	380 230 190 670				
CPU Fan Speed		1152RPM			<pre>++: Select : f1: Select : f1: Select : +/-: Change f1: General F2: Previous F3: Optimize F4: Save & f ESC: Exit</pre>	Screen Item Opt. Help s Values ad Defaults Exit
	Version 2.17.1255. C	opyright (C) 2016 A	Merican M	egatrends, In	пс.

Shows current system CPU and board temperatures and CPU fan speed.



Power Consumption

Main	Aptio Setup Utility -	• Copyright	(C) 2016 American	Megatrends,	Inc.
Power Consump	otion				
VCORE VGFX VMEM SVSB VIN (12V) SV 3.3V 3.3VSB RTC Input Current		1.248V 0.012V 1.196V 4.989V 11.980V 5.071V 3.346V 3.296V 3.038V 2.630A		++: Select : 11: Select : Enter: Select : Enter: Select : F1: General F2: Previous F3: Optimize F4: Save & f ESC: Exit	Screen Item St Opt. Help s Values ed Defaults Exit
	Version 2.17.1255. C	opyright (C) 2016 American M	egatrends, In	ю.

Shows current system VCORE, VGFX, VMEM, 5VSB, VIN (12V), 5V, 3.3V, 3.3VSB, RTC and input current.

Runtime Statistics

Aptio Setup U Main	tility – Copyright (C) 2016 Ameria	can Megatrends, Inc.
Runtime Statistics		
Total Runtime Current Runtime Power Cycles Boot Cycles Boot Reason	326h 31m Oh 11m 17s 155 1645 Software-reset	++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.17	.1255. Copyright (C) 2016 America	n Megatrends, Inc.

Shows current system total runtime, current runtime, power cycles, boot cycles, and boot reason.



Flags

Aptio Setup Main	Utility – Copyright ((C) 2016 American	Megatrends,	Inc.
Flags				
BMC Flags BIOS Select ATX/AT-Mode Exception Code	0x40 Standard E ATX-Mode 0x00	9105	++: Select S 14: Select J Enter: Select +/-: Change F1: General F2: Previous F3: Optimize F4: Save & E ESC: Exit	icreen item opt. Help : Values Values id Defaults ixit
Version 2.3	17.1255. Copyright (C)	2016 American Me	egatrends, Ir	ic.

Shows current system BMC flags, BIOS select, ATX/AT-mode and exception code.

Power Up

Aptio Setup Utility – Copyright (C) 2016 American Main	Megatrends, Inc.
Power Up Power-Up Watchdog [Disabled] ATTENTION: Pressing F12 during start up disables the Power Up Watchdog.	The Power Up Watchdog resets the system after a certain amount of time after power up. Pressing F12 during start up disables the Power Up Watchdog.
	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>

Enables/disables Power Up Watchdog reset of the system a certain amount of time after power up. Pressing F12 during startup disables Power Up Watchdog.



Smart Fan

Main	Aptio Setup Utility – Copyright (C) 2016 American	Megatrends, Inc.
Smart Fan		CPU Fan Mode
CPU Fan Mode		++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
	Version 2.17.1255. Copyright (C) 2016 American Mu	egatrends, Inc.

Sets CPU fan mode from AUTO (Smart Fan) or Full Speed.

A.2 Advanced

Aptio Setup Utility – Copyright (C) 2016 American Main <mark>Advanced</mark> Security Boot Save & Exit	Megatrends, Inc.
<pre>> CPU > SATA + Memory > Graphics > USB > Super IO > Serial Port Console > Network > Security</pre>	CPU Configuration Parameters ++: Select Screen 1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.17.1255. Copyright (C) 2016 American Ma	egatrends, Inc.
A Setting incorrect or conflicting value	es in Advanced BIOS

CAUTION:

Setting incorrect or conflicting values in Advanced BIOS Setup may cause system malfunction

Accesses advanced options of the EOS-1300.



