

ACM-ICLDE7

COM Express Basic Module Type 7 with Intel[®] ICE LAKE-D



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



IEC 60417-6172 (2012-09)

All power cords must be disconnected during product repair.

Ver: 100 Date: Sep. 26, 2022

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Table of Contents

1.	Int	roduction	5
	1.1.	Specifications	5
	1.2.	Packing List	6
2.	На	rdware Information	7
	2.1.	Dimensions	7
	2.2.	Switches and Connectors	9
	2.3.	List of Connectors	. 10
		2.3.1. AT/ATX Switch (SW1)	. 10
		2.3.2. Battery (CN3)	. 10
		2.3.3. EC Programming Header (CN4)	. 10
		2.3.4. BIOS Programming Header (CN5)	11
		2.3.5. ROW A/B Connector (CN8)	11
		2.3.6. ROW C/D Connector (CN9)	. 14
		2.3.7. LPC (CN10)	. 18
		2.3.8. LAN GPIO (i210IT) (CN11)	. 18
	2.4.	DIMM Population Configurations	. 19
		2.4.1. DDR4 2933 ECC SoDIMM Validation Results	. 20
	2.5.	Function Block Diagram	. 21
	2.6.	Hardware Assembly	. 22
		2.6.1. CPU Cooler Assembly	. 22
3.	AN	II BIOS Setup	24
	3.1.	System Test and Initialization	. 24
	3.2.	AMI BIOS Setup	. 24
	3.3.	Setup Submenu: Main	. 25
	3.4.	Setup Submenu: Advanced	. 26
		3.4.1. Trusted Computing	. 26
		3.4.2. NVMe Configuration	. 28
		3.4.3. Hardware Monitor	. 28
		3.4.4. SIO Configuration	. 29
		3.4.5. Serial Port Configuration	. 29
		3.4.6. Serial Port Console Redirection	. 30
		3.4.7. BIOS Robot	. 31
		3.4.8. Power Management	. 32
		3.4.9. Digital IO Port Configuration	. 33



	3.5.	Setup Submenu: Platform Configuration	. 34
		3.5.1. PCH-IO Configuration	. 34
		3.5.2. PCI Express Configuration	. 35
		3.5.3. SATA Configuration	. 36
		3.5.4. Server ME Configuration	. 37
	3.6.	Setup Submenu: Socket Configuration	. 37
		3.6.1. Processor Configuration	. 38
		3.6.2. Memory Configuration	. 38
		3.6.3. Memory Topology	. 39
		3.6.4. IIO Configuration	. 40
		3.6.5. Socket0 Configuration	. 40
	3.7.	Setup Submenu: Security	. 41
		3.7.1. Secure Boot	. 42
		3.7.2. Secure Boot	. 43
	3.8.	Setup Submenu: Boot	. 44
		3.8.1. BBS Priorities	. 45
	3.9.	Setup Submenu: Save & Exit	. 46
4.	Dri	vers Installation	47
	4.1.	Drivers Download and Installation	. 47
5.	Ap	pendix	48
	5.1.	I/O Information	. 48
		5.1.1. I/O Address Map	. 48
		5.1.2. Memory Address Map	. 49
		5.1.3. IRQ Mapping Chart	. 51
6.	FA	Q	54
	Q 1.	Where can I find the serial number of this product?	. 54



1. Introduction

ACM-ICLDE7 is the latest COM Express Type 7 product of Acrosser, which is equipped with an Intel Ice Lake D server-grade processor. Especially, it is included a 4 x integrated 10GbE KR high-speed signal on board except for Standard Type 7 with 32 PCIe Lanes. The form factor that meets the popular COM Express standard Basic Module size of 125mm x 95mm completely, this one can fulfill all of your embedded requirements ideally, and make your embedded idea to reality.

ACM-ICLDE7 is equipped with 5 CPU grades totally for your choosing, which can be helpful for all of your applications in a high-speed 10 GbE ethernet communication environment.

Model Name:

ACM-ICLDE7-A1 (D-1746TER, 10c) ACM-ICLDE7-A2 (D-1735TR, 8c) ACM-ICLDE7-A3 (D-1732TE, 8c) ACM-ICLDE7-A4 (D-1715TER, 4c) ACM-ICLDE7-A5 (D-1712TR, 4c)

1.1. Specifications

(Specifications are subject to change without notice.)

