

I11C-G2060S

RUGGED GPU SERVER SUPPORT NVIDIA RXT2060S



User's Manual Revision Date: June. 15. 2021

Revision Date: June. 15. 2021

Safety Information

Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.
- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Make sure that your power supply is set to the correct voltage in your area.
- If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your local distributor.

Operation safety

- Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter any technical problems with the product, contact your local distributor

Statement

- All rights reserved. No part of this publication may be reproduced in any form or by any means, without prior written permission from the publisher.
- All trademarks are the properties of the respective owners.
- All product specifications are subject to change without prior notice

Revision Date: June. 15. 2021

Revision History

Revision	Date (yyyy/mm/dd)	Changes
V1.0	2021/06/15	First release

Packing List

ltem	Description	Q'ty
1	I11C-G2060S, AI Accelerated GPU Server	1
2	Driver CD	1

Ordering Information

i11C-G2060S

Rugged GPU Server Support NVIDIA RTX2060S with Intel 8 /9th Gen i7-9700TE CPU, Rich I/O Interface, w/GPU, 9~36V DC-DC 300W,Operation Temp. 0 to 50°C

i11C-G2060S-ET

Rugged GPU Server Support NVIDIA RTX2060S with Intel 8 /9th Gen i7-9700TE CPU, Rich I/O Interface, w/o GPU, 9~36V DC-DC 300W,Operation Temp. -20 to 55°C

i11C-G2060S-UT

Rugged GPU Server Support NVIDIA RTX2060S with Intel 8 /9th Gen i7-9700TE CPU, Rich I/O Interface, w/o GPU, 9~36V DC-DC 300W,Operation Temp. -30 to 70°C



Revision Date: June. 15. 2021

RoHS



7Starlake RoHS Environmental Policy and Status Update

7Starlake is a global citizen for building the digital infrastructure. We are committed to providing green products and services, which are compliant with

European Union RoHS (Restriction on Use of Hazardous Substance in Electronic Equipment) directive 2011/65/EU, to be your trusted green partner and to protect our environment.

In order to meet the RoHS compliant directives, 7Starlake has established an engineering and manufacturing task force to implement the introduction of green products. The task force will ensure that we follow the standard 7Starlake development procedure and that all the new RoHS components and new manufacturing processes maintain the highest industry quality levels for which 7Starlake are renowned.

The model selection criteria will be based on market demand. Vendors and suppliers will ensure that all designed components will be RoHS compliant.

Revision Date: June. 15. 2021

Chapter 1 : Produc Introduction	5
1.2 Front Panel I/O Placement	7
1.3 Rear Panel I/O Placement	8
1.4 Mechanical Dimensions	9
Chapter 2 : Rear I/O Ports	10
2.1 Panel Connector Pin Define	10
Chapter 3: AMI BIOS UTILITY	11
3.1 Starting	11
3.2 Navigation Keys	11
3.3 Main	12
3.4 Advanced	13
3.4.2 Trusted Computing	13
3.4.2 CPU Configuration	14
3.4.3 ACPI Setting	15
3.4.4 Smart Setting	15
3.4.5 F81866 Super IO Configuration	16
3.4.6 Hardware Monitor	17
3.4.7 Platform Function	18
3.4.8 Serial Consolr Redirection	19
3.4.9 NVMe Configuration	20
3.4.10 USB Configuration	20
3.4.11 CSM Configuration	21
3.4.12 SATA Configuration	22
3.5 Chipset Menu	22
3.5.1 System Agent (SA) Configuration	23
3.5.2 PCH-IO Configuration	25
3.6 Security Menu	29
3.7 Boot Menu	30
3.8 Save & Exit	31