A.2.1 CPU

Aptio Setup Utility Advanced	y – Copyright (C) 2016 An	merican Megatrends, Inc.
Aptio Setup Utilits Advanced CPU Intel(R) Core(TM) i3-6100 CPU @ 3 CPU Signature Microcode Patch Max CPU Speed Processor Cores Hyper Threading Technology Intel VT-x Technology Intel VT-x Technology G4-bit EIST Technology CPU C3 state CPU C4 state CPU C4 state CPU C4 state CPU C4 state CPU C5 state CPU C4 state CPU C5 state CPU C4 state CPU C5 state CPU C5 state CPU C4 state CPU C5 state CPU C5 state CPU C4 state CPU C5 state CPU C5 state CPU C10 state	 a - Copyright (C) 2016 Ar 3.70GHz 506E3 82 3700 MHz 800 MHz 8700 MHz 2 Supported Supported	 Disabled for Windows XP Disabled for Windows XP ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit F5: Exit
L1 Code Cache L2 Cache L3 Cache	32 кв x 2 32 кВ x 2 256 кВ x 2 3 МВ	ESL: EXIL
Version 2.17.1255.	. Copyright (C) 2016 Amer	rican Megatrends, Inc.

Aptio Setup Utility Advanced	– Copyright (C) 2016 A	merican Megatrends, Inc.
Intel SMX Technology 64-bit EIST Technology CPU C3 state CPU C4 state CPU C7 state CPU C9 state CPU C9 state CPU C10 state CPU C10 state L1 Data Cache L1 Code Cache L2 Cache	Not Supported Supported Supported Supported Supported Supported Not Supported Not Supported 32 kB × 2 32 kB × 2 256 kB × 2	 Enable/Disable ACPI 3.0 T-States.
L3 Cache L4 Cache	3 MB Not Present	↔: Select Screen ↑↓: Select Item Enter: Select
Limit CPUID Maximum Execute Disable Bit Intel Virtualization Technology VT-d Intel(R) SpeedStep(tm) CPU C states Enhanced C-states Package C State limit ACPI 3.0 T-States	[Disabled] [Enabled] [Enabled] [Enabled] [Enabled] [Enabled] [Enabled] [AUTO] [Disabled]	+/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Limit CPUID Maximum

Disabled for Windows XP.

Execute Disable Bit

XD can prevent certain malicious buffer overflow attacks when combined with a supporting OS (Windows Server 2003 SP1, Windows XP SP2, SuSE Linux 9.2, or Red Hat Enterprise 3 Update 3).

Intel[®] Virtualization Technology

When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.



VT-d

Enables/disables VT-d capability.

Intel[®] SpeedStep(tm)

Allows more than two frequency ranges to be supported.

Turbo Mode

Enables/disables Intel[®] TurboBoost Technology.

CPU C states

Enables/disables CPU C states.

Enhanced C-states

Enables/disables C1E. When enabled, CPU will switch to minimum speed when all cores enter C-State.

Package C State limit

CPU package C state limit.

ACPI 3.0 T-States

Enables/disables ACPI 3.0 T-States.

A.2.2 SATA

Aptio Setup Utility Advanced	y – Copyright (C)	2016 American	Megatrends, Inc.
SATA SATA Speed Selection Serial ATA Port O Software Preserve	[Default] 2.5" SATA SS SUPPORTED	D (32.0GB)	Indicates the maximum speed the SATA controller can support.
			++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

SATA Speed Selection

Indicates the maximum speed the SATA controller can support.



A.2.3 Memory

Aptio Setup Utility – Advanced	Copyright (C)	2016 American	Megatrends,	Inc.
Advanced Memory RC Version Memory Frequency Total Memory VDD DIMM#0 DIMM#1 Memory Timings (tCL-tRCD-tRP-tRAS)	1.9.0.0 2133 MHz 4096 MB 1200 mVolts 4096 MB Not Present 15-15-15-36		++: Select { fl: Select ; Enter: Select ; Enter: Select ; F1: General F2: Previous F3: Optimiz; F4: Save & E ESC: Exit	Screen Item St Opt. Help s Values s Values ed Defaults Exit
Version 2.17.1255. C	opyright (C) 2	016 American M	egatrends, In	nc.

Shows current system memory RC version and values for memory frequency, total memory, VDD, DIMM#0, DIMM#1 and Memory Timings (tCL-tRCD-tRP-tRAS).