Form Factor •	COM Express Basic size, Type 7		
CPU ·	Intel [®] Idaville Platform Ice Lake-D (XEON-D) LCC series		
CPU Frequency •	Up to 2.00 GHz, D-1746TER		
Chipset ·	Intel [®] SoC		
BIOS	AMI UEFI		
Memory ·	4x DDR4 SO-DIMM up to 128GB		
10 GbE Ethernet	4x 10GBASE KR (10 GbE with KR interface & NC-SI) Support PXE Boot function		
GbE Ethernet	1x GbE (Intel [®] i210IT GbE) Support PXE Boot function		
SATA ·	2x SATA III (6.0Gb/s)		
USB ·	4x USB2.0 4x USB3.2 Gen1		
Serial Port ·	2x RS-232 (Only TX & RX)		
GPIO ·	8-bit		



Expansion • • • •	32x PCI Express 3.0 lanes 1x PCI-e x16 4x PCI-e x4 I2C LPC SMBus
OS Support •	Windows 10 Linux Kernel 64-bit (Ubuntu 20.04)
Watchdog Timer •	255 levels
Power Mode •	AT / ATX Mode
Operating Temp •	0~60°C (32~104°F)
Dimension •	125 x 95mm (4.92" x 3.74")
Safety ·	CE, FCC class A

1.2. Packing List

Check if the following items are included in the package.

Item	Q'ty
ACM-ICLDE7	1
FAN + Heatsink	1



2. Hardware Information

2.1. Dimensions





With Active Cooler:





2.2. Switches and Connectors

Top Side:



Bottom Side:





2.3. List of Connectors

Label	Function	
SW1	AT/ATX Switch	
CN3	Battery	
CN4	EC Programming Header	
CN5	BIOS Programming Header	
CN8	ROW A/B	
CN9	ROW C/D	
CN10	LPC	
CN11	LAN GPIO (i210IT)	

2.3.1. AT/ATX Switch (SW1)

Pin #	ON	OFF
1	AT Mode (Default)	ATX Mode
2	RTC Reset	RTC Normal (Default)

2.3.2. Battery (CN3)

Pin #	Signal
1	+3.3V
2	GND

2.3.3. EC Programming Header (CN4)

Pin #	Signal	
1	SPI_MISO	
2	GND	
3	SPI_CLK	
4	+3.3VSB	
5	SPI_MOSI	
6	SPI_CS	
7	NC	



2.3.4. BIOS Programming Header (CN5)

Pin #	Signal	
1	SPI_MISO	
2	GND	
3	SPI_CLK	
4	+3.3VSB	
5	SPI_MOSI	
6	SPI_CS	
7	NC	

2.3.5. ROW A/B Connector (CN8)

Row A		Row B	
Pin #	Signal	Pin #	Signal
A1	GND(FIXED)	B1	GND(FIXED)
A2	GBE0_MDI3-	B2	GBE0_ACT#
A3	GBE0_MDI3+	B3	LPC_FRAME#
A4	GBE0_LINK100#	B4	LPC_AD0
A5	GBE0_LINK1000#	B5	LPC_AD1
A6	GBE0_MDI2-	B6	LPC_AD2
A7	GBE0_MDI2+	B7	LPC_AD3
A8	GBE0_LINK#	B8	LPC_DRQ0#
A9	GBE0_MDI1-	B9	LPC_DRQ1#
A10	GBE0_MDI1+	B10	LPC_CLK
A11	GND(FIXED)	B11	GND(FIXED)
A12	GBE0_MDI0-	B12	PWRBTN#
A13	GBE0_MDI0+	B13	SMB_CK
A14	GBE0_CTREF	B14	SMB_DAT
A15	SUS_S3#	B15	SMB_ALERT#
A16	SATA0_TX+	B16	SATA1_TX+
A17	SATA0_TX-	B17	SATA1_TX-
A18	SUS_S4#	B18	SUS_STAT#
A19	SATA0_RX+	B19	SATA1_RX+
A20	SATA0_RX-	B20	SATA1_RX-
A21	GND(FIXED)	B21	GND(FIXED)



