

AND-APL1Ex

Desktop Network Appliance

AND-APL1E1

Intel[®] Celeron[®] Processor N3350 SoC

AND-APL1E2

Intel[®] Celeron[®] Processor E3940 SoC



User Manual

Acrosser Technology Co., Ltd. www.acrosser.com



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Purpose

This document is intended to provide the information about the features and use of the product.

Audience

The intended audiences are technical personnel, not for general audiences.

WARNING

Danger of explosion if batteries are incorrectly replaced. Always replace the battery with the same specifications. Dispose of used batteries according to the manufacturer's instructions.

Before running the system, make sure the power cord is firmly plugged into the socket.

CAUTION



E IEC 60417-6172 (2012-09)

All power cords must be disconnected during product repair.

Ver: 101 Date: Jan. 10, 2022

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1. Product Specifications

AND-APL1Ex networking appliance product effectively handles Software Defined-WAN (SD-WAN), Virtual Customer Premise Equipment (vCPE) technology, Unified Threat Management (UTM), Virtual Private Networking (VPN), Intrusion Detection and Prevention Systems (IDS, IPS), Firewall technology, and Load Balancing applications.

The AND-APL1Ex is powered by an Intel[®] Celeron[®] Processor N3350 or E3940 processor and has onboard LPDDR4 2GB memory and 8GB eMMC. Measuring only 165 x 92 x 40mm, the appliance is small enough for even the most crowded offices. Despite its modest dimensions, it still houses two USB3.0 ports and a console port alongside its four LAN ports.

1.1. Specifications

(Specifications are subject to change without notice.)

Platform	
Form Factor	Desktop Network Appliance
Processor	 AND-APL1E1: Intel[®] Celeron[®] Processor N3350 SoC AND-APL1E2: Intel[®] Celeron[®] Processor E3940 SoC
Chipset	• SoC
System Memory	 Onboard LPDDR4 2GB memory 1x DDR3L SO-DIMM socket (For AND-APL1E2 only)
Network	
Ethernet	 Intel[®] i211 GbE x 4
Bypass	 1 pair bypass function (For AND-APL1E1 only)
Display	
Graphic Controller	Intel [®] Integrated
Storage	
HDD	• 2.5" HDD Bay x 1
CF/CFast/mSATA	Onboard 8GB eMMC, SATA 6.0 Gb/s port x 1



Internal/Expansion Interface

Mini-PCle Slot	 With USB 2.0 signal x 1, with SIM socket (For AND- APL1E2 only)
Universal Serial Bus	• USB 3.0 x 2

Miscellaneous

PTC	Internal PTC
RIC	
Watchdog Timer	 1~255 steps by software programmable
ТРМ	 (TPM v1.2 9660/TPM2.0 9665 Optional) (For AND- APL1E1 only)
GPIO	 4-bit input, 4-bit output optional (For AND-APL1E1 only)
FAN	 1 (For AND-APL1E1 only)
MTBF (Hours)	• 166,000
Color	• Black

I/O Interface

Front Panel	 Power LED x 1 Status LED x 1 HDD Active LED x 1 Bypass LED x 1 LAN LEDs x 8
Rear Panel	 USB 3.0 Port x 2 RJ-45 Port x 4 RJ-45 Console x 1 12V DC Power Input x 1 Reset Button x 1 Power Button x 1 (For AND-APL1E2 only) Antenna Hole x 2 Optional (For AND-APL1E2 only)

Environmental Parameters and Dimension

Power Requirement	12V DC Power	
Operating Temperature	• 32°F ~ 104°F (0°C ~ 40°C)	
Storage Temperature	-4°F ~ 140°F (-20°C ~ 60°C)	
Operating Humidity	 10%~80% relative humidity, non-condensing 	
Storage Humidity	 10%~80% @40°C; non-condensing 	
Vibration	 0.5 Grms/ 5 ~ 500Hz / operation (2.5" HDD) 1.5 Grms/ 5 ~ 500Hz / non operation 	
Shock	 10 G peak acceleration (11 m sec. duration), operation 20 G peak acceleration (11 m sec. duration), non operation 	



Dimension (W X D X H) • 6.5" x 3.62" x 1.57" (165mm x 92mm x 40mm)

1.2. Package Contents

Check if the following items are included in the package.