7STARLAKE

Revision Date: June. 15. 2021

Chapter 1 : Produc Introduction

1.1 Specifications

System

CPU	9th Gen. Intel [®] Coffee Lake LGA1151 Socket Processor	
	Intel [®] Core i7-9700 (8 Cores 65W)	
	Intel [®] Core i7-9700TE (8 Cores 35W)	
Memory type	2 x SO-DIMM DDR4 2666 MHz up to 64GB	
Chipset	Intel® Q370 Chipset	
Expansion slot	1 x M.2 (Key M, 2242/2260/2280) with PCIex4 and SATA3	
GPU	RTX2060S (CUDA Core: 2176, 8GB GDDR6)	
DISPLAY		
Display Port	Resolution up to 4096 x 2304 60@Hz	
HDMI	Resolution up to 4096 x 2160 30@Hz	
STORAGE		
Storage 1	1 x M.2 2280	
Storage 2	2 x SATAIII	
ETHERNET		
Ethernet	Intel® I210 & I219LM GbE LAN (support 10/100/1000 Mbps)	
REAR I/O		
DC-IN	1 x 4P Terminal Block	
USB	4 x USB2.0	
FRONT I/O		
Display Port	2 x DP ; 1 x HDMI	
Ethernet	2 x RJ45	
Audio	2 x 3.5mm Audio Jacks (1 x MIC, 1 x Line-Out)	
USB	4 x USB 3.1	
Antenna	4 x Antenna hole(options)	
Power Button	1 x Power Button w/indicatot LED	

Revision Date: June. 15. 2021

POWER REQUIREMEN

Power Input	9~36V 300W DC-DC	
	100~240V AC-DC for options	
APPLICATIONS,	OPERATING SYSTEM	
Applications	Commercial and Industrial Platforms, Embedded Computing, Process Control, Intelligent	
	Automation and manufacturing applications	
Operating System	Windows 10 64Bit, Ubuntu13.04, Ubuntu13.10, Ubuntu14.04, Fedora20	
PHYSICAL		
Dimension	301 x 315 x 86 mm (W x D x H)	
Weight	5.5kg	
Chassis	SECC	
Heatsink	Aluminum Alloy, Corrosion Resistant	
Finish	Anodic aluminum oxide	

ENVIRONMENTAL

Compliance	MIL-STD-810G, IEC-61850-3, IEEE-1613, CE and FCC, RoHS	
Operating Temp.	-20 to 55°C	
Storage Temp.	-40 to 85°C	
Relative Humidity	5% to 95%, non-condensing	

7STARLAKE

Revision Date: June. 15. 2021

1.2 Front Panel I/O Placement



1)	AUDIO x1
2)	ANTENNA HOLD x 4
3)	LAN x 2
4)	USB3.1 x 2
5)	DP x 2
6)	HDMI x 1
7)	POWER BUTTON x 1



Revision Date: June. 15. 2021

1.3 Rear Panel I/O Placement



1)	DC-IN x 1
2)	USB2.0 x 4

Revision Date: June. 15. 2021

1.4 Mechanical Dimensions



Revision Date: June. 15. 2021

Chapter 2 : Rear I/O Ports

2.1 Panel Connector Pin Define

LAN1 and LAN2 LED

	LAN Port LED Indications		ACT/LINK	SPEED	
Activity/Link LED SPEED LED		SPEED LED	LED	LED	
Status	s Description	Status	Description		
Off	No Link	Off	10Mbps connection	Contraction of the	
Blink	ing Data Activity	Yellow	100Mbps connection		
On	Link	Green	1Gbps connection	LAN	Port

AUDIO: LINE-OUT/MIC-IN

Pin	Definition		1
1	Line-out	\odot	Line-out
2	Mic-in	0	Mic-in

DC-In:

Pin	DC-In	++
1	V-In +	
2	V-In +	
3	GND	
4	GND	

Revision Date: June. 15. 2021

Chapter 3: AMI BIOS UTILITY

This chapter provides users with detailed descriptions on how to set up a basic system configuration through the AMI BIOS setup utility.

3.1 Starting

To enter the setup screens, perform the following steps:

- Turn on the computer and press the key immediately.
- After the key is pressed, the main BIOS setup menu displays. Other setup screens can be accessed from the main BIOS setup menu, such as the Chipset and Power menus.

3.2 Navigation Keys

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. Some of the hot keys are <F1>, <F10>, <Enter>, <ESC>, and <Arrow> keys.



Some of the navigation keys may differ from one screen to another.

