AVS-302

Aplex Palm-size System

Intel Celeron J1900 Platform

User Manual

Release Date	Revision
Aug. 2022	V1.1

Aplex Technology, Inc.
15F-1, No.186, Jian Yi Road, Zhonghe District, New Taipei City 235,Taiwan
Tel: 886-2-82262881 Fax: 886-2-82262883 E-mail: aplex@aplex.com.tw
URL: www.aplex.com.tw

Revision History

Reversion	Date	Description
1.0	2021/03/04	Official Version
1.1	2022/08/19	Delete Ch4 Driver Installation part information

Warning!_____

This equipment will generate, use and radiate radio frequency energy and if not installed and used in accordance with the instructions manual, it may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to FCC Rules, which is designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user with its own expense will be required to take whatever measures may be required to correct the interference.

Electric Shock Hazard – Do not operate the machine with its back cover removed. There are dangerous high voltages inside.

Packing List

Accessories (as ticked) included in this package are:
☐ Adaptor ☐ Driver & manual CD disc ☐ Other._____(please specify)

Safety Precautions

Follow the messages below to prevent your systems from damage:

- Avoid your system from static electricity on all occasions.
- Prevent electric shock. Don‘t touch any components of this card when the card is power-on. Always disconnect power when the system is not in use.
- Disconnect power when you change any hardware devices. For instance, when you connect a jumper or install any cards, a surge of power may damage the electronic components or the whole system.

Table of Contents

Chapter 1 Getting Started

1.1 Features

- Rugged, Fan-less, Compact Design
- Intel Celeron J1900 Processor (onboard, 2M, Cache 2.00GHz)
- 2 x Display Port
- 1 x 204-pin SO-DIMM Memory up to 8GB DDR3L
- 9~36V DC Wide-ranging Power input
- 4 x LAN, 3 x USB2.0, 1 x USB3.0, 1 x USB2.0 (dongles)
- 1 x mSATA for SSD storage, 1 x SATAII for HDD
- 1 x full-size mini-PCIe, with LTE/BT expansion
- Compound Mounting Design with Wall-Mount kit
- 2 x COM(DB9)

1.2 Specifications

Model Name	**AVS-302**
System	
CPU	Intel Celeron J1900 Processor(Onboard, 2.00GHz)
Chipset	SoC
Memory	1 x 204-pin DDR3L SO-DIMM memory, up to 8GB
BIOS	AMI/UEFI
Outside IO Port	
Serial	1 x RS232/RS485/RS422, DB9 connector 9 Pin 1 x RS232, DB9 connector 9Pin (COM2)
Audio	Line out
USB-External	1 x USB 3.0(Type A) stack ports 3 x USB 2.0(Type A) stack ports 1 x USB2.0 (Type A) stack port (internal)
LAN(GT211V controller)	4 x GbE ports by RJ45 with Intel I210AT controller
GPIO	1 x 8-bit GPIO(4 x DI+4 x DO)
Storage Space	

Storage	1 x SATAII Connector(7 pin) 1 x mSATA Connector
Expansion	
Expansion Slot	1 x mPCIE connector(Default)
Display	
Controller	Intel Graphics 688/854 MHz(J1900)
VGA	1 x 1920 x 1200, by DB15
HDMI	1 x 1920 x 1200
Power	
Power Input	9~36V DC with 1x 3Pin power input connector 1 x 2Pin Power Switch
Mechanical	
Construction	Plating Titanium Gray Aluminum Heatsink and Black Steel Chassis
Mounting	Wall Mount
Dimensions(unit: mm)	207 x 130 x 35.5
Net Weight(unit: Kg)	0.95
Environmental	
Operating Temperature	-20~70°C
Storage Temperature	-40~85°C
Storage Humidity	10 to 90% @ 40°C, non-condensing
Certification	CE / FCC Class A
Operating System Support	Microsoft® Win10 IoT, Linux (TBD)

1.3 Dimensions

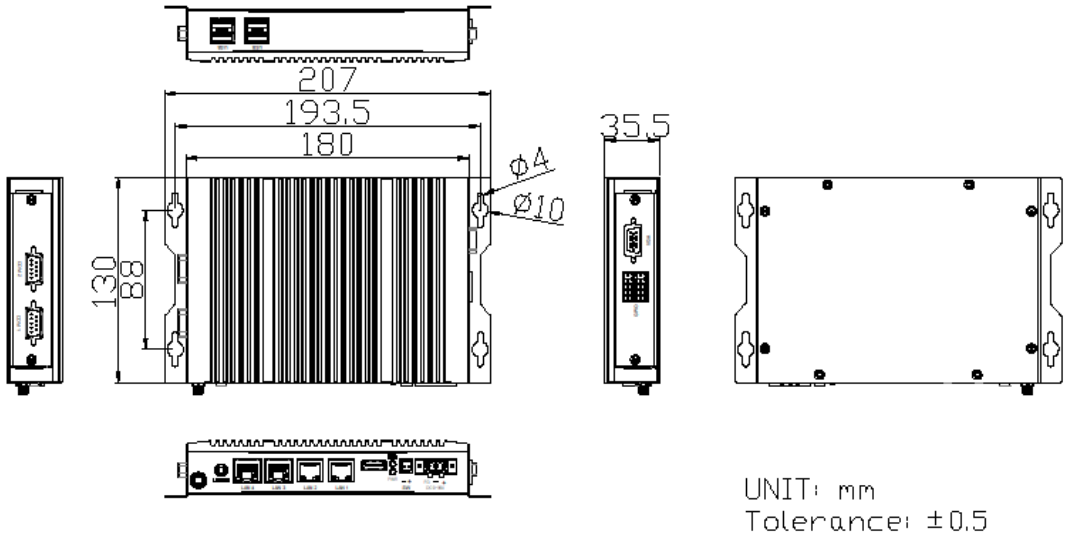


Figure 1.1: Dimension of AVS-302

1.4 Brief Description of AVS-302

AVS-302 is fanless-design high-efficiency BOX PC, powered by Intel Celeron J1900 Processor and supports 1 x 204-pin DDR3 SO-DIMM memory up to 8GB. It comes with multiple choices of USB 3.0 Type A and USB 2.0 Type A, LAN, VGA, HDMI, COM ports, and 1 x audio line-out for AVS-302. AVS-302 supports SATAII and mSATA connectors for storage use, and 9~36V DC wide-ranging power input. AVS-302 has 1x mPCIE slot for expansion and it is plating titanium gray aluminum heatsink and black steel chassis designed. AVS-302 can be wall mounted, and it works well with our other products and they can provide an absolute easy way to perform control maintenance.