Item	Q'ty
AND-APL1Ex	1
SATA Cable	1
SATA Power Cable	1
Power Adapter	1
Power Cord	1
System Rubber Foot	4



2. Hardware Information

2.1. Dimensions

(Unit: mm)

System:









Board Component Side:





Board Solder Side:





2.2. Jumpers and Connectors

Component Side:





Solder Side:





2.3. List of Jumpers

Please refer to the table below for all of the board's jumpers that you can configure for your application.

Label	Function
CN2	CMOS Setting Selection

2.3.1. CMOS Setting Selection (CN2)

123	Normal (Default)	1-2
1 2 3	Clear CMOS	2-3

2.4. List of Connectors

Please refer to the table below for all of the board's connectors that you can configure for your application.

Label	Function
DIMM1	DDR3L SODIMM SOCKET (Option)
CN5	SATA6G INTERFACE
CN4	SATA POWER
CN15	USB3.0 DUAL Port
CN9	Digital I/O
CN16	LAN1-4
SW2	Software Reset
CN30	Battery Socket
LED6	POWER/Stats LED
LED1	HDD LED
LED2-LED5	LAN1-LAN4 Link Stats LED
CN3	MICRO HDMI (Option)
CPU_FAN1	FAN



2.4.1. Digital I/O (CN9)

Pin	Signal	Pin	Signal Type
1	Digital- IN/OUT(Port1 Bit 1)	2	Digital- IN/OUT (Port1 Bit 2)
3	Digital- IN/OUT (Port1 Bit 4)	4	Digital- IN/OUT (Port1 Bit 5)
5	Digital- IN/OUT (Port3 Bit 4)	6	Digital- IN/OUT (Port3 Bit 5)
7	Digital- IN/OUT (Port6 Bit 3)	8	Digital- IN/OUT (Port4 Bit 7)
9	+5V	10	GND



2.5. 2.5" Hard Drive Installation

This section details the steps of how to install a 2.5" hard drive.

Step 1: Unscrew the front cover.



Step 2: Install the anti-vibration pad and 2.5"HDD and then fix the screws.







Step 3: Install the HDD Bracket & Cable and fix the screws.







Step 4: Screw on the front cover.





3. AMI BIOS Setup

3.1. System Test and Initialization

The system uses certain routines to perform testing and initialization. If an error, fatal or non-fatal, is encountered, a few short beeps or an error message will be outputted. The board can usually continue the boot up sequence with non-fatal errors.

The system configuration verification routines check the current system configuration against the values stored in the CMOS memory. If they do not match, an error message will be outputted, in which case you will need to run the BIOS setup program to set the configuration information in memory.

There are three situations in which you will need to change the CMOS settings:

- · You are starting your system for the first time
- · You have changed your system's hardware
- The CMOS memory has lost power and the configuration information is erased

The system's CMOS memory uses a backup battery for data retention, which is to be replaced once emptied.

3.2. AMI BIOS Setup

The AMI BIOS ROM has a pre-installed Setup program that allows users to modify basic system configurations, which is stored in the battery-backed CMOS RAM and BIOS NVRAM so that the information is retained when the power is turned off.

To enter BIOS Setup, press or <F2> immediately while your computer is powering up.

The function for each interface can be found below.

Main – Date and time can be set here. Press <Tab> to switch between date elements

Advanced – Enable/ Disable boot option for legacy network devices

Chipset - For hosting bridge parameters

Boot - Enable/ Disable quiet Boot Option

Security – The setup administrator password can be set here

Save & Exit – Save your changes and exit the program



3.3. Setup Submenu: Main

BIDS Information Set the Date. Use Tab to ADM-APLIEx v1.0 American Megatrends BIDS Vendor American Megatrends Compliancy UEFI 2.5; PI 1.4 System Date [Sun 04/22/2018] System Time [20:11:18] Access Level Administrator +t: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit ESC: Exit	Main Advance	Aptio Setup Utility d Chipset Security	– Copyright (C) 2018 American Boot Save & Exit	Megatrends, Inc.
BIDS Vendor American Megatrends Year: 2005-2099 Compliancy UEFI 2.5; PI 1.4 Months: 1-12 System Date [Sun 04/22/2018] Days: dependent on month System Time [20:11:18]	BIOS Informati ADM-APL1	.on Ex v1.0		Set the Date. Use Tab to switch between Date elements. Default Ranges:
System Date [Sun 04/22/2018] System Time [20:11:18] Access Level Administrator ++: Select Screen 11: Select Item Enter: Select	BIOS Vendor Compliancy		American Megatrends UEFI 2.5; PI 1.4	Year: 2005–2099 Months: 1–12 Days: dependent on month
Access Level Administrator ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	System Date System Time		[Sun 04/22/2018] [20:11:18]	
++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	Access Level		Administrator	
				<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>