Left/Right	The Left and Right <arrow> keys moves the cursor to select a</arrow>	
	menu.	
Up/Down	The Up and Down <arrow> keys moves the cursor to select a</arrow>	
	setup screen or sub-screen.	
+– Plus/Minus	The Plus and Minus < Arrow> keys changes the field value of a	
	particular setup setting.	
Tab	The <tab> key selects the setup fields.</tab>	
F1	The <f1> key displays the General Help screen.</f1>	
F10	The <f10> key saves any changes made and exits the BIOS setup</f10>	
	utility.	
Esc	The <esc> key discards any changes made and exits the BIOS</esc>	
	setup utility.	
Enter	The <enter> key displays a sub-screen or changes a selected or</enter>	
	highlighted option in each menu.	

Revision Date: June. 15. 2021

3.3 Main

The Main menu is the first screen that you will see when you enter the BIOS Setup Utility.

BIOS Information		Set the Date. Use Tab
BIOS Vendor	American Megatrends	to switch between Date
Core Version	5.11	elements.
Compliancy	UEFI 2.4; PI 1.3	
Project Version	18349202	
Build Date and Time	06/16/2016 12:43:43	
Memory Information		
Total Memory	32768 MB	
		++: Select Screen
System Date	[Thu 01/14/2016]	11: Select Item
System Time	[23:01:58]	Enter: Select
		+/-: Change Opt.
Access Level	Administrator	F1: General Help
		F2: Previous Values
		F3: Optimized Defaults
		F4: Save & Exit
		ESC: Exit

System Date

Use this function to change the system date.

Select System Date using the Up and Down <Arrow> keys. Enter the new values through the keyboard. Press the Left and Right <Arrow> keys to move between fields. The date setting must be entered in MM/DD/YY format.

System Time

Use this function to change the system time.

Select System Time using the Up and Down <Arrow> keys. Enter the new values through the keyboard. Press the Left and Right <Arrow> keys to move between fields.

The time setting 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.

Access Level

Display the access level of the current user in the BIOS.



Revision Date: June. 15. 2021

3.4 Advanced

The Advanced Menu allows you to configure your system for basic operation. Some entries are defaults required by the system board, while others, if enabled, will improve the performance of your system or let you set some features according to your preference. <u>Setting incorrect field values</u> may cause the system to malfunction.

Aptio Setup Utility – Copyright (C) 2016 American Megatrends, Inc. Main Advanced Chipset Security Boot Save & Exit		
 Trusted Computing CPU Configuration ACPI Settings PCH-FW Configuration SMART Settings F81866 Super 10 Configuration Hardware Monitor Platform Function Serial Port Console Redirection 	Trusted Computing Settings	
 NVMe Configuration USB Configuration CSM Configuration SATA Configuration 	<pre>++: Select Screen f↓: 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 America	n Megatrends, Inc. AB	

3.4.2 Trusted Computing

Aptio Setup Utility – Copyright (C) 2016 American Megatrends, Inc. Advanced		
Configuration Security Device Sup [Enable] NO Security Device	Enables or Disables BIOS support for security device. 0.S. will not show Security Device. TCG EFI protocol and INTIA interface will not be available. ++: 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) 2010	5 American Megatrends, Inc.	



Revision Date: June. 15. 2021

3.4.2 CPU Configuration

Aptio Setup Utility Advanced	y – Copyright (C) 2016 Am	merio	an Megatrends, Inc.
Advanced CPU Configuration Intel(R) Core(TM) i3-6: CPU Signature Microcode Patch Max CPU Speed Min CPU Speed CPU Speed Processor Cores Hyper Threading Tech Intel VT-x Technology Intel SMX Technology 64-bit	LOOTE CPU @ 2.70GHz 506E3 7C 2700 MH2 800 MHz 2700 MHz 2 Supported Supported Not Supported Supported		Enabled for Windows XP and Linux (OS optimized for Hyper-Threading Technology) and Disabled for other OS (OS not optimized for Hyper-Threading Technology). When Disabled only one ++: Select Screen t4: Select Item Enter: Select
EIST Technology CPU C3 state CPU C6 state CPU C7 state CPU C8 state CPU C9 state	Supported Supported Supported Supported Supported Not Supported	-	+/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Version 2.17.1255. Copyright (C) 2016 American Megatrends, Inc