Figure 1.2: Front view of AVS-302

Figure 1.3: Rear view of AVS-302

Chapter 2 Hardware

2.1 Motherboard Introduction

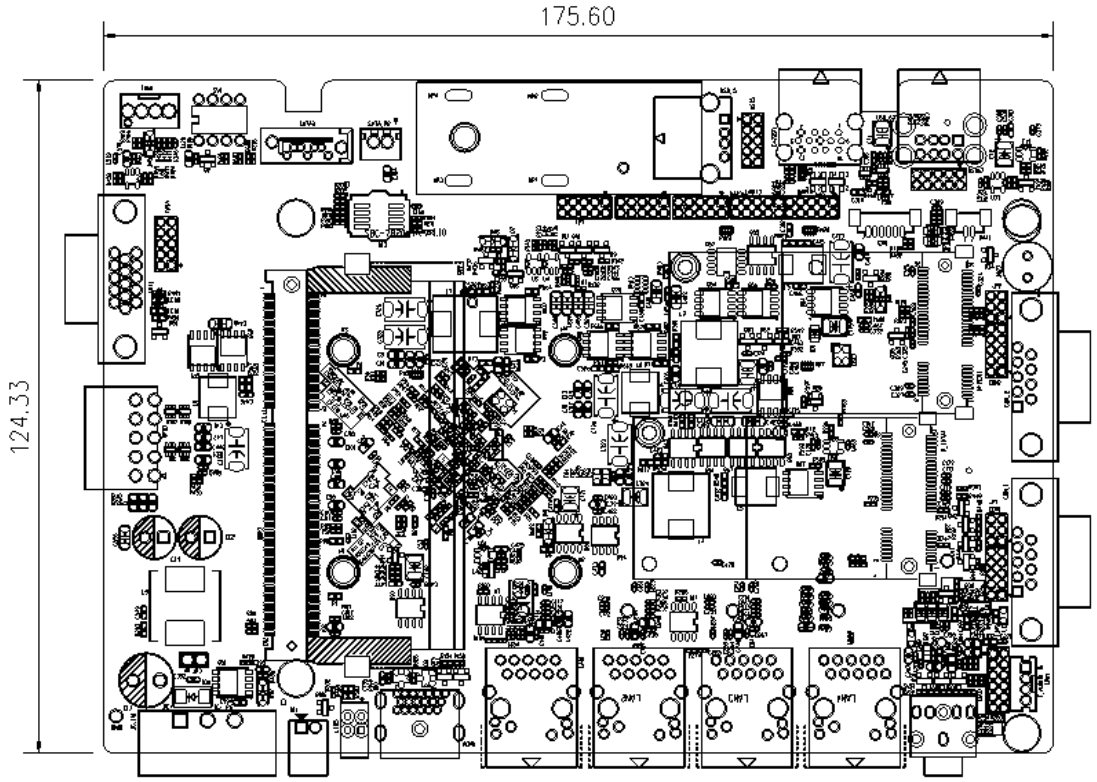
SBC-7827 is an industrial MB developed on the basis of Intel Bay Trail, which provides abundant peripheral interfaces to meet the needs of different customers. Also, it features four GbE ports, 2-COM ports, one mini PCIe and one mSATA configuration. To satisfy the special needs of high-end customers. Due to its compact size, the product is widely used in various sectors of industrial control.

2.2 Specifications

Specifications	
Board Size	175.6mm x 124.3mm x 1.6mm
CPU Support	Onboard Intel Celeron J1900 Processor(2M, Cache 2.00GHz)
Chipset	SOC
Memory Support	1 x SO-DIMM (204pins), up to 8GB DDR3L
GPIO/SIM	4 x DI, 4 x DO, DB9 connector 9Pin
Super I/O	Nuvoton NCT6106D
BIOS	AMI/UEFI
Storage	1 x SATAII connector (7Pin) 1 x mSATA connector
Ethernet	4 x PCIe GbE LAN, RJ45 via Intel I210AT controller
USB	2 x USB3.0 (typeA) stack ports 2 x USB2.0 (typeA) stack ports
Serial	1 x RS232/RS422/RS485 DB9 connector 9Pin (COM1) 1 x RS232 DB9 connector 9Pin (COM2)
Audio	Line out by Jack
Expansion Bus	1 x mini-PCI-express connector(w/USB/SIM signal//woPCIE)
Display Controller	Integrated Intel HD Graphics 688/854 MHz (J1900)
VGA Interface	1 x DB15

HDMI Interface	1 x HDMI
Resolution	Up to 1920 x 1200 for HDMI Up to 1920 x 1200 for VGA1
Power Management	Wide Range DC 9~36V input 1 x 3Pin Power input Connector 1 x 2Pin Power Switch
TPM	Infineon's Trusted Platform Module(TPM2.0, option)
Temperature	Operating: -20℃ to 70℃ Storage: -40℃ to 85℃
Humidity	10% - 90%, non-condensing, operating
EMI/EMS	Meet CE/FCC Part15 class A RoHS

2.3 Motherboard Dimension



(Unit: mm)

Figure 2.1: Motherboard SBC-7827 Dimensions

2.4 Jumpers and Connectors Location

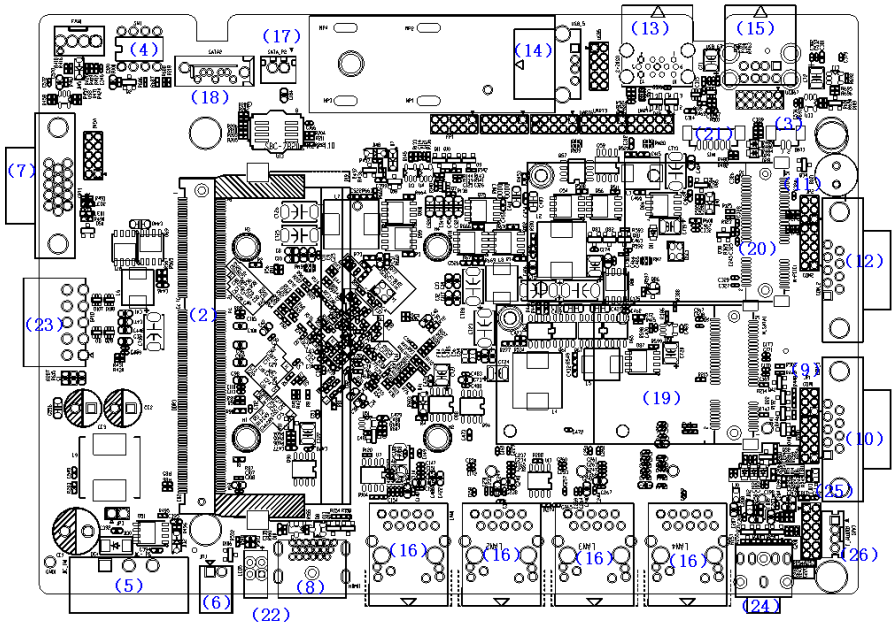


Figure 2.2: Jumpers and Connectors Location- Board Top

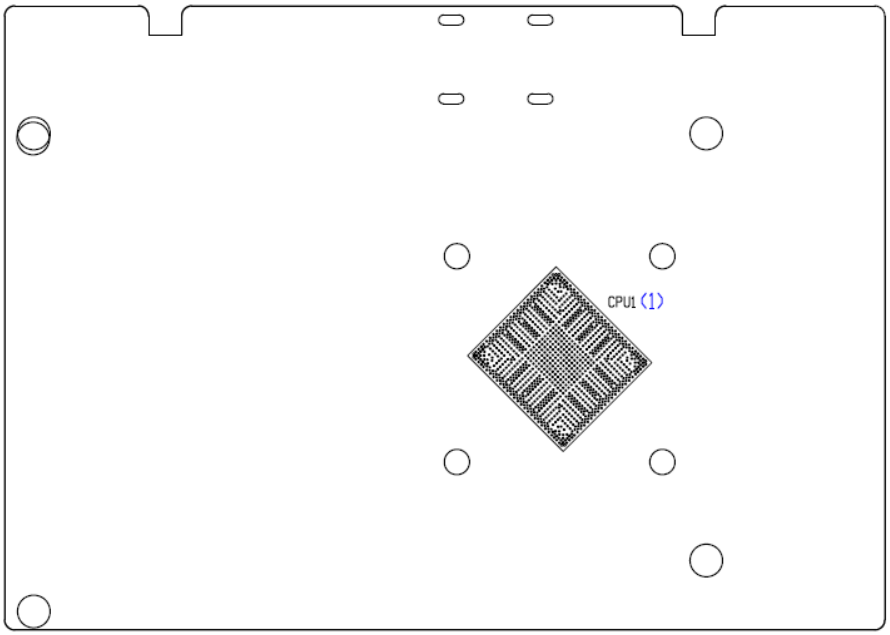


Figure 2.3: Jumpers and Connectors Location- Board Bottom

2.5 Jumpers Setting and Connectors

1. CPU:

Onboard Intel Celeron J1900 processor, the basic frequency of the processor is 2.00GHz, the pulse frequency can reach up to 2.42 GHz. It contains 4 cores and 4 threads, and with 2MB cache. The power consumption of J1900 is up to 10 watts.

2. DDR3L:

1 x SO-DIMM (204PINs), up to 8GB DDR3L 1333MHz

3. BAT1:

(1.25mm Pitch 1x2 wafer Pin Header) 3.0V Li Battery is embedded to provide power for CMOS.

Pin#	Signal Name
Pin1	Ground
Pin2	VCC_RTC

4. RTC:

(Switch), Auto Power on jumper setting.

SW1	Mode
Pin1 ON	**Auto Power on (Default)**
Pin1 OFF	FP_PWBTN (option)

CMOS clear switch, CMOS clear operation will permanently reset old BIOS settings to factory defaults.