A.2.4 Graphics

Aptio Setup Utility – Copyright (C) 2016 Amerio Advanced	can Megatrends, Inc.
Graphics	Graphics turbo IMON current
IGFX VBIOS Version 1036 Graphics Turbo IMON Current <mark>31</mark>	
GTT Size [8MB] Aperture Size [256MB] DVMT Pre-Allocated [32M] DVMT Total Gfx Mem [256M] Gfx Low Power Mode [Enabled]	
	<pre>+: Select Screen t↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Varsion 2 17 1255 Comunisht (C) 2016 America	n Megatrends Toc

Graphics Turbo IMON Current

Graphics turbo IMON current values supported (14-31).

GTT Size

Sets GTT size.

Aperture Size

Sets aperture size. OVer 4GB MMIO BIOS assignment is automatically enabled when selecting 2048MB aperture, when CSM support is disabled.



DVMT Pre-Allocated

Sets DVMT 5.0 Pre-allocated (Fixed) graphics memory size used by the internal graphics device.

DVMT Total Gfx Mem

Sets DVMT5.0 Total graphic memory size as used by the internal graphics device.

Gfx Low Power Mode

Applicable for SFF only.

A.2.5 USB

Aptio Setup Utility - Advanced	Copyright (C) 2016 American	Megatrends, Inc.
USB Configuration		Enables Legacy USB support.
USB Module Version	14	support if no USB devices are connected. DISABLE option will
USB Devices: 1 Drive, 1 Keyboard, 1 Mouse,	1 Hub	keep USB devices available only for EFI applications.
Legacy USB Support XHCI Hand-off USB Mass Storage Driver Support Port 60/64 Emulation	[Enabled] [Enabled] [Enabled] [Disabled]	
		++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.17.1255. Co	pyright (C) 2016 American M	legatrends, Inc.

Legacy USB Support

Enables Legacy USB support, with AUTO disabling legacy support if no USB devices are connected and DISABLE keeping USB devices available only for EFI applications.

XHCI Hand-Off

A workaround for OS without XHCI hand-off support, with XHCI ownership change claimed by XHCI driver.

USB Mass Storage Driver Support

Enables/disables USB mass storage driver support.

Port 60/64 Emulation

Enables I/O port 60h/64h emulation support, and should be enabled for complete USB keyboard legacy support for non-USB aware OS.



A.2.6 Super IO

Aptio Setup Utility Advanced	– Copyright (C) 2016 American	n Megatrends, Inc.
IT8783 Super IO Configuration		Set Parameters of Serial Port 1 (COMA)
Super IO Chip ▶ Serial Port 1 Configuration ▶ Serial Port 2 Configuration	IT8783	
		<pre>++: Select Screen f1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>

Shows current system Super IO Chip, Serial Port 1 Configuration and Serial Port 2 Configuration.

Serial Port 1 Configuration

	Aptio Setup Utility - Advanced	- Copyright	(C) 2016 American	Megatrends, :	Inc.
Serial	Port 1 Configuration				
Serial Device	Port 1 Configuration Settings	IO=3F8h;	IRQ=4;	++: Select St 14: Select It Enter: Select +/-: Change C F1: General H F2: Previous	creen tem t Dpt. 4elp Values
				F3: Optimized F4: Save & E> ESC: Exit	d Defaults Kit
	Version 2.17.1255. C	Copyright (C) 2016 American M	egatrends, Ind	o.



Serial Port 2 Configuration

Aptio S Advanced	Getup Utility –∣	Copyright	(C) 2016	American	Megatrends,	Inc.
Serial Port 2 Configu	ration					
Device Settings		I0=2F8h;	IRQ=3;		++: Select S T4: Select 1 Enter: Select +/-: Change F1: General F2: Previous F3: Optimize F4: Save & E ESC: Exit	Acreen item it Opt. Help Values id Defaults ixit
Versio	n 2.17.1255. Co	pyright (C	:) 2016 AI	merican Me	egatrends, Ir	ic.

A.2.7 Serial Port Console

Aptio Setup Utility – (Advanced	Copyright (C) 2016 American	Megatrends, Inc.
COM1 Console Redirection ▶ Console Redirection Settings	[Disabled]	Console Redirection Enable or Disable.
COM2 Console Redirection Console Redirection Settings	[Disabled]	
Legacy Console Redirection ▶ Legacy Console Redirection Settings		
Serial Port for Out-of-Band Managemer Windows Emergency Management Services Console Redirection ▶ Console Redirection Settings	nt∕ s (EMS)) [Disabled]	++: Select Screen tl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.17.1255. Cop	oyright (C) 2016 American M	egatrends, Inc.