Row A		Row B	
Pin #	Signal	Pin #	Signal
A22	PCIE_TX15+	B22	PCIE_RX15+
A23	PCIE_TX15-	B23	PCIE_RX15-
A24	SUS_S5#	B24	PWR_OK
A25	PCIE_TX14+	B25	PCIE_RX14+
A26	PCIE_TX14-	B26	PCIE_RX14-
A27	BATLOW#	B27	WDT
A28	(S)ATA_ACT#	B28	RSVD
A29	RSVD	B29	RSVD
A30	RSVD	B30	RSVD
A31	GND(FIXED)	B31	GND(FIXED)
A32	RSVD	B32	SPKR
A33	RSVD	B33	I2C_CK
A34	BIOS_DIS0#	B34	I2C_DAT
A35	THRMTRIP#	B35	THRM#
A36	PCIE_TX13+	B36	PCIE_RX13+
A37	PCIE_TX13-	B37	PCIE_RX13-
A38	GND	B38	GND
A39	PCIE_TX12+	B39	PCIE_RX12+
A40	PCIE_TX12-	B40	PCIE_RX12-
A41	GND(FIXED)	B41	GND(FIXED)
A42	USB2-	B42	USB3-
A43	USB2+	B43	USB3+
A44	USB_2_3_OC#	B44	USB_0_1_OC#
A45	USB0-	B45	USB1-
A46	USB0+	B46	USB1+
A47	VCC_RTC	B47	ESPI_EN
A48	RSVD	B48	RSVD
A49	RSVD	B49	SYS_RESET#
A50	LPC_SERIRQ	B50	CB_RESET#
A51	GND(FIXED)	B51	GND(FIXED)
A52	PCIE_TX5+	B52	PCIE_RX5+
A53	PCIE_TX5-	B53	PCIE_RX5-
A54	GPIO	B54	GPO1



Row A		Row B		
Pin #	Signal	Pin #	Signal	
A55	PCIE_TX4+	B55	PCIE_RX4+	
A56	PCIE_TX4-	B56	PCIE_RX4-	
A57	GND	B57	GPO2	
A58	PCIE_TX3+	B58	PCIE_RX3+	
A59	PCIE_TX3-	B59	PCIE_RX3-	
A60	GND(FIXED)	B60	GND(FIXED)	
A61	PCIE_TX2+	B61	PCIE_RX2+	
A62	PCIE_TX2-	B62	PCIE_RX2-	
A63	GPI1	B63	GPO3	
A64	PCIE_TX1+	B64	PCIE_RX1+	
A65	PCIE_TX1-	B65	PCIE_RX1-	
A66	GND	B66	WAKE0#	
A67	GPI2	B67	WAKE1#	
A68	PCIE_TX0+	B68	PCIE_RX0+	
A69	PCIE_TX0-	B69	PCIE_RX0-	
A70	GND(FIXED)	B70	GND(FIXED)	
A71	PCIE_TX8+	B71	PCIE_RX8+	
A72	PCIE_TX8-	B72	PCIE_RX8-	
A73	GND	B73	GND	
A74	PCIE_TX9+	B74	PCIE_RX9+	
A75	PCIE_TX9-	B75	PCIE_RX9-	
A76	GND	B76	GND	
A77	PCIE_TX10+	B77	PCIE_RX10+	
A78	PCIE_TX10-	B78	PCIE_RX10-	
A79	GND	B79	GND	
A80	GND(FIXED)	B80	GND(FIXED)	
A81	PCIE_TX11+	B81	PCIE_RX11+	
A82	PCIE_TX11-	B82	PCIE_RX11-	
A83	GND	B83	GND	
A84	NCSI_TX_EN	B84	VCC_5V_SBY	
A85	GPI3	B85	VCC_5V_SBY	
A86	RSVD	B86	VCC_5V_SBY	
A87	RSVD	B87	VCC_5V_SBY	



Row A Ro		Row B		
Pin #	Signal	Pin #	Signal	
A88	PCIE_CK_REF+	B88	BIOS_DIS1#	
A89	PCIE_CK_REF-	B89	NCSI_RX_ER	
A90	GND(FIXED)	B90	GND(FIXED)	
A91	SPI_POWER	B91	NCSI_CLK_IN	
A92	SPI_MISO	B92	NCSI_RXD1	
A93	GPO0	B93	NCSI_RXD0	
A94	SPI_CLK	B94	NCSI_CRS_DV	
A95	SPI_MOSI	B95	NCSI_TXD1	
A96	TPM_PP	B96	NCSI_TXD0	
A97	TYPE10#	B97	SPI_CS#	
A98	SER0_TX	B98	NCSI_ARB_IN	
A99	SER0_RX	B99	NCSI_ARB_OUT	
A100	GND(FIXED)	B100	GND(FIXED)	
A101	SER1_TX	B101	FAN_PWMOUT	
A102	SER1_RX	B102	FAN_TACHIN	
A103	LID#	B103	SLEEP#	
A104	VCC_12V	B104	VCC_12V	
A105	VCC_12V	B105	VCC_12V	
A106	VCC_12V	B106	VCC_12V	
A107	VCC_12V	B107	VCC_12V	
A108	VCC_12V	B108	VCC_12V	
A109	VCC_12V	B109	VCC_12V	
A110	GND(FIXED)	B110	GND(FIXED)	