SW1	Mode
Pin2 OFF	**Normal (Default)**
Pin2 ON	Clear CMOS

Procedures of CMOS clear:

a) Turn off the system and unplug the power cord from the power outlet.

b) To clear the CMOS settings, use the switch to Pin2 on for about 3 seconds then move the switch Pin2 off.

c) Power on the system again.

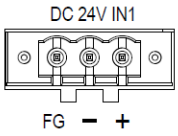
d) When entering the POST screen, press the <DEL> key to enter CMOS Setup Utility to load optimal defaults.

e) After the above operations, save changes and exit BIOS Setup.

SW1	CMOS
Pin3 OFF	Default
Pin4 OFF	Default

5. DC_IN1:

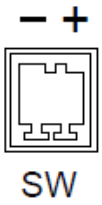
(5.08mm Pitch 1x3 Pin Connector), DC9~36V system power input connector. Before inserting this Phoenix connector, make sure that the power polarity is connected correctly. If connects to POE equipment, confirm that the output voltage of power adapter is DC 24V/5A. When the power consumption of the whole machine is large, you need to consider the power supply for the power adapter of the whole machine. Insufficient power will cause instability or abnormal operation of your system. When the external POE 1/POE2 port is not connected to POE equipment and only use as three network ports, the output voltage range of power adapter is +DC9~36V.



Pin#	Power Input（DC_IN1）
Pin1	DC+9V~36V
Pin2	Ground
Pin3	FG

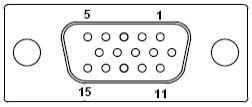
6. BT1:

SW1 is triggered. When the external + DC24V (or + DC9 ~ 36V) is powered on, the machine will automatically power on and start up. When the machine is turned on, the + pole and - pole of SW are short circuited for 4 seconds to shut down. Press 4 seconds to shut down or after the operating system is shut down normally, the + pole and - pole of SW need to be contacted once. After normal shutdown, please keep it for more than 30 seconds before starting up. Illegal shutdown has the risk of damaging the operating system or the machine. Repeated switching may affect the service life of the machine. The power switch button interface can be connected with the button switch through the cable.



7. VGA:

(CRT Connector DB15), Video Graphic Array Port, provide high-quality video output.



8. HDMI:

(HDMI 19P Connector) High Definition Multimedia Interface connector

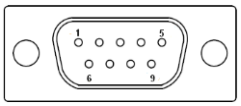
9. JP1:

(2.0mm Pitch 2x3 Pin Header), COM1 jumper setting, pin 1~6 are used to select signal out of pin 9 of COM1 port.

JP1 Pin#	Function
Close 1-2	**COM1 Pin9 RI (ring Indicator) (default)**
Close 3-4	COM1 Pin9= +5V/1A (option)
Close 5-6	COM1 Pin9= +12V/1A (option)

10. COM1:

(DB9 Connector), COM1 Port, standard RS232 ports are provided. They can be used directly via COM cable connection.



RS-232(**Default**)	
Pin#	Signal Name
1	DCD# (Data Carrier Detect)
2	RXD (Received Data)
3	TXD (Transmit Data)
4	DTR (Data Terminal Ready)
5	Ground
6	DSR (Data Set Ready)
7	RTS (Request To Send)
8	CTS (Clear To Send)
9	RI

BIOS Setup：
Advanced/NCT6106D Super IO Configuration/Serial Port 1 Configuration【RS-232】

RS-422：	
Pin#	Signal Name
1	422_TX-
2	422_TX+
3	422_RX+
4	422_RX-
5	Ground
6	NC
7	NC
8	NC
9	NC

BIOS Setup：

Advanced/NCT6106D Super IO Configuration/Serial Port 1 Configuration

【RS-422】

RS-485：	
Pin#	Signal Name
1	485-
2	485+
3	NC
4	NC
5	Ground
6	NC
7	NC
8	NC
9	NC

BIOS Setup：

Advanced/NCT6106D Super IO Configuration/Serial Port 1 Configuration

【RS-485】

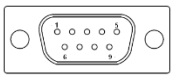
11. JP2:

(2.0mm Pitch 2x3 Pin Header), COM2 jumper setting, pin1~6 are used to select signal out of pin9 of COM2 port.

JP2 Pin#	Function
Close 1-2	**COM2 Pin9 RI (Ring Indicator) (default)**
Close 3-4	COM2 Pin9= +5V/1A
Close 5-6	COM2 Pin9= +12V/1A

12. COM2:

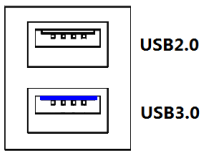
(DB9 Connector), COM2 Port, standard RS232 ports are provided. They can be used directly via COM cable connection.



13. USB2+USB3 (USB2.0+3.0):

(Single stack USB type A), USB2.0 connector, it provides two USB ports via a dedicated USB cable, speed up to 480Mb/s.

(Single stack USB type A), Rear USB3.0 connector, it provides up to 2 USB3.0 ports. USB3.0 allows data transfers up to 5.0 Gb/s, supports USB2.0 and full-speed and low-speed signaling.

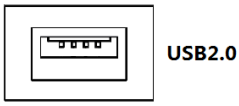


Each USB Type A Receptacle (2 ports) current limited value is 2.0A.

If the external USB device current exceeds 2.0A, please separate connectors into different Receptacle.

14. USB_5 (USB2.0):

(Single stack USB type A), USB2.0 connector, it provides two USB ports via a dedicated USB cable, speed up to 480Mb/s.

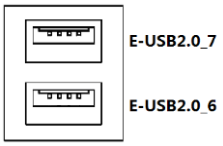


Each USB Type A Receptacle (2 ports) current limited value is 2.0A.

If the external USB device current exceeds 2.0A, please separate connectors into different Receptacle.

15. USB2.0:

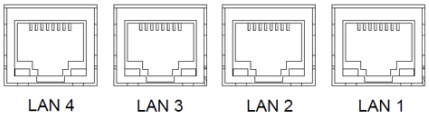
USB2.0 interface, two standard USB2.0 interfaces are reserved, USB2.0 allows data transmission up to 480MB/s, and supports USB2.0 for full-speed and low-speed signals. It can be connected to USN2.0 and USB1.1 devices. By default, there is no load on this interface.



Each USB Type A Receptacle (2 ports) current limited value is 2.0A.
If the external USB device current exceeds 2.0A, please separate connectors into different Receptacle.

16. LAN1/LAN2/LAN3/LAN4:

(RJ45 Connector), 4 standard 10/100/1000M network interfaces with Intel I210AT chipset. The use of connecting cables requires compliance with relevant protocols and specifications.



17. SATA_P2:

(2.5mm Pitch 1x2 Wafer Pin Header), support a stereo Class-D Speaker Amplifier with 2 Watt per channel output power.

Pin#	Signal Name
1	+DC5V_S0
2	Ground

Note:

Output current of the connector must not be above 1A.

18. SATA2:

(SATA 7P), SATA Connectors, one SATA connector is provided, SATA2 transfer speed up to 3.0Gb/s.

19. M_SATA1:

(50.95mmx30mm Socket 52Pin), mSATA socket, it is located at the top, and supports LPCbus, SMbus, USB2.0 and mSATA signals.

Function	Support
Mini SATA	●
LPC bus	●
SMbus	●
USB2.0 (USB8)	●

20. M-PCIE1:

(Socket 52Pin), mini PCIe socket, it is located at the top, and supports mini PCIe devices with USB2.0, SIM, SMbus and PCIe signals. MPCIe card size is 30x50.95mm.

Function	Support
Mini PCIe4 Signal	●
SIM Signal	●
SMbus	●
USB2.0 (USB4)	●

21. SIM1:

(2.0mm Pitch 1x6 Pin Wafer Header), Support SIM Card devices

Pin#	Signal Name
1	SIM_VCC
2	Ground
3	SIM_RST
4	NC
5	SIM_CLK
6	SIM_IO

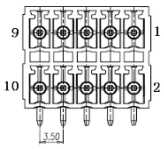
22. HDD/PWR:

PWR: Power Indicator

HDD: HDD Indicator

23. GPIO:

(3.50mm, 2x5 pin connector), general I/O port, 8 port GPIO, user can program interface by themselves. GPIO programming routines are required; please contact your sales window staff or agent.