3.4. Setup Submenu: Advanced

Aptio Setup Utility – Copyright (C) 2018 American Main <mark>Advanced</mark> Chipset Security Boot Save & Exit	Megatrends, Inc.
 Trusted Computing CPU Configuration SATA Drives USB Configuration Hardware Monitor SIO Configuration Serial Port Console Redirection LAN Bypass Configuration 	Trusted Computing Settings
Prover Management ► Digital ID Port Configuration	<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 2.18.1263. Copyright (C) 2018 American Me	egatrends, Inc.



3.4.1. Advanced: Trusted Computing

Aptio Setup Utility - Advanced	Copyright (C) 2017 American	Megatrends, Inc.
TPM20 Device Found Vendor: IFX Firmware Version: 5.51 Security Device Support Active PCR banks Available PCR banks SHA-1 PCR Bank SHA256 PCR Bank	[Enable] SHA-1,SHA256 SHA-1,SHA256 [Enabled] [Enabled]	Enables or Disables BIOS support for security device. O.S. will not show Security Device. TGG EFI protocol and INTIA interface will not be available.
Pending operation Platform Hierarchy Storage Hierarchy Endorsement Hierarchy TPM2.0 UEFI Spec Version Physical Presence Spec Version TPM 20 InterfaceType Device Select	[None] [Enabled] [Enabled] [TCG_2] [1.3] [TIS] [Auto]	<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>

Security Device Support

Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.

 SHA-1 PCR Bank Enable or Disable SHA-1 PCR Bank.

SHA256 PCR Bank

Enable or Disable SHA256 PCR Bank.

• Pending operation

Schedule an Operation for the Security Device. NOTE: Your Computer will reboot during restart in order to change State of Security Device.

- Platform Hierarchy Enable or Disable Platform Hierarchy.
- Storage Hierarchy
 Enable or Disable Storage Hierarchy.
- Endorsement Hierarchy Enable or Disable Endorsement Hierarchy.
- TPM2.0 UEFI Spec Version Select the TCG2 Spec Version Support.

TCG_1_2: the Compatible mode for Win8/Win10, TCG_2: Support new TCG2 protocol and event format for Win10 or later.



Physical Presence Spec Version

Select to Tell O.S. to support PPI Spec Version 1.2 or 1.3. Note some HCK tests might not support 1.3.

Device Select

TPM 1.2 will restrict support to TPM 1.2 devices, TPM 2.0 will restrict support to TPM 2.0 devices, Auto will support both with the default set to TPM 2.0 devices if not found, TPM 1.2 devices will be enumerated.

3.4.2. Advanced: CPU Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2018 American	Megatrends, Inc.
CPU Configuration		When enabled, a VMM can
Intel(R) Celeron(R) CPU N3350 @ 1 10	GHZ	handware canabilities provided
CPU Signature	50609	hu Vandernaal Technologu
Microcode Patch	2F	by tander poor recimorogy
Max CPU Sneed	1100 MHz	
Min CPU Sneed	800 MHz	
Processor Cores	2	
Intel HT Technology	Not Supported	
Intel VT-x Technology	Supported	
L1 Data Cache	24 kB x 2	
L1 Code Cache	32 kB x 2	
L2 Cache	1024 kB x 2	↔: Select Screen
L3 Cache	Not Present	↑↓: Select Item
		Enter: Select
Speed	1100 MHz	+/-: Change Opt.
64-bit	Supported	F1: General Help
		F2: Previous Values
		F3: Optimized Defaults
VT-d	[Enabled]	F4: Save & Exit
EIST	[Disabled]	ESC: Exit
CPU Power Management Configuration		
Power Limit 1 Enable	[Disabled]	
Version 2.18.1263. Co	pyright (C) 2018 American M	egatrends, Inc.