2.3.6. ROW C/D Connector (CN9)

Row C		Row D		
Pin #	Signal	Pin #	Signal	
C1	GND(FIXED)	D1	GND(FIXED)	
C2	GND	D2	GND	
C3	USB_SSRX0-	D3	USB_SSTX0-	
C4	USB_SSRX0+	D4	USB_SSTX0+	
C5	GND	D5	GND	



Row C		Row D		
Pin #	Signal	Pin #	Signal	
C6	USB_SSRX1-	D6	USB_SSTX1-	
C7	USB_SSRX1+	D7	USB_SSTX1+	
C8	GND	D8	GND	
C9	USB_SSRX2-	D9	USB_SSTX2-	
C10	USB_SSRX2+	D10	USB_SSTX2+	
C11	GND(FIXED)	D11	GND(FIXED)	
C12	USB_SSRX3-	D12	USB_SSTX3-	
C13	USB_SSRX3+	D13	USB_SSTX3+	
C14	GND	D14	GND	
C15	10G_PHY_MDC_SCL3	D15	10G_PHY_MDIO_SDA3	
C16	10G_PHY_MDC_SCL2	D16	10G_PHY_MDIO_SDA2	
C17	10G_SDP2	D17	10G_SDP3	
C18	GND	D18	GND	
C19	PCIE_RX6+	D19	PCIE_TX6+	
C20	PCIE_RX6-	D20	PCIE_TX6-	
C21	GND(FIXED)	D21	GND(FIXED)	
C22	PCIE_RX7+	D22	PCIE_TX7+	
C23	PCIE_RX7-	D23	PCIE_TX7-	
C24	10G_INT2	D24	10G_INT3	
C25	GND	D25	GND	
C26	10G_KR_RX3+	D26	10G_KR_TX3+	
C27	10G_KR_RX3-	D27	10G_KR_TX3-	
C28	GND	D28	GND	
C29	10G_KR_RX2+	D29	10G_KR_TX2+	
C30	10G_KR_RX2-	D30	10G_KR_TX2-	
C31	GND(FIXED)	D31	GND(FIXED)	
C32	10G_SFP_SDA3	D32	10G_SFP_SCL3	
C33	10G_SFP_SDA2	D33	10G_SFP_SCL2	
C34	10G_PHY_RST_23	D34	10G_PHY_SEL_23	
C35	10G_PHY_RST_01	D35	10G_PHY_SEL_01	
C36	10G_LED_SDA	D36	RSVD	
C37	10G_LED_SCL	D37	RSVD	
C38	10G_SFP_SDA1	D38	10G_SFP_SCL1	



Row C		Row D			
Pin #	Signal	Pin #	Signal		
C39	10G_SFP_SDA0	D39	10G_SFP_SCL0		
C40	10G_SDP0	D40	10G_SDP1		
C41	GND(FIXED)	D41	GND(FIXED)		
C42	10G_KR_RX1+	D42	10G_KR_TX1+		
C43	10G_KR_RX1-	D43	10G_KR_TX1-		
C44	GND	D44	GND		
C45	10G_PHY_MDC_SCL1	D45	10G_PHY_MDIO_SDA1		
C46	10G_PHY_MDC_SCL0	D46	10G_PHY_MDIO_SDA0		
C47	10G_INT0	D47	10G_INT1		
C48	GND	D48	GND		
C49	10G_KR_RX0+	D49	10G_KR_TX0+		
C50	10G_KR_RX0-	D50	10G_KR_TX0-		
C51	GND(FIXED)	D51	GND(FIXED)		
C52	PCIE_RX16+	D52	PCIE_TX16+		
C53	PCIE_RX16-	D53	PCIE_TX16-		
C54	TYPE0#	D54	RSVD		
C55	PCIE_RX17+	D55	PCIE_TX17+		
C56	PCIE_RX17-	D56	PCIE_TX17-		
C57	TYPE1#	D57	TYPE2#		
C58	PCIE_RX18+	D58	PCIE_TX18+		
C59	PCIE_RX18-	D59	PCIE_TX18-		
C60	GND(FIXED)	D60	GND(FIXED)		
C61	PCIE_RX19+	D61	PCIE_TX19+		
C62	PCIE_RX19-	D62	PCIE_TX19-		
C63	RSVD	D63	RSVD		
C64	RSVD	D64	RSVD		
C65	PCIE_RX20+	D65	PCIE_TX20+		
C66	PCIE_RX20-	D66	PCIE_TX20-		
C67	RSVD	D67	GND		
C68	PCIE_RX21+	D68	PCIE_TX21+		
C69	PCIE_RX21-	D69	PCIE_TX21-		
C70	GND(FIXED)	D70	GND(FIXED)		
C71	PCIE_RX22+	D71	PCIE_TX22+		