Pin#	Signal	GPIO	Function
1	5V_GPIO	5V_GPIO	5VDC_OUT
2	Ground	Ground	GND
3	GPIO_IN1	6106_GP20	OUT
4	GPIO_IN2	6106_GP21	OUT
5	GPIO_IN3	6106_GP22	OUT
6	GPIO_IN4	6106_GP23	OUT
7	GPIO_OUT1	6106_GP24	OUT
8	GPIO_OUT2	6106_GP25	OUT
9	GPIO_OUT3	6106_GP26	OUT
10	GPIO_OUT4	6106_GP27	OUT

24. Line OUT:

(Diameter 3.5mm Three stack Jack), High Definition Audio Port

25. F_Audio1:

(2.0mm Pitch 1x4 Wafer Pin Header) Support a stereo Class-D Speaker Amplifier with 2 watt per channel output power.

Pin#	Signal Name
1	SPK_OUTL_P
2	SPK_OUTL_N
3	SPK_OUTR_N
4	SPK_OUTR_P

26. SPK1:

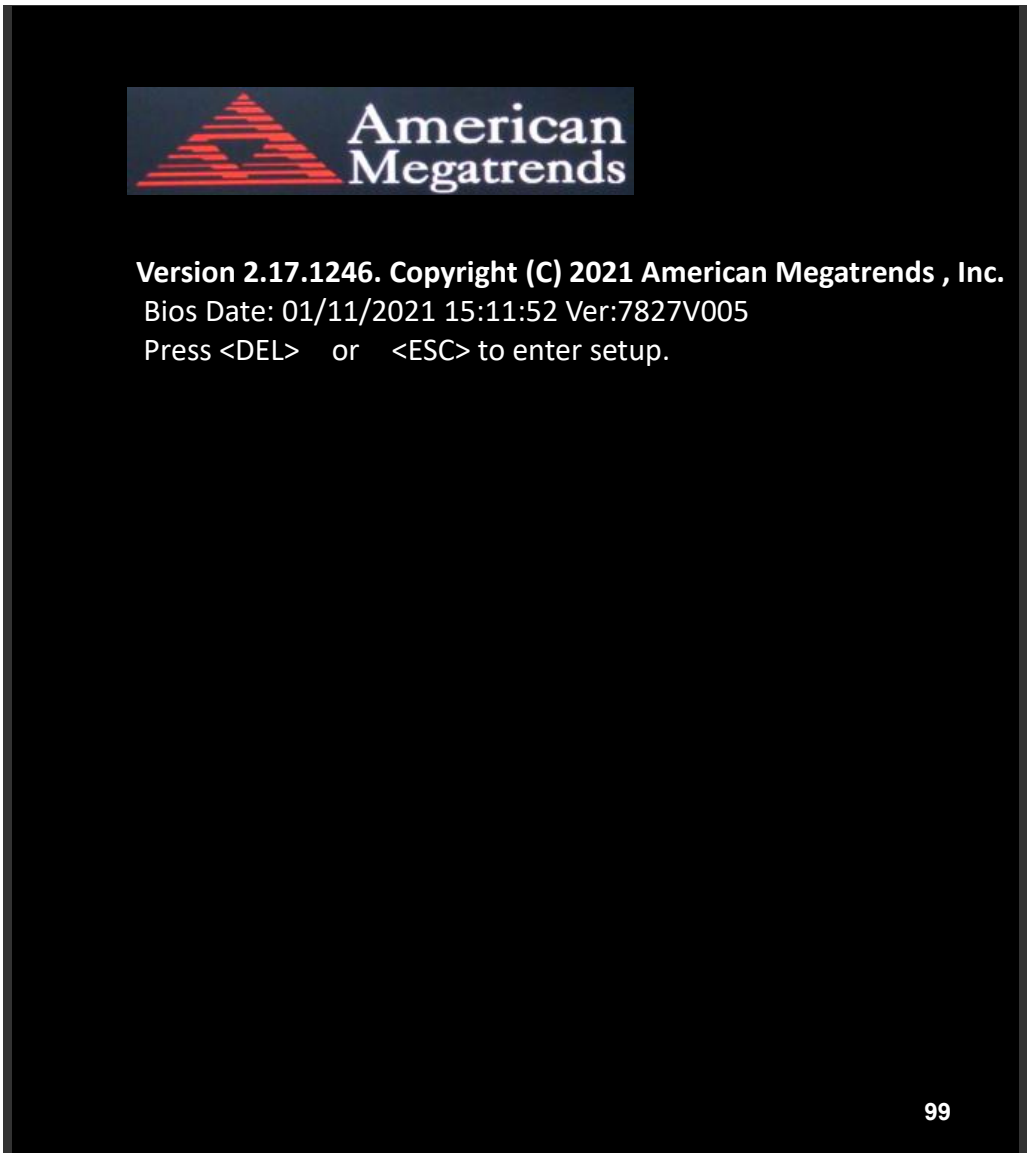
(2.0mm Pitch 1x4 Wafer Pin Header), Front Audio, Line Out can be connected to a headphone or amplifier. Line In is used for the connection of external audio source via a Line in cable. MIC is the port for microphone input audio.

Signal Name	Pin#	Pin#	Signal Name
+5V	1	2	GND_AUD
LINE-OUT-L	3	4	LINE-OUT-R
FRONT_JD	5	6	LINE_JD
LINE-IN-L	7	8	LINE-IN-R
MIC-IN-L	9	10	MIC-IN-R
GND_AUD	11	12	MIC1_JD

Chapter 3 BIOS Setup

3.1 Operations after POST Screen

After CMOS discharge or BIOS flashing operation, press [Delete] key to enter CMOS Setup.