Intel Virtualization Technology

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

• VT-d

Enable/Disable CPU VT-d.

- EIST Enable/Disable Intel SpeedStep.
- **Power Limit 1 Enable** Enable/Disable Power Limit 1.



3.4.3. Advanced: SATA Drives

Aptio Setu Advanced	p Utility – Copyright (C) 2018 Ameri	can Megatrends, Inc.
SATA Configuration		Enables or Disables the
Chipset SATA		Chipset SATA controller Chipset SATA controller supports the 2 black internal
SATA Port	[Not Installed]	SATA ports (up to 3Gb/s supported per port).
		<pre>++: Select Screen T4: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
	.18.1263. Copyright (C) 2018 America	

Chipset SATA

Enables or Disables the Chipset SATA Controller. The Chipset SATA controller supports the 2 black internal SATA ports (up to 3Gb/s supported per port).



3.4.4. Advanced: USB Configuration

Aptio Setup Advanced	Utility – Copyright ((C) 2018 American	Megatrends, Inc.
USB Configuration			Enables Legacy USB support.
Legacy USB Support			Holo oprion disadies legady support if no USB devices are connected. DISABLE option will keep USB devices available only for EFI applications.
			++: 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.	18.1263. Copyright (C)) 2018 American Mu	egatrends, Inc.

• 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.



3.4.5. Advanced: Hardware Monitor

Aptio Setup Utility Advanced	– Copyright (C) 2018 Amer	rican Megatrends, Inc.
System Fan Smart Control FAN Control Mode Spin PWM Off Control Temperature Start Control Temperature Full Speed Temperature PWM Slope CPU DTS Temperature Sustem Temperature	[Enabled] [Automatic Mode] 100 30 50 80 5 5 : +50 % : +27 %	For En/Disable System Fan Smart Control Enabled: FAN is running in accordance with user settings Disabled: FAN is always running with full speed
System Fan Speed VCORE VMEM	: N/A : +1.164 V : +1.236 V	++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. 51: Company Help
+140 +5V 5VDUAL VBAT	: +12.192 V : +5.019 V : +5.019 V : +3.024 V	F2: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.18.1263.	Copyright (C) 2018 Americ	can Megatrends, Inc.

• System Fan Smart Control

For En/Disable Fan 1 Smart Control.

Enabled: FAN is running in accordance with user settings.

Disabled: FAN is always running with full speed.

• Fan Control Mode

Manual Mode: Depends on PWM Duty. Automatic Mode: FAN Speed is depends on System Temperature.

Spin PWM The PWM Duty of FAN Spin. Range: [0 - 255]

- Off Control Temperature Temperature Limit Value of Fan Off.
 Note: Some fans have the minimum speed even if the PWM value is 0.
- Start Control Temperature Temperature Limit Value of FAN Start Control.
- Full Speed Temperature Temperature Limit Value of FAN Full Speed.
- PWM Slope
 Slope PWM value/Degree C for FAN Speed Control. Range:[1-15]



3.4.6. Advanced: SIO Configuration

	Aptio Setup Utility – Copyright (C) 2018 American Advanced	Megatrends, Inc.
	AMI SID Driver Version : A5.05.03	View and Set Basic properties of the SIO Logical device.
Þ	Super IO Chip Logical Device(s) Configuration [*Active*] Serial Port	Like IO Base, IRQ Range, DMA Channel and Device Mode.
	WARNING: Logical Devices state on the left side of the control, reflects the current Logical Device state. Changes made during Setup Session will be shown after you restart the system.	
		→+: Select Screen 1↓: Select Item
		Enter: Select +/-: Change Opt.
		F1: General Help F2: Previous Values
		F3: Optimized Defaults F4: Save & Exit ESC: Exit
	Version 2.18.1263. Copyright (C) 2018 American M	egatrends, Inc.

3.4.6.1. Serial Port Configuration





Use This Device

Enable/Disable this Logical Device.

Possible

Allow user to change Device's Resource settings. New settings will be reflected on This Setup Page after System restarts.

3.4.7. Advanced: Serial Port Console Redirection



Console Redirection

Console Redirection Enabled or Disabled.