AB

Advanced	y – Copyright (C) 2016 Ameri	ican Megatrends, inc.
CPU C10 state	Not Supported	Enabled for Windows XP and Linux (OS optimized
L1 Data Cache	32 KB x 2	for Hyper-Threading
L1 Code Cache	32 kB x 2	Technology) and
L2 Cache	256 kB x 2	Disabled for other OS
L3 Cache	4 MB	(US not optimized for
L4 Cache	Not Present	Hyper-Threading
		Technology). When
Hyper-threading	[Enabled]	Disabled only one
Active Processor Core	[A11]	
Intel Virtualization	[Enabled]	++: Select Screen
Hardware Prefetcher	[Enabled]	†↓: Select Item
Adjacent Cache Line P	[Enabled]	Enter: Select
CPU AES	[Enabled]	+/-: Change Opt.
Boot performance mode	[Max Non-Turbo Perfo]	F1: General Help
Intel(R) Speed Shift	[Enabled]	F2: Previous Values
Intel(R) SpeedStep(tm	[Enabled]	F3: Optimized Defaults
CPU C states	[Enabled]	F4: Save & Exit
Enhanced C-states	[Enabled]	ESC: Exit

Version 2.17.1255. Copyright (C) 2016 American Megatrends, Inc.

AB

Revision Date: June. 15. 2021

3.4.3 ACPI Setting

ACPI Settings		Enables or Disables System ability to
Enable Hibernation ACPI Sleep State	[Enabled] [S3 (Suspend to RAM)]	Hibernate (OS/S4 Sleep State). This option may be not effective with some OS.
		<pre>++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values 52: Optimized Defaults</pre>
		F3: Optimized Default: F4: Save & Exit ESC: Exit

3.4.4 Smart Setting

SMART Settings		Run SMART Self Test on all HDDs during POST
SMART Self Test	[Disabled]	
		++: Select Screen 14: Select Item Enter: Select
		i/-: Change Opt.
		F2: Previous Values
		1 E 3 * 1 Int 1 m1 2 e d 1 let al 1 l t s

Revision Date: June. 15. 2021

3.4.5 F81866 Super IO Configuration

Aptio Setup Util Advanced	ity – Copyright (C) 2016	American Megatrends, Inc.
F81866 Super IO Conf Super IO Chip Serial Port 1 Config Serial Port 2 Config Serial Port 3 Config Serial Port 4 Config Serial Port 5 Config Serial Port 6 Config	F81866 (uration (uration (uration (uration (uration (uration (uration	Set Parameters of Serial Port 1 (COMA)
		<pre>++: Select Screen f4: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
		and a set Manada and a set
Version 2.17.12	255. Copyright (C) 2016 Am	merican Megatrends, inc. AB
Version 2.17.12 Aptio Setup Util	55. Copyright (C) 2016 An ity – Copyright (C) 2016	AB American Megatrends, Inc.
Aptio Setup Util Advanced Serial Port 1 Config	255. Copyright (C) 2016 An ity — Copyright (C) 2016 Auration	American Megatrends, Inc. AB American Megatrends, Inc. Enable or Disable Serial Port (COM)
Aptio Setup Util Advanced Serial Port 1 Config Serial Port Device Settings	255. Copyright (C) 2016 An ity – Copyright (C) 2016 Curation [Enabled] IO=3F8h; IRQ=4;	AB American Megatrends, Inc. AB Enable or Disable Serial Port (COM)
Aptio Setup Util Advanced Serial Port 1 Config Serial Port Device Settings Uhange Settings	(C) 2016 An (ity - Copyright (C) 2016 (uration [Enabled] IO=3F8h; IRQ=4; [Auto]	AB American Megatrends, Inc. Enable or Disable Serial Port (COM)
Aptio Setup Util Advanced Serial Port 1 Config Serial Port Device Settings Change Settings	tty - Copyright (C) 2016 An ity - Copyright (C) 2016 uration [Enabled] IO=3F8h; IRQ=4; [Auto]	American Megatrends, Inc. American Megatrends, Inc. Enable or Disable Serial Port (COM)
Aptio Setup Util Advanced Serial Port 1 Config Serial Port Device Settings Change Settings	<pre>ity - Copyright (C) 2016 An ity - Copyright (C) 2016 uration [Enabled] IO=3F8h; IRQ=4; (Auto)</pre>	American Megatrends, Inc. American Megatrends, Inc. Enable or Disable Serial Port (COM) **: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Revision Date: June. 15. 2021