Console Redirection

Enables console redirection on COM 1 to 2 and EMS COM.

Console Redirection Settings

Sets miscellaneous parameters for COM Ports 1 to 2 and EMS COM.

Legacy Console Redirection Settings

Selects a COM port to display redirection of Legacy OS and Legacy OPROM Messages.



A.2.8 Network

Aptio Setup Utili Advanced	ty – Copyright (C) 2016 Amer	ican Megatrends, Inc.
Network		Enable/Disable UEFI Network
Network Stack		STACK
PCH LAN i219LM Controller i219–LM Wake on LAN PCH LAN i211 Controller	[Enabled] [Enabled] [Enabled]	++: Select Screen ++: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults
		F4: Save & Exit ESC: Exit
Version 2.17.125	5. Copyright (C) 2016 Americ	an Megatrends, Inc.

Network Stack

Enables/disables UEFI network stack.

PCH LAN i219LM Controller

Enables/disables onboard NIC i219LM.

i219-LM Wake on LAN

Enables/disables integrated LAN to wake the system. (The Wake On LAN cannot be disabled if ME is on at Sx state.)

PCH LAN i211 Controller

Enables/disables onboard NIC i211.

A.2.9 Security

Aptio Setup Utility – Copyright (C) 2016 American Advanced	Megatrends, Inc.
Security	BIOS Security Configuration
▶ BIOS Security Configuration ▶ Trusted Computing	
	++: Select Screen f1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.17.1255. Copyright (C) 2016 American Ma	egatrends, Inc.

Displays current system BIOS security configuration and Trusted Computing settings.



BIOS Security Configuration

Main	Aptio Setup Utility –	Copyright	(C) 2016	5 American	Megatrends, Inc.
BIOS Security RTC Lock BIOS Lock	Configuration	[Enabled] [Enabled]			Enable will lock bytes 38h–3Fh in the lower/upper 128–byte bank of RTC RAM.
					<pre>++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>

RTC Lock

When enabled, locks bytes 38h-3Fh in the lower/upper 128byte bank of RTC RAM.

BIOS Lock

Enables/disables PCH BIOS Lock Enable (BLE bit).

Trusted Computing

Aptio Setup Utility – Advanced	Copyright (C) 2016 American	Megatrends, Inc.
Configuration Security Device Support TPM State Pending operation Device Select	[Enable] [Enabled] [None] [Auto]	Enables or Disables BIOS support for security device. O.S. will not show Security Device. TGG EFI protocol and INT1A interface will not be available.
Current Status Information TPM Enabled Status: TPM Active Status: TPM Owner Status:	[Enabled] [Activated] [Owned]	
		<pre>t4: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.1255. Cc	pyright (C) 2016 American M	egatrends, Inc.

Security Device Support

Enables/disables BIOS support for security device, with OS not showing Security Device and TCG EFI protocol and INT1A interface unavailable.

TPM State

Enables/disables Security Device. Computer will reboot during restart in order to change State of the Device.

Pending operation

Schedules operations for the Security Device. Computer will reboot during restart in order to change State of Security Device.



Device Select

TPM 1.2 restricts support to TPM 1.2 devices, TPM 2.0 restricts support to TPM 2.0 devices, Auto supports both with the default set to TPM 2.0 devices if not found, and TPM 1.2 devices are enumerated.

A.3 Security

Aptio Setup Utility – Copyright (C) 20 Main Advanced <mark>Security</mark> Boot Save & Exit	016 American Megatrends, Inc.		
Password Description 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. The password length must be in the following range: Minimum length 3 Maximum length 20 Administrator Password User Password	Set Administrator Password ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit		

If only the Administrator's password is set, access to Setup is limited and the password requested when entering. If only the user's password is set, power on requires authentication to boot or enter Setup. In Setup the user has Administrator rights.

Administrator Password

Sets Administrator Password.
User Password

Sets User Password.