3.4.7.1. Console Redirection Settings

Aptio Setup Utility - Advanced	- Copyright (C) 2018 Amer.	ican Megatrends, Inc.
Advanced COMO Console Redirection Settings Terminal Type Bits per second Data Bits Parity Stop Bits Flow Control VT-UTF& Combo Key Support Recorder Mode Resolution 100x31 Legacu 05 Redirection Resolution	[ANSI] [115200] [8] [None] [1] [None] [Enabled] [Disabled] [Disabled] [0]sabled]	Emulation: ANSI: Extended ASCII char set. VT100: ASCII char set. VT100+: Extends VT100 to support color, function keys, etc. VT-UTF8: Uses UTF8 encoding to map Unicode chars onto 1 or more bytes.
Redirection After BIOS POST	[VT100] [Always Enable]	<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.18.1263. U	Copyright (C) 2018 America	an Megatrends, Inc.

• Terminal Type

Emulation:

ANSI: Extended ASCII char set.

VT100: ASCII char set.

VT100+: Extends VT100 to support color, function keys, etc.

VT-UTF8: Uses UTF8 encoding to map Unicode chars onto 1 or more bytes.

Bits per second

Selects serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.

Data Bits

Data Bits

• Parity

A Parity bit can be sent with the data bits to detect some transmission errors.

Even: parity bit is 0 if the number of 1's in the data bits is even.

Odd: parity bit is 0 if the number of 1's in the data bits is odd.

Mark: parity bit is always 1.

Space: parity bit is always 0. Mark and Space Parity do not allow for error detection.



Stop Bits

Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning). The standard setting is 1 stop bit. Communication with slow devices may require more than 1 stop bit.

Flow control

Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a 'stop' signal can be sent to stop the data flow. Once the buffers are empty, a 'start' signal can be sent to re-start the flow. Hardware flow control uses two wires to send start/stop signals.

• VT-UTF8 Combo Key Support

Enable VT-UTF8 Combination Key Support for ANSI/VT100 terminals.

Recorder Mode

With this mode enabled only text will be sent. This is to capture Terminal data.

Resolution 100x31

Enables or disables extended terminal resolution.

Legacy OS Redirection Resolution
 On Legacy OS, the Number of Rows and Columns supported redirection.

Putty KeyPad

Select FunctionKey and KeyPad on Putty.

Redirection After BIOS POST

The Setting Specify if BootLoader is selected than Legacy console redirection is disabled before booting to Legacy OS. Default value is Always Enable which means Legacy console Redirection is enabled for Legacy OS.



3.4.7.2. Legacy Console Redirection Settings

Aptio Setup Advanced	Utility –	Copyright	(C) :	2018 (American	Megatrends, Inc.
Legacy Serial Redirection	Port	[COMO]				Select a COM port to display redirection of Legacy OS and Legacy OPROM Messages
						<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.	18.1263. Co	pyright ((0) 20:	18 Am	erican Me	egatrends, Inc.

Legacy Serial Redirection

Select a COM port to display redirection of Legacy OS and Legacy OPROM Messages. (Default only support first COM Port).



3.4.7.3. Serial Port for Out-of-Band Management/Windows Emergency Management Services (EMS)

Ap Advanced	tio Setup Utility –	Copyright (C)	2018 American	Megatrends, Inc.
Out-of-Band Mgmt Terminal Type Bits per second Flow Control Data Bits Parity Stop Bits	Port	COMO [VT-UTF8] [115200] [None] 8 None 1		<pre>VT-UTF8 is the preferred terminal type for out-of-band management. The next best choice is VT100+ and then VT100. See above, in Console Redirection Settings page, for more Help with Terminal Type/Emulation. ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt, F1: General Help F2: Previous Values F3: Optimized Defaults F4: Sole Exit ESC: Exit</pre>
V	ersion 2.18.1263. C	opyright (C) 2	018 American M	egatrends, Inc.

• Terminal Type

VT-UTF8 is the preferred terminal type for out-of-band management. The next best choice is VT100+ and then VT100. See above, in Console Redirection Settings page, for more Help with Terminal Type/Emulation.

Bits per second

Selects serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.

Flow Control

Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a 'stop' signal can be sent to stop the data flow. Once the buffers are empty, a 'start' signal can be sent to re-start the flow. Hardware flow control uses two wires to send start/stop signals.