3.4.6 Hardware Monitor

Aptio Setup Utilit Advanced	y – Copyright (C)	2016 American Megatrends, Inc.
Pc Health Status		Enable or Disable Smart Fan
Smart Fan Function Smart Fan Mode Configu CPU temperature System temperature CPU Fan Speed System Fan Speed CPU VCore +5V +3.3V +12V VBAT	[Enabled] ration : +31°C : +35°C : 1330 RPM : N/A : +1.008 V : +5.129 V : +3.363 V : +11.880 V : +3.168 V	<pre>++: Select Screen t1: 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) 2	016 American Megatrends, Inc. AB

3.4.6.1 Smart Fan Mode Configuration

Aptio Setup Utili Advanced	ty – Copyright (C) 2016 Amer	rican Megatrends, Inc.
CPU Fan Control	[Auto Duty-Cycle Mode]	▲ Smart Fan Mode Select
Temperature 1	70	1
Temperature 2	60	
Temperature 3	50	
Temperature 4	40	
Duty Cycle 1	85	
Duty Cycle 2	70	
Duty Cycle 3	60	
Duty Cycle 4	51	
System Fan Control	[Auto Duty-Cycle Mode]	→+: Select Screen
Temperature 1	70	↑↓: Select Item
Temperature 2	60	Enter: Select
Temperature 3	50	+/-: Change Opt.
Temperature 4	40	F1: General Help
Duty Cycle 1	85	F2: Previous Values
Duty Cycle 2	70	F3: Optimized Defaults
Duty Cycle 3	60	F4: Save & Exit
Duty Cycle 4	51	ESC: Exit
Version 2.17.125	5. Copyright (C) 2016 Americ	can Megatrends, Inc. AB

Revision Date: June. 15. 2021

3.4.7 Platform Function

Aptio Setup Utili Advanced	ty – Copyright (C) 2016 Ame	rican Megatrends, Inc.
Watch Dog Function Watch dog Mode Watch dog Timer Watch dog count	[Sec] O N/A	Watch dog Mode (Second ∕ Minute)
COM2 Function COM2 port mode Siew rate control	[RS232] [250Kbps]	
Mini PCIE Function Slot1 Wifi	[Enabled]	→+: Select Screen ↑↓: Select Item
LVDS Function LVDS Function	[Disabled]	Enter: Select <pre>i/ : Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.125	5. Copyright (C) 2016 Ameri	can Megatrends, Inc. AB
Aptio Setup Utili Advanced	ty – Copyright (C) 2016 Ame	rican Megatrends, Inc.
Watch Dog Function Watch dog Mode Watch dog Timer Watch dog count	[Sec] O N/A	COM2 port mode
COM2 Function COM2 port mode Slew rate control	COM2 port mode	

Mini PCIE Function RS485 ++: Select Screen Slot1 Wifi t↓: Select Item LVDS Function Enter: Select LVDS Function [Disabled] +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit Version 2.17.1255. Copyright (C) 2016 American Megatrends, Inc.

Revision Date: June. 15. 2021

3.4.8 Serial Consolr Redirection

Aptio Setup Utility – Copyright (C) 2016 American Megatrends, Inc. Advanced		
COMO Console Redirection [Enabled] > Console Redirection Settings	Console Redirection Enable or Disable.	
Version 2.17.1255. Copyright (C) 2016 A	merican Megatrends, Inc.	