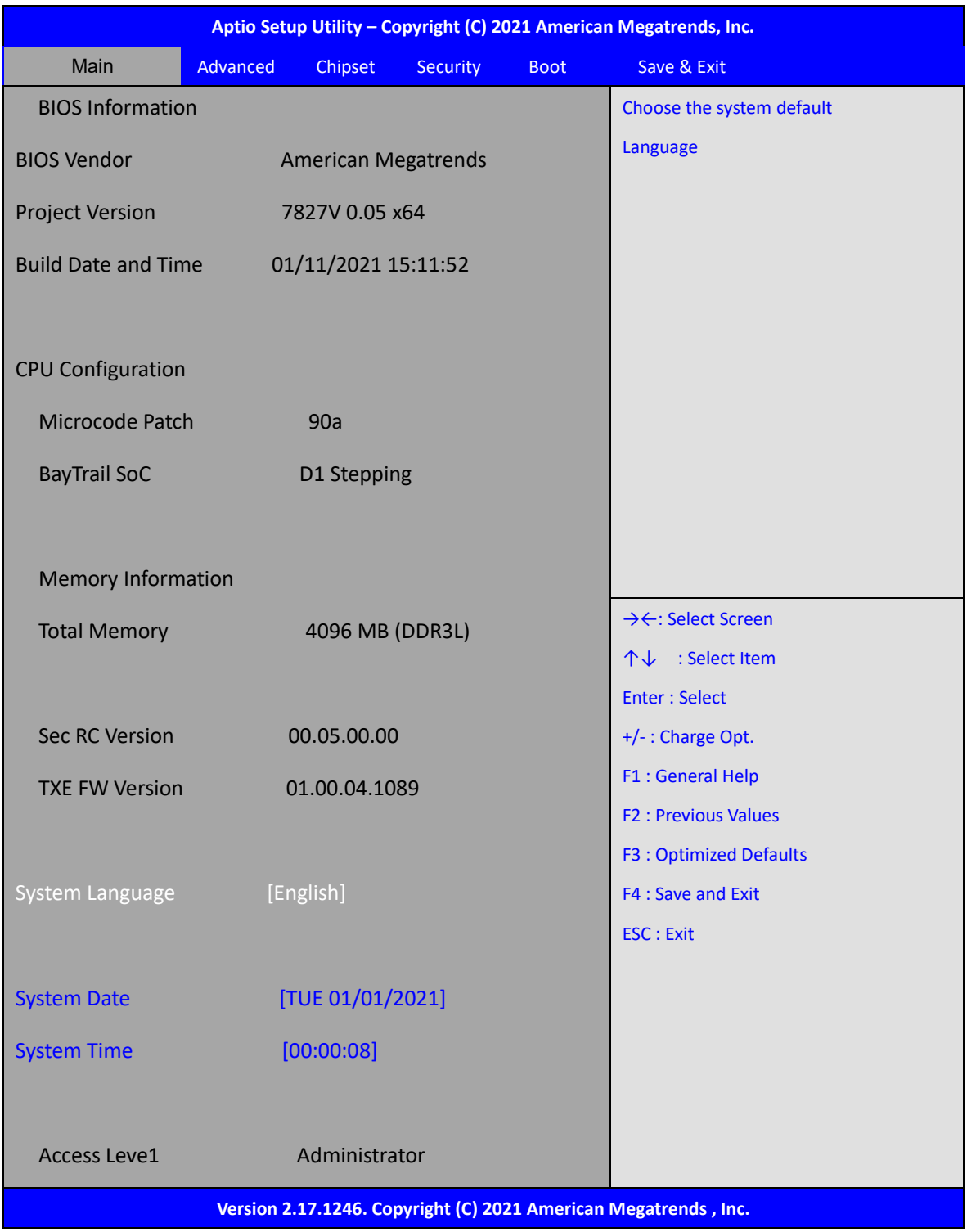


After optimizing, exits CMOS Setup.

3.2 BIOS Setup Utility

Press [Delete] key to enter BIOS Setup utility during POST, and then a main menu containing system summary information will appear.

3.3 Main Settings



System Time:

Set the system time, the time format is:

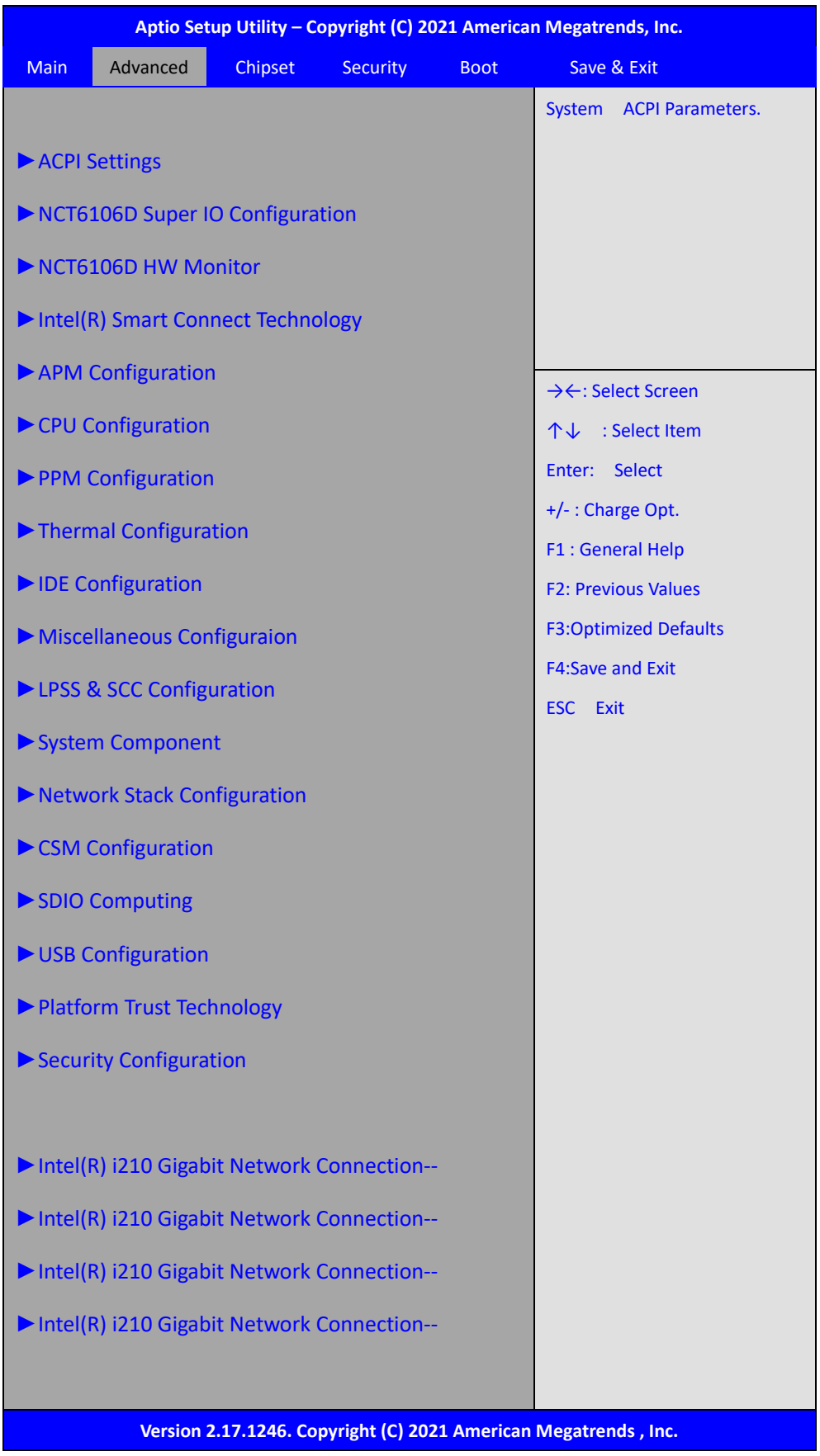
Hour :	0 to 23
Minute :	0 to 59
Second :	0 to 59

System Date:

Set the system date, the date format is:

Day: Note that the ‘Day’ automatically changes when you set the date.

3.4 Advanced Settings



3.4.1 ACPI Settings

Enable ACPI Auto Configuration:

[Disabled]

[Enabled]

Enable Hibernation:

[Enabled]

[Disabled]

ACPI Sleep State:

[S3 (Suspend to RAM)]

[Suspend Disabled]

Lock Legacy Resources:

[Disabled]

[Enabled]

3.4.2 NCT6106D Super IO Configuration

Super IO Chip NCT6106D

Serial Port 1 Configuration

Serial port

[Enabled]

[Disabled]

Device Settings IO=3F8h； IRQ=4；

Change Settings

[Auto]

[IO=3F8h；IRQ=4]

[IO=3F8h ;IRQ=3,4,5,6,7,9,10,11,12 ;]

[IO=2F8h ;IRQ=3,4,5,6,7,9,10,11,12 ;]

[IO=3E8h ;IRQ=3,4,5,6,7,9,10,11,12 ;]

[IO=2E8h ;IRQ=3,4,5,6,7,9,10,11,12 ;]

COM1 Mode Selection

[RS-232]

[RS-485]

[RS-422]

Serial Port 2 Configuration

Serial port

[Enabled]

[Disabled]

Device Settings IO=2F8h;IRQ=3;

Change Settings

[Auto]
[IO=2F8h; IRQ=3]
[IO=3F8h ;IRQ=3,4,5,6,7,9,10,11,12 ;]
[IO=2F8h ;IRQ=3,4,5,6,7,9,10,11,12 ;]
[IO=3E8h ;IRQ=3,4,5,6,7,9,10,11,12 ;]
[IO=2E8h ;IRQ=3,4,5,6,7,9,10,11,12 ;]

3.4.3 NCT6106D HW Monitor

Pc Health Status

System Temperature：+45 C
CPU Fan Speed ： N/A
VCORE：+0.864 V
12V：+11.960V
5V：+5.160V
1.35V ：+1.356V

3.4.4 Intel® Smart Connect Technology

ISCT Support

[Enabled]
[Disabled]

3.4.5 APM Configuration

RTC Power On

[Disabled]
[Enabled]

3.4.6 CPU Configuration

Socket 0 CPU Information

CPU Thermal Configuration
DTS

[Enabled]
[Disabled]

3.4.7 PPM Configuration

CPU c state Report

[Enabled]
[Disabled]

SOix

[Enabled]

[Disabled]