Data Bits

Data Bits

Parity

A parity bit can be sent with the data bits to detect some transmission errors. Even: parity bit is 0 if the num of 1's in the data bits is even. Odd: parity bit is 0 if num of 1's in the data bits is odd. Mark: parity bit is always 1. Space: Parity bit is always 0. Mark and Space Parity do not allow for error detection.



Stop Bits

Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning). The standard setting is 1 stop bit. Communication with slow devices may require more than 1 stop bit.

3.4.8. Advanced: LAN Bypass Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2018 American	Megatrends, Inc.
LAN Bypass Configuration		Configure LAN Bypass Status
LAN Bypass Status LED	[LED OFF]	LLU.
LAN Bypass Kit 1 Configuration Mode for Power-on Mode for Power-off WDT Configuration	[PassTru] [PassTru] [System Reset]	
		<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 2.18.1263. Co	opyright (C) 2018 American M	egatrends, Inc.

- STATUS LED CTRL
 Configure LAN Bypass Status LED.
- LAN kit Power ON
 Setting LAN kit function behavior when power on. (Bypass/Pass Through)
- LAN kit Power Off
 Setting LAN kit function behavior when power off.(Bypass/Pass Through)
- WDT Configuration Configure WDT behavior: System Reset, Force Bypass.



3.4.9. Advanced: Power Management

Aptio Setup Utili Advanced	ty – Copyright (C) 2018 Ame	rican Megatrends, Inc.
Power Management		Select system power mode.
Power Mode Restore AC Power Loss	(ATX Type] [Last State]	
Wake Events RTC wake system from S5	[Disabled]	
		<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 2.18.126	3. Copyright (C) 2018 Ameri	can Megatrends, Inc.

- Power Mode
 Select power supply mode.
- Restore AC Power Loss
 Select power state when power is re-applied after a power failure.
- RTC wake system from S5

Fixed Time : System will wake on the hr::min::sec specified.

Dynamic Time: System will wake on the current time + Increase minutes(s).

- Wake up day (Fixed time option) Select 0 for daily system wake up, 1-31 for which day of month that you would like the system to wake up.
- Wake up hour (Fixed time option) Select 0-23 For example enter 3 for 3am and 15 for 3pm.
- Wake up minute (Fixed time option) 0-59.
- Wake up second (Fixed time option) 0-59.
- Wake up minute increase (Dynamic time option) 1-5.



3.4.10. Advanced: Digital IO Port Configuration

Aptio Setup Utility Advanced	– Copyright (C) 2	018 American Megatrends, Inc.
Digital IO Port Configuration DIO Port1 Output Level	[Output] [High]	Set DIO as Input or Output
DIO Port2 Output Level DIO Port3 Output Level DIO Port4 Output Level DIO Port5 DIO Port6	(Output) [High] (Output) [High] [Output] [High] [Input] [Input]	
DIO Port7 DIO Port8	[Input] [Input]	++: Select Screen ++: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
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- DIO Port1~4
 Set DIO as Input or Output
- Output Level
 Set output level when DIO pin is output
- DIO Port5~8
 Set DIO as Input or Output



3.5. Setup submenu: Chipset

Main Advance	Aptio Setu; ed Chipset	OUtility – Security	Copyrigh Boot Sa	nt (C) 201 ave & Exit	L8 Americar ∶	n Megatrends,	Inc.
• North Bridge • SCC Configurat	: ion					North Bridge	e Parameters
						14: Select Enter: Select +/-: Change F1: General F2: Previous F3: Optimize F4: Save & f ESC: Exit	Item ot Opt. Help s Values ad Defaults Exit
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3.5.1. Chipset: North Bridge

Aptio Setup Utility Chipset	– Copyright (C) 2018 America	n Megatrends, Inc.
Memory Information		Select which of IGD/PCI Graphics device should be
Total Memory	1024 MB (LPDDR4)	Primary Display
Primary Display		
		++: Select Screen
		↑↓: Select Item Enter: Select
		+/-: Cnange upt. F1: General Help F2: Previous Values
		F3: Optimized Defaults F4: Save & Exit
		ESC: Exit
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• Primary Display

Select which of IGD/PCI Graphics device should be Primary Display.