A.4 Boot

Aptio Setup Utility Main Advanced Security <mark>Boot</mark>	– Copyright (C) 2016 America Save & Exit	n Megatrends, Inc.
Boot Configuration Setup Promot Timeout Bootup NumLock State Quiet Boot	1 [On] [Enabled]	Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.
Boot Option Priorities Boot Option #1 Boot Option #2	[PO: 2.5" SATA SSD 3MG2-P] [UEFI: USB FLASH DRIVE PMAP, Partition 1]	
Boot Option #3 Fast Boot	[UEFI: Built-in EFI Shell] [Disabled]	++: Select Screen
New Boot Option Policy Hard Drive BBS Priorities	[Default]	Enter: Select +/-: Change Opt. F1: General Help
▶ CSM Configuration		F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.17.1255.	Copyright (C) 2016 American	Megatrends, Inc.

Setup Prompt Timeout

Number of seconds before setup activation key is launched, with 65535(0xFFFF) generating indefinite waiting.

Bootup NumLock State

Sets keypad Number Lock status following boot.



Quiet Boot

When Disabled, directs BIOS to display POST messages, and when Enabled, directs BIOS to display the OEM logo.

Boot Option Priorities

Specifies the priority of boot devices, all detected during POST and displayed. Select Boot Option # and select the desired device.

Fast Boot

Enables or disables boot initializing the minimum devices required to launch active boot option. Does not affect BBS boot options.

New Boot Option Policy

Controls the placement of newly detected UEFI boot options.

Hard Drive BBS Priorities

Sets the order of legacy devices in this group.

A.4.1 CSM Configuration

Aptio Setup Utility – (Boot	Copyright (C) 2016 American	Megatrends, Inc.
Compatibility Support Module Configu	ration	Enable/Disable CSM Support.
CSM Support		
CSM16 Module Version	07.79	
GateA20 Active Option ROM Messages INT19 Trap Response	[Upon Request] [Force BIOS] [Immediate]	
Boot option filter	[UEFI and Legacy]	
Option ROM execution		
Network Storage Video Other PCI devices	[Do not launch] [Legacy] [Legacy] [Legacy]	11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.17.1255. Co	pyright (C) 2016 American M	egatrends, Inc.

CSM Support

Enables/disables CSM Support.

GateA20 Active

UPON REQUEST disables GA20 using BIOS services, and ALWAYS prevents GA20 from being disabled, indicated when any RT code exceeding 1MB is executed.

Option ROM Messages

Sets display mode for Option ROM.



INT19 Trap Response

BIOS reaction on INT19 trapping by Option ROM, with IMMEDI-ATE executing trap immediately, and POSTPONED executing trap during legacy boot.

Boot option filter

Controls Legacy/UEFI ROM priority.

Network

Controls execution of UEFI and Legacy PXE OpROM.

Storage

Controls execution of UEFI and Legacy Storage OpROM.

Video

Controls execution of UEFI and Legacy Video OpROM.

Other PCI devices

Determines OpROM execution policy for devices other than Network, Storage, and Video.

A.5 Save & Exit

Aptio Setup Utility – Copyright (C) 2016 American Main Advanced Security Boot <mark>Save & Exit</mark>	Megatrends, Inc.
Save Options Save Changes and Exit Discard Changes and Exit Save Changes and Reset Discard Changes and Reset	Exit system setup after saving the changes.
Save Changes Discard Changes Default Options	
Restore Defaults Save as User Defaults Restore User Defaults Boot Overnide	
PO: 2.5" SATA SSD 3MG2-P USB FLASH DRIVE PMAP UEFI: Built-in EFI Shell UEFI: USB FLASH DRIVE PMAP, Partition 1	+/−: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults
	F4: Save & Exit ESC: Exit
Version 2.17.1255. Copyright (C) 2016 American Me	egatrends, Inc.

Save Changes and Exit

Exits system setup after saving changes.

Discard Changes and Exit

Exits system setup without saving any changes.

Save Changes and Reset

Resets the system after saving the changes.



Discard Changes and Reset

Resets the system without saving any changes.

Save Changes

Saves changes made to that point to any Setup options.

Discard Changes

Discards changes made to that point to any Setup options.

Restore Defaults

Restores/loads default values for all Setup options.