Aptio Setup Utility Advanced) – Copyright (C) 201	6 American Megatrends, Inc.
COMO Console Redirection Set Terminal Type Bits per second Data Bits Parity Stop Bits Flow Control VT-UTF8 Combo Key Sup Recorder Mode Resolution 100x31 Legacy OS Redirection Putty KeyPad Redirection After BIO	tings [VT100+] [115200] [8] [None] [1] [None] [Enabled] [Disabled] [Disabled] [0isabled] [80x24] [VT100] [Always Enable]	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 ++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Vencion 0 47 4055	Convertished (C) COAC	Anonioon Nevetnende Tee

ersion 2.17.1255. Copyright (C) 2016 American Megatrends, In

7STARLAKE

AB

Revision Date: June. 15. 2021

3.4.9 NVMe Configuration



Revision Date: June. 15. 2021

3.4.10 USB Configuration



3.4.11 CSM Configuration

Aptio Setup Utility – Copyright (C) 2016 American Megatrends, Inc. Advanced		
Compatibility Support	Module Configuration	UPON REQUEST - GA20 can
CSM Support	[Enabled]	be disabled using BIOS services. ALWAYS - do
CSM16 Module Version	07.79	GA20; this option is useful when any RT code
GateA20 Active Option ROM Messages	[Upon Request] [Force BIOS]	is executed above 1MB.
INT19 Trap Response	[Immediate]	the Salact Senson
Option ROM execution	LOCKI and Legacy	14: Select Item
	(Do not longel)	+/-: Change Opt.
Network	[Do not launch]	F1: General Help
Storage	[Legacy]	F2: Previous values
Video	[Legacy]	F3: Uptimized Defaults
Uther PCI devices	(UEFI)	ESC: Exit
Version 2.17.1255	. Copyright (C) 2016 America	an Megatrends, Inc.



Revision Date: June. 15. 2021

3.4.12 SATA Configuration

Aptio Setup Utility – Copyright (C) 2016 American Megatrends, Inc. Advanced		
SATA Controller(s) SATA Mode Selection ▶ Software Feature Mask C Aggressive LPM Suppor	[Enabled] [AHCI] onfiguration [Enabled]	Enable or disable SATA Device.
Serial ATA Port 0 Software Preserve Port 0 Spin Up Device SATA Device Type	Empty Unknown [Enabled] [Disabled] [Hard Disk Drive]	
Serial ATA Port 1 Software Preserve Port 1 Spin Up Device	Empty Unknown [Enabled]	<pre>++: Select Screen f↓: Select Item Enter: Select L/_: Change Opt.</pre>
SATA Device Type Serial ATA Port 2 Software Preserve Port 2	[Hard Disk Drive] Empty Unknown [Enabled]	F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit
Spin Up Device Version 2.17.1255.	[Disabled] ▼ Copyright (C) 2016 America	ESC: Exit

3.5 Chipset Menu

Aptio Setup Utility – Copyright (C) 2016 American Megatrends, Inc. Main Advanced <mark>Chipset</mark> Security Boot Save & Exit		
▶ System Agent (SA) Configuration ▶ PCH-IO Configuration	System Agent (SA) Parameters ++: 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	Megatrends, Inc.	



Revision Date: June. 15. 2021

3.5.1 System Agent (SA) Configuration

Aptio Setup Utility – Copyright (C) 2016 American Megatrends, Inc. Chipset			
System Agent Bridge N SA PCIE Code Version VT-d VT-d • Graphics Configuration • PEG Port Configuration • GT - Power Management C	Skylake 1.9.0.0 Supported [Enabled] ontrol		<pre>VT-d capability ++: Select Screen t1: 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	Megatrends, Inc.

3.5.1.1 Graphics Configuration

Aptio Setup Utility – Copyright (C) 2016 American Megatrends, Inc. Chipset		
Graphics Configuration		If Enable, it will not scan for External Gfx
IGFX VBIOS Version	1036	Card on PEG and PCH PCIE Ports
Skip Scaning of Exter Primary Display Internal Graphics GTT Size Aperture Size DVMT Pre-Allocated	[Disabled] [Auto] [Enabled] [8MB] [256MB] [32M]	
DVMT Total Gf× Mem PAVP Enable	[256M] [Enabled]	<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>
Version 2.17.1255.	Copyright (C) 2016 Ameri	can Megatrends, Inc.



Revision Date: June. 15. 2021

3.5.1.2 PEG Port Configuration



3.5.1.3 GT-Power Management Control

Aptio Setup Utility – Copyright (C) 2016 American Megatrends, Inc. Chipset		
GT – Power Management (GT Info RC6(Render Standby)	Control GT2 [Enabled]	Check to enable render standby support.
	RC6(Render Standby) — Disabled Enabled	Select Screen Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.17.1255. Copyright (C) 2016 American Megatrends, Inc.		