3.5.2. Chipset: SCC Configuration

Ap	tio Setup Utility – Chipset	Copyright (C) 2018 American	Megatrends, Inc.
SCC eMMC Support eMMC Max Speed	(D28:F0)	[Enable] [HS400]	Enable/Disable SCC eMMC Support
			++: Select Screen T4: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
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- SCC eMMC Support (D28:F0) Enable/Disable SCC eMMC Support.
- eMMC Max Speed Select the eMMC max Speed allowed.



3.6. Setup submenu: Security

Aptio Setup Ut Main Advanced Chipset Se	ility – Copyright (C) 2018 A curity <mark>Boot Save & Exit</mark>	merican Megatrends, Inc.
Password Description		Set Setup Administrator Password
If ONLY the Administrator's then this only limits access only asked for when entering If ONLY the User's password is a power on password and m boot or enter Setup. In Setu have Administrator rights. The password length must be in the following range: Minimum length	password is set, to Setup and is Setup. is set, then this ust be entered to p the User will 3	
Maximum length	20	++: Select Screen ↑↓: Select Item
Setup Administrator Password User Password		Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
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Change User/Administrator Password

You can set an Administrator Password or User Password. An Administrator Password must be set before you can set a User Password. The password will be required during boot up, or when the user enters the Setup utility. A User Password does not provide access to many of the features in the Setup utility.

Select the password you wish to set, and press Enter. In the dialog box, enter your password (must be between 3 and 20 letters or numbers). Press Enter and retype your password to confirm. Press Enter again to set the password.

Removing the Password

Select the password you want to remove and enter the current password. At the next dialog box press Enter to disable password protection.



3.7. Setup submenu: Boot

Aptio Setup Utility – Main Advanced Chipset Security	Copyright (C) 2018 American Boot Save & Exit	Megatrends, Inc.
Boot Configuration		Enables or disables Quiet Boot
Quiet Boot CSM Support Launch PXE ROM Network Stack	(Enabled) [Enabled] [Disabled] [Disabled]	00.100
Boot Option Priorities Boot Option #1	[UEFI: SanDisk Cruzer Blade 1.27, Partition 1]	
Boot Option #2	[MMC - M52516]	
Hand Drive BBS Priorities		+: Select Screen 14: Select Item Enter: Select +/-: Change Opt, F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.18.1263. Co	pyright (C) 2018 American M	egatrends, Inc.

- Quiet Boot Enable / Disable Quiet Boot option.
- CSM Support Enable/Disable CSM Support.
- Launch PXE ROM
 Controls the execution of Legacy PXE OpROM.
- Network Stack
 Enable/Disable UEFI Network Stack.



3.8. Setup submenu: Exit

Aptio Setup Utility – Copyright (C) 2018 American Main Advanced Chipset Security Boot <mark>Save & Exit</mark>	Megatrends, Inc.
Save Options	Reset the system after saving the changes
Save Changes and Reset Discard Changes and Exit	the charges.
Default Options Restore Defaults	
	<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 18 1263 Convright (C) 2018 American Ma	egatrends Inc



4. FAQ

Q 1. Where is the serial number located on my system?

• The serial number (S/N) is an alpha-numeric character located on the bottom or side chassis.



(for reference only)





Technical Support Form

We deeply appreciate your purchase of Acrosser products. Please find the "**tech_form. doc**" file in our utility CD. If you have any questions or problems about Acrosser products, please fill in the following information. We will answer your questions in the shortest time possible.

Describe Your Info and Acrosser System Info

Your Company Name:	
Your Contact Info:	Phone Number:
Your E-Mail Address:	
Your Company Address:	
Acrosser Model Name:	
Acrosser Serial Number:	
Describe System Configuration	
• CPU Type:	
Memory Size:	
Storage Device (e.g. HDD, CF, or SSD):
Additional Peripherals (e.g. Graphic Ca	ard):
Operating System & Version (e.g. Wind	dows 7 Embedded):
Special API or Driver:	
	(If yes, please provide it for debug.)
Running Applications:	
Others:	
Describe Your Problems or Question	ns:
Send the above information to one of • Acrosser Local Sales Representative • Acrosser Authorized Sales Channels • Acrosser Inquiry http://www.acrosse	of the following Acrosser contacts:





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