Save as User Defaults

Saves changes made to that point as User defaults.

Restore User Defaults

Restores all Setup options to User defaults.

Important Safety Instructions

For user safety, please read and follow all instructions, Warnings, Cautions, and Notes marked in this manual and on the associated device before handling/operating the device, to avoid injury or damage.

S'il vous plaît prêter attention stricte à tous les avertissements et mises en garde figurant sur l'appareil, pour éviter des blessures ou des dommages.

- Read these safety instructions carefully
- ► Keep the User's Manual for future reference
- Read the Specifications section of this manual for detailed information on the recommended operating environment
- The device can be operated at an ambient temperature of 55°C (with DC supply) and 50°C (with adapter supply);
- When installing/mounting or uninstalling/removing device; or when removal of a chassis cover is required for user servicing (See "Getting Started" on page 23.):
 - ▷ Turn off power and unplug any power cords/cables
 - > Reinstall all chassis covers before restoring power
- ► To avoid electrical shock and/or damage to device:
 - ▷ Keep device away from water or liquid sources
 - ▷ Keep device away from high heat or humidity
 - Keep device properly ventilated (do not block or cover ventilation openings)
 - Always use recommended voltage and power source settings
 - Always install and operate device near an easily accessible electrical outlet
 - Secure the power cord (do not place any object on/over the power cord)
 - Only install/attach and operate device on stable surfaces and/or recommended mountings
- If the device will not be used for long periods of time, turn off and unplug from its power source



- Never attempt to repair the device, which should only be serviced by qualified technical personnel using suitable tools
- A Lithium-type battery may be provided for uninterrupted backup or emergency power.



Risk of explosion if battery is replaced with one of an incorrect type; please dispose of used batteries appropriately. *Risque d'explosion si la pile est remplacée par une autre de type incorrect. Veuillez jeter les piles usagées de façon appropriée.*

- The device must be serviced by authorized technicians when:
 - ▷ The power cord or plug is damaged
 - Liquid has entered the device interior
 - The device has been exposed to high humidity and/or moisture
 - The device is not functioning or does not function according to the User's Manual
 - The device has been dropped and/or damaged and/or shows obvious signs of breakage
- Disconnect the power supply cord before loosening the thumbscrews and always fasten the thumbscrews with a screwdriver before starting the system up
- It is recommended that the device be installed only in a server room or computer room where access is:
 - Restricted to qualified service personnel or users familiar with restrictions applied to the location, reasons therefor, and any precautions required
 - Only afforded by the use of a tool or lock and key, or other means of security, and controlled by the authority responsible for the location
- If PoE (Power over Ethernet) is enabled for the device, the system can ONLY be deployed indoors. Unless otherwise noted, the PoE system is NOT designed to withstand the rigors of outdoor use.



BURN HAZARD

Touching this surface could result in bodily injury. To reduce risk, allow the surface to cool before touching.

RISQUE DE BRÛLURES

Ne touchez pas cette surface, cela pourrait entraîner des blessures.

Pour éviter tout danger, laissez la surface refroidir avant de la toucher.



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Getting Service

Ask an Expert: http://askanexpert.adlinktech.com

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.

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
+86-21-5132-8988
+86-21-5132-3588
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	

PENTA ADLINK Technology GmbH

	Ulrichsbergerstrasse 17
	94469 Deggendorf, Germany
Tel:	+49 (0) 991 290 94 - 10
Fax:	+49 (0) 991 290 94 - 29
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

〒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
+81-3-4455-3722
+81-3-5209-6013
japan@adlinktech.com

ADLINK Technology, Inc. (Korean Liaison Office)

Address:	경기도 성남시 분당구 수내로 46 번길 4 경동빌딩 2 층
	(수내동 4-4 번지) (우) 463-825
	2F, Kyungdong B/D, 4 Sunae-ro 46 beon-gil
	Bundang-gu, Seongnam-si, Gyeonggi-do, Korea, 463-825
Toll Free	+82-80-800-0585
Tel	+82-31-786-0585
Fax	+82-31-786-0583
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)

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

ADLINK Technology, Inc. (UK Liaison Office)

Tel:	+44 774 010 59 65	

Email: UK@adlinktech.com