3.4.8 Thermal Configuration Parameters

Critical Trip Point [90C]

Passive Trip Point [85C]

Dynamic Platform& Thermal Framework

DPTF

[Disabled]

[Enabled]

CPU Sensor Participant

Critical [70C]

Passive [60C]

Ambient Sensor Participant

Critical [70C]

Passive [60C]

DDR Sensor Participant

Critical [70C]

Passive [60C]

Super Debug [Disabled]

Current Logical Processor [Disabled]

Start P-State [P0]

Step size [25%]

Power Control Setting [CORE offlining]

Performance Control Setting [CORE offlining]

DPPM

[Enabled]

3.4.9 IDE Configuration

Serial-ATA(SATA)

[Enabled]

[Disabled]

SATA Test Mode

[Enabled]

[Disabled]

SATA Speed Support

[Gen2]

[Gen1]

SATA ODD Port

[No ODD]

[Port0 ODD]

[Port1 ODD]

SATA Mode

[AHCI Mode]

[IDE Mode]

Serial-ATA Port 0

[Enabled]

[Disabled]

SATA Port0 HotPlug

[Enabled]

[Disabled]

Serial-ATA Port 1

[Enabled]

[Disabled]

SATA Port1 HotPlug

[Enabled]

[Disabled]

SATA Port 0
Not Present

SATA Port1
Not Present

3.4.10 Miscellaneous Configuration

High Precision Timer

[Enabled]

[Disabled]

Boot Timer with HPET Timer

[Enabled]

[Disabled]

PCI Express Dynamic Clock Gating

[Enabled]

[Disabled]

3.4.11 LPSS& SCC Configuration

LPSS & SCC Devices Mode

[ACPI mode]

[PCI mode]

SCC Configuration

SCC eMMC Support

[eMMC AUTO MODE]

[Disabled]

[Enable eMMC 4.5 Support]

[Enable eMMC 4.41 Support]

SCC eMMC 4.5 DDR50 Support

[Enabled]

[Disabled]

SCC eMMC 4.5 HS200 Support

[Disabled]

[Enabled]

eMMC Secure Erase

[Disabled]

[Enabled]

SCC SDIO Support

[Enabled]

[Disabled]

SCC SD Card Support

[Enabled]

[Disabled]

SDR25 Support for SDCard [Disabled]

DDR50 Support for SDCard [Enabled]

MIPI HSI Support

[Disabled]

[Enabled]

LPSS Configuration

LPSS DMA #1 Support

[Disabled]

[Enabled]

LPSS DMA #2 Support

[Disabled]

[Enabled]

LPSS I2C #1 Support

[Disabled]

[Enabled]

LPSS I2C #2 Support

[Disabled]

[Enabled]

LPSS I2C #3 Support

[Disabled]

[Enabled]

LPSS I2C #4 Support

[Disabled]

[Enabled]

LPSS I2C #5 Support

[Disabled]

[Enabled]

LPSS I2C #6 Support

[Disabled]

[Enabled]

LPSS I2C #7 Support

[Disabled]

[Enabled]

I2C touch Device Address

[AUTO]

[0x4B]

[0x4A]

LPSS HSUART #1 Support

[Disabled]

[Enabled]

LPSS HSUART #2 Support

[Disabled]

[Enabled]

LPSS PWM #1 Support

[Disabled]

[Enabled]

LPSS PWM #2 Support

[Disabled]

[Enabled]

LPSS SPI Support

[Disabled]

[Enabled]

3.4.12 System Component

PMIC Configuration

PMIC ACPI OBJECT

[Disabled]

[Enabled]

PNP Setting

[Disabled]

[AUTO]

[AX STEPPING]

[BX STEPPING]

Witt Setting

[Disabled]

[Enabled]

3.4.13 Network Stack Configuration

Network Stack

[Disabled]

[Enabled]

3.4.14 CSM Configuration

Compatibility Support Module Configuration

CSM Support

[Disabled]

[Enabled]

CSM16 Module Version 07.76

GateA20 Active

[Upon Request]

[Always]

Option ROM Messages

[Force BIOS]

[Keep Current]

Boot option filter

[UEFI and Legacy]

[Legacy only]

[UEFI only]

Option ROM execution

Network

[Do not launch]

[UEFI]

[Legacy]

Storage

[Do not launch]

[UEFI]

[Legacy]

Video

[Do not launch]

[UEFI]

[Legacy]

Other PCI devices

[UEFI]

[Legacy]

3.4.15 SDIO Configuration

SDIO Configuration

[Auto]

[DMA]

[PIO]

6.4.16 USB Configuration

USB Configuration

USB Module Version 8.11.02

USB Devices:

2 Keyboards, 1Mouse, 2Hubs

Legacy USB Support

[Disabled]

[Enabled]

XHCI Hand-off

[Disabled]

[Enabled]

EHCI Hand-off

[Disabled]

[Enabled]

USB Mass Storage Driver Support

[Disabled]

[Enabled]

USB hardware delays and time-outs:

USB transfer time-out

[1sec]

[5sec]

[10sec]

[20sec]

Device reset time-out

[10sec]

[20sec]

[30sec]

[40sec]

Device power-up delay

[Auto]

[Manual]

3.4.17 Platform Trust Technology

TPM Configuration

fTPM

[Disabled]

[Enabled]

3.4.18 Security Configuration

Intel® TXE Configuration

Intel® Anti-Theft Technology Configuration

Intel® AT

[Disabled]

[Enabled]

Intel® AT Platform PBA

[Disabled]

[Enabled]

Intel® AT Suspend Mode [Disabled]

3.5 Chipset Settings

3.5.1 North Bridge

►Intel IGD Configuration

GOP Configuration

GOP Driver

[Enabled]

[Disabled]

Intel IGD Configuration

Integrated Graphics Device

[Enabled]

[Disabled]

IGD Turbo Enable

[Enabled]

[Disabled]

Primary Display [IGD]

GFX Boost

[Enabled]

[Disabled]

PAVC [LITE Mode]

DVMT Pre-Allocated [64M]

DVMT Total Gfx Mem [256MB]

Aperture Size [256MB]

DOP CG

[Enabled]

[Disabled]

GTT Size [2MB]

IGD Thermal

[Enabled]

[Disabled]

Spread Spectrum clock

[Enabled]

[Disabled]

ISP Enable/Disable

[Enabled]

[Disabled]

ISP PCI Device Selection

[Enabled]

[Disabled]

Vcc,Vnn Configuration for Power state2:

Vcc_Vnn Config for Power state2

[Enabled]

[Disabled]

►**IGD – LCD Control**

Force Lid Status

[ON]

[OFF]

BIA

[AUTO]

ALS Support

[Enabled]

[Disabled]

IGD Flat Panel

[AUTO]

Panel Scaling

[AUTO]

►**Graphics Power Management Control**

Graphics Power Management Control

RC6(Render Standby)

[Enabled]

[Disabled]

Memory Information

Total Memory	4096 MB(DDR3L)
Memory Slot0	4096 MB(DDR3L)
Memory Slot2	Not Present
Max TOLUD	**[Dynamic]**

This is to view the memory configuration information.