Revision Date: June. 15. 2021

3.5.2 PCH-IO Configuration



Revision Date: June. 15. 2021

3.5.2.1 PCI Express Configuration

Aptio Setup Utility – Copyright (C) 2016 American Megatrends, Inc. Chipset		
PCI Express Configuration PCI Express Clock Gat [Enabled]	Enable or disable PCI Express Clock Gating for each root port.	
DMI Link ASPM Control [Enabled]		
PCI Express Root Port 5 PCI Express Root Port 6 PCI Express Root Port 7		
 PCI Express Root Port 17 		
	<pre>++: Select Screen f↓: Select Item</pre>	
	Enter: Select +/-: Change Opt. E1: General Help	
	F2: Previous Values F3: Optimized Defaults	
	F4: Save & Exit ESC: Exit	
Version 2.17.1255. Copyright (C) 2016 America	n Megatrends, Inc. AB	

7STARLAKE

Revision Date: June. 15. 2021

3.5.2.2 USB configuration

Aptio Setup Utility Chipse	– Copyright (C) 2016 Amer t	ican Megatrends, Inc.
USB Configuration USB Precondition XHCI Disable Complian	[Disabled] [FALSE]	Options to disable Compliance Mode. Default is FALSE to not disable Compliance Mode. Set TRUE to disable Compliance Mode.
USB Port Disable Over	[Disabled] XHCI Disable Compliance Mo E	de ect Screen ect Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.17.1255. Aptio Setup Utility Chipse	Copyright (C) 2016 Americ – Copyright (C) 2016 Amer t	an Megatrends, Inc. AB rican Megatrends, Inc.
USP Configuration		Selectivelu
USB Precondition XHCI Disable Complian	[Disabled] [FALSE]	Enable/Disable the corresponding USB port from reporting a Device Connection to the controller.
USB Port Disable Over	[Disabled] • USB Port Disable Override sabled Plect Per-Pin	lect Screen lect 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 Americ	an Megatrends, Inc. AB



Revision Date: June. 15. 2021

3.5.2.3 HD Audio Configuration



Revision Date: June. 15. 2021

3.6 Security Menu

Use the Security Menu to establish system passwords

Aptio Setup Utility – Copyright (C) 2016 American Megatrends, Inc. Main Advanced Chipset <mark>Security</mark> Boot Save & Exit		
Password Descriptio	n	Set Administrator Password
If ONLY the Adminis then this only limi only asked for when If ONLY the User's is a power on passw boot or enter Setup have Administrator	trator's password is set, ts access to Setup and is entering Setup. password is set, then this ord and must be entered to . In Setup the User will rights.	
in the following ra	must be	++: Select Screen
Minimum length	3	fl: Select Item
Maximum length	20	Enter: Select +/-: Change Opt. F1: General Help
Administrator Passw	ord	F2: Previous Values
User Password		F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.17.1	255. Copyright (C) 2016 Ameri	can Megatrends, Inc. AB

Administrator Password

Set administrator password.

User Password

Set user Password.



Revision Date: June. 15. 2021

3.7 Boot Menu

This section is used to configure the boot features.

Aptio Setup Utility – Copyright (C) 2016 American Megatrends, Inc. Main Advanced Chipset Security <mark>Boot</mark> Save & Exit		
Setup Prompt Timeout 1 Bootup NumLock State [On] Quiet Boot [Disabled] Boot Option Priorities	<pre>Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting. ++: 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 Megatrends, Inc. AB		

Setup Prompt Timeout

Number of seconds to wait for setup activation key. 65535 (0xFFFF) means indefinite waiting.

Bootup NumLock State

Select the keyboard NumLock state

Quiet Boot

Enables or disables quiet boot option



Revision Date: June. 15. 2021

3.8 Save & Exit

This screen provides functions for handling changes made to the BIOS settings and the exiting of the Setup program.



Save Changes and Exit

Exit system setup after saving the changes

Discard Changes and Exit

Exit system setup without saving changes

Restore Defaults

Restore/Load default values for all the setup options