3.5.2 South Bridge

►**Azalia HD Audio**

Audio Configuration

LPE Audio Support

[Enabled]

[Disabled]

Audio Controller

[Enabled]

[Disabled]

Azalia VCi Enable

[Enabled]

[Disabled]

Azalia Docking Support Enable

[Enabled]

[Disabled]

Azalia PME Enable

[Enabled]

[Disabled]

Azalia HDMI Codec

[Enabled]

[Disabled]

HDMI Port B

[Enabled]

[Disabled]

HDMI Port C

[Enabled]

[Disabled]

►**USB Configuration**

USB OTG Support

[Enabled]

[Disabled]

USB VBUS

[On]

[Off]

XHCI Mode [Smart Auto]

USB2 Link Power Management

[Enabled]

[Disabled]

USB 2.0(ENCI) Support [Disabled]

USB EHCI debug [Enabled]

USB Per Port Control

[Enabled]

[Disabled]

USB Port 0

[Enabled]

[Disabled]

USB Port 1

[Enabled]

[Disabled]

USB Port 2

[Enabled]

[Disabled]

USB Port 3

[Enabled]

[Disabled]

►**PCI Express Configuration**

PCI Express Port 0

[Enabled]

[Disabled]

Hot Plug

[Enabled]

[Disabled]

Speed	[Auto]
Extra Bus Reserved	1
Reserved Memory	10
Reserved Memory Alignment	1
Prefetchable Memory	10
Prefetchable Memory Alignment	1
Reserved I/O	4

PCI Express Port 1

[Enabled]

[Disabled]

Hot Plug

[Enabled]

[Disabled]

Speed	[Auto]
Extra Bus Reserved	0
Reserved Memory	10
Reserved Memory Alignment	1
Prefetchable Memory	10
Prefetchable Memory Alignment	1
Reserved I/O	4

PCI Express Port 2

[Enabled]

[Disabled]

Hot Plug

[Enabled]

[Disabled]

Speed [Auto]

Extra Bus Reserved 0

Reserved Memory 10

Reserved Memory Alignment 1

Prefetchable Memory 10

Prefetchable Memory Alignment 1

Reserved I/O 4

PCI Express Port 3

[Enabled]

[Disabled]

Hot Plug

[Enabled]

[Disabled]

Speed [Auto]

Extra Bus Reserved 0

Reserved Memory 10

Reserved Memory Alignment 1

Prefetchable Memory 10

Prefetchable Memory Alignment 1

Reserved I/O 4

►**COM Port Configuration**

COM Port Configuration

COM1 RS485 Resistance

[Disabled]

[Enabled]

COM2 RS485 Resistance

[Disabled]

[Enabled]

COM3 RS485 Resistance

[Enabled]

[Disabled]

COM4 RS485 Resistance

[Enabled]

[Disabled]

COM5 RS485 Resistance

[Enabled]

[Disabled]

COM6 RS485 Resistance

[Enabled]

[Disabled]

COM7 RS485 Resistance

[Enabled]

[Disabled]

COM8 RS485 Resistance

[Enabled]

[Disabled]

COM9 RS485 Resistance

[Enabled]

[Disabled]

COM10 RS485 Resistance

[Enabled]

[Disabled]

High Precision Timer

[Enabled]

[Disabled]

Restore AC Power Loss

[Power off]

[power on]

[Last State]

LCD PWM DC Mode

[PWM]

[DC]

GPIO00-027 Mode

[Input]

[Output]

GPIO00 -027

[High]

[Low]

Serial IRQ Mode

[Quiet]

[Continuous]

Global SMI Lock

[Enabled]

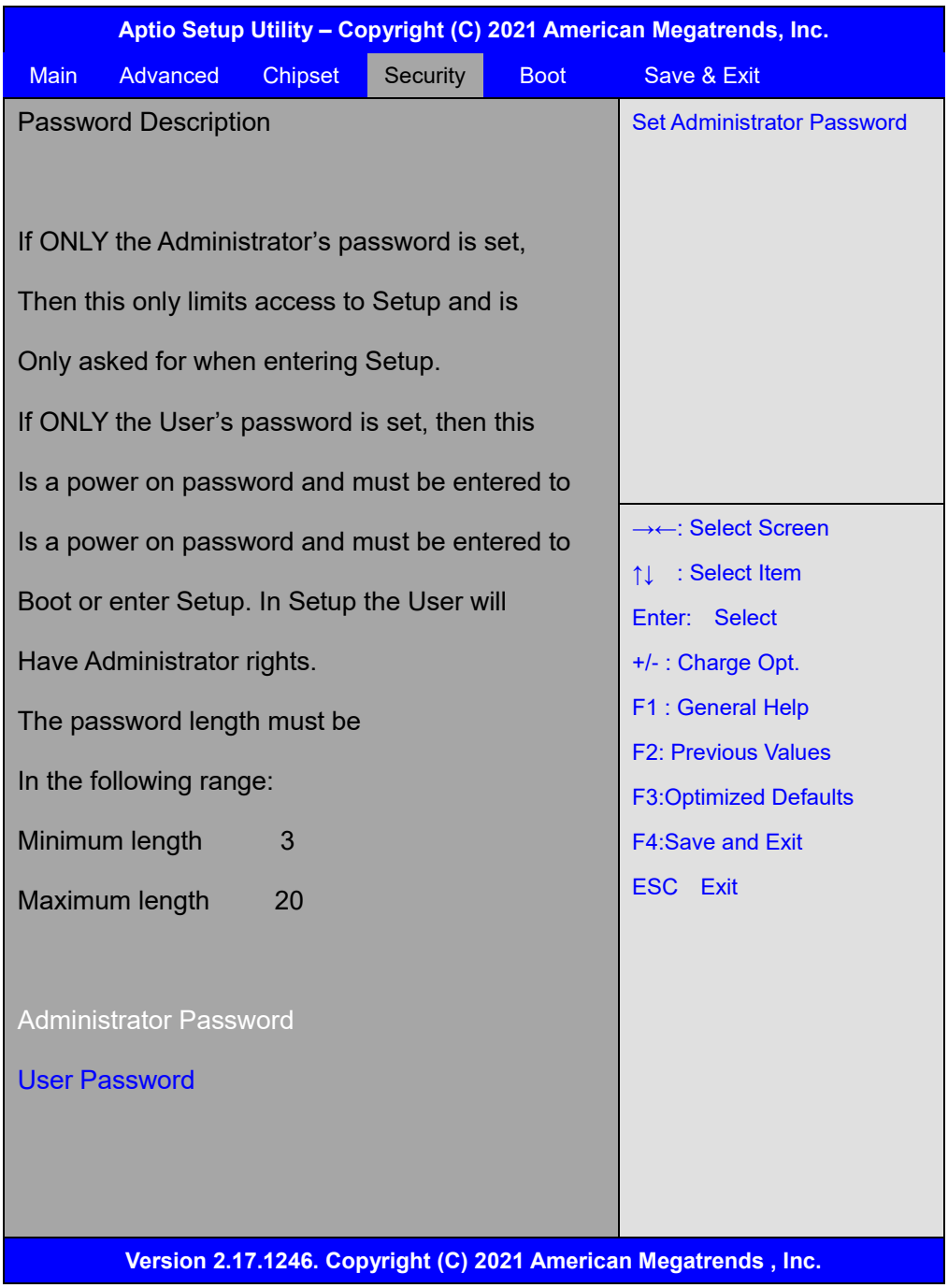
[Disabled]

BIOS Read/Write Protection

[Enabled]

[Disabled]

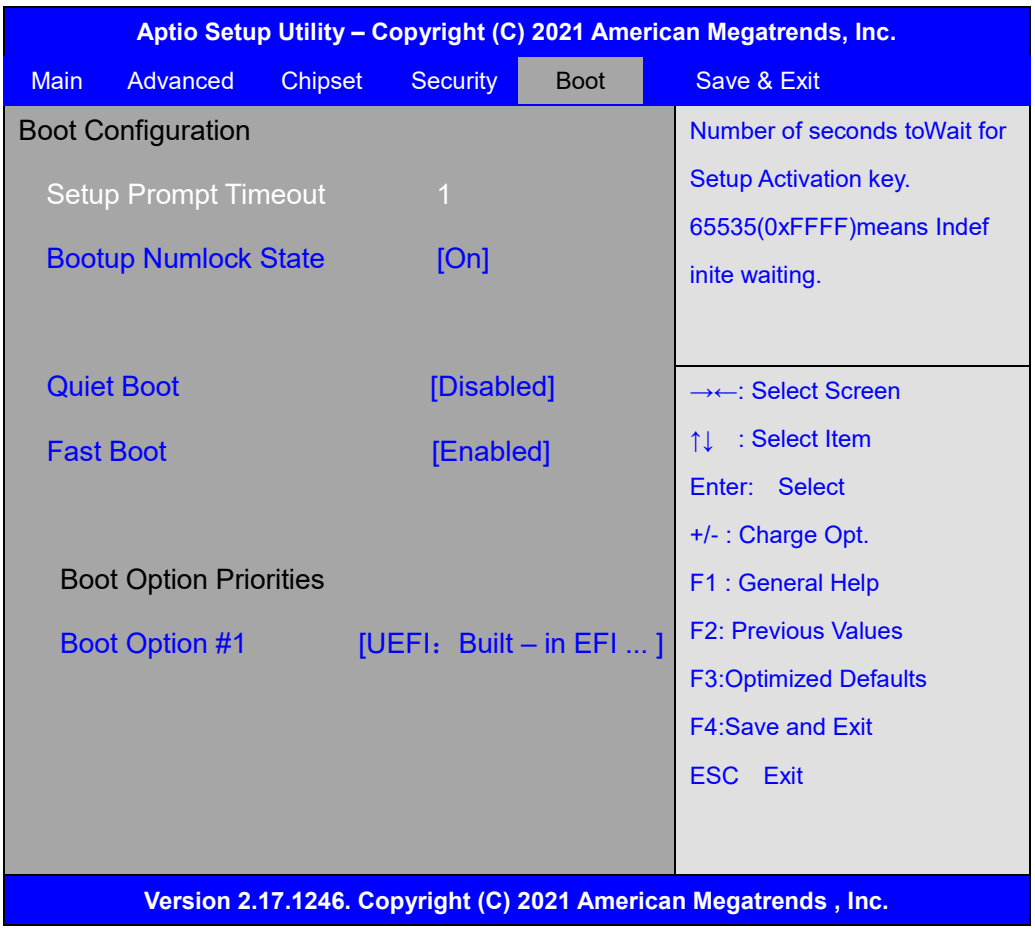
3.6 Security Settings



3.6.1 Administrator Password

3.6.2 User Password

3.7 Boot Settings



Setup Prompt Timeout [1]

Bootup Numlock State

[On]

[off]

Quiet Boot

[Disabled]

[Enabled]

Fast Boot

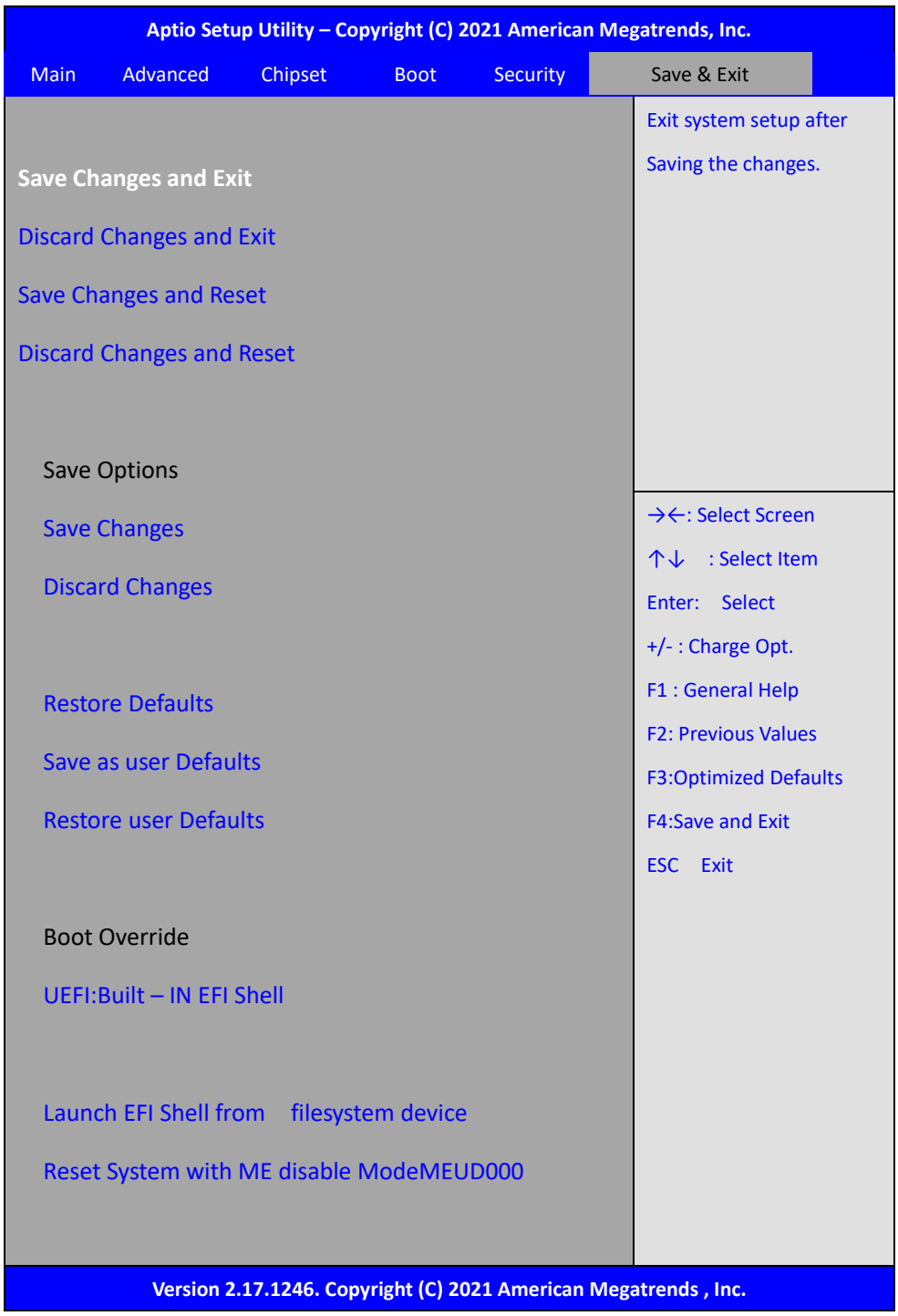
[Disabled]

[Enabled]

Boot Option Priorities

Boot Option #1 [UEFI:Built – in EFI ...]

3.8 Save & Exit Settings



Save & Exit Setup save Configuration and exit?

[Yes]

[No]

Exit Without Saving Quit without saving?

[Yes]

[No]

Reset the system after Saving The changes?

[Yes]

[No]

Reset system setup without Saving any changes?

[Yes]

[No]

Save Setup done so far to any of the setup options?

[Yes]

[No]

Discard Changes done so far to any of the setup options?

[Yes]

[No]

Restore /Load Defaults values for all the setup options?

[Yes]

[No]

Save the changes done so far as User Defaults?

[Yes]

[No]

Restore the User Defaults to all the setup options?

[Yes]

[No]

Boot Override

UEFI: Built – in EFI Shell

Launch EFI Shell from filesystem device

WARNING Not Found

[ok]

Reset System with ME disable ModelMEUD000

Chapter 4 Mounting Suggestions

4.1 Wall Mount

4.1.1 AVS-302 Wall Mount

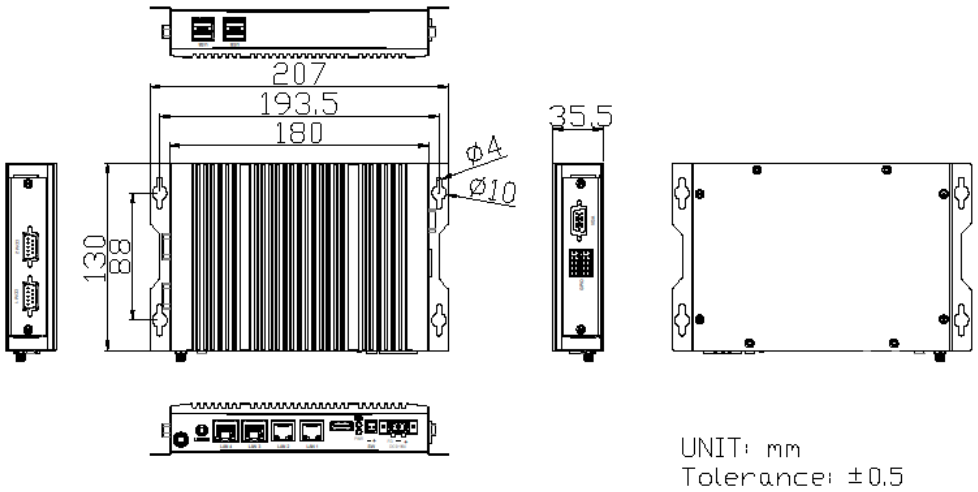


Figure 4.1 Wall Mount of AVS-302