Row C		Row D		
Pin #	Signal	Pin #	Signal	
C72	PCIE_RX22-	D72	PCIE_TX22-	
C73	GND	D73	GND	
C74	PCIE_RX23+	D74	PCIE_TX23+	
C75	PCIE_RX23-	D75	PCIE_TX23-	
C76	GND	D76	GND	
C77	RSVD	D77	RSVD	
C78	PCIE_RX24+	D78	PCIE_TX24+	
C79	PCIE_RX24-	D79	PCIE_TX24-	
C80	GND(FIXED)	D80	GND(FIXED)	
C81	PCIE_RX25+	D81	PCIE_TX25+	
C82	PCIE_RX25-	D82	PCIE_TX25-	
C83	RSVD	D83	RSVD	
C84	GND	D84	GND	
C85	PCIE_RX26+	D85	PCIE_TX26+	
C86	PCIE_RX26-	D86	PCIE_TX26-	
C87	GND	D87	GND	
C88	PCIE_RX27+	D88	PCIE_TX27+	
C89	PCIE_RX27-	D89	PCIE_TX27-	
C90	GND(FIXED)	D90	GND(FIXED)	
C91	PCIE_RX28+	D91	PCIE_TX28+	
C92	PCIE_RX28-	D92	PCIE_TX28-	
C93	GND	D93	GND	
C94	PCIE_RX29+	D94	PCIE_TX29+	
C95	PCIE_RX29-	D95	PCIE_TX29-	
C96	GND	D96	GND	
C97	RSVD	D97	RSVD	
C98	PCIE_RX30+	D98	PCIE_TX30+	
C99	PCIE_RX30-	D99	PCIE_TX30-	
C100	GND(FIXED)	D100	GND(FIXED)	
C101	PCIE_RX31+	D101	PCIE_TX31+	
C102	PCIE_RX31-	D102	PCIE_TX31-	
C103	GND	D103	GND	
C104	VCC_12V	D104	VCC_12V	



Row C		Row D		
Pin #	Signal	Pin #	Signal	
C105	VCC_12V	D105	VCC_12V	
C106	VCC_12V	D106	VCC_12V	
C107	VCC_12V	D107	VCC_12V	
C108	VCC_12V	D108	VCC_12V	
C109	VCC_12V	D109	VCC_12V	
C110	GND(FIXED)	D110	GND(FIXED)	

2.3.7. LPC (CN10)

Pin #	Signal
1	LAD0
2	LAD1
3	LAD2
4	LAD3
5	+3.3V
6	LFRAME#
7	LRESET#
8	GND
9	LCLK
10	NC
11	NC
12	NC

2.3.8. LAN GPIO (i210IT) (CN11)

Pin #	Signal
1	SDP1
2	SDP2
3	SDP3
4	SDP4
5	GND
6	GND



2.4. DIMM Population Configurations

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

DIMM	Slot Configuration	Memory Type
1	CN2	DDR4 2933
1	CN6	DDR4 2933
2	CN2 & CN6	DDR4 2666
4	CN1 & CN2 & CN7 & CN8	DDR4 2400

Note: Memory supports 8GB to 32GB per SoDIMM.



2.4.1. DDR4 2933 ECC SoDIMM Validation Results

Listed below are validation results from a small sample of DDR4 2933 ECC SoDIMM tested on Intel reference platforms.

DIMM Supplier	DIMM Part Number	DIMM Size	Raw Card
Micron	MTA18ASF4G72HZ-3G2B1	32GB	G1
Samsung	M474A4G43AB1-CVF	32GB	G1
Samsung	M474A4G43AB1-CWE	32GB	G1
Samsung	M474A2K43DB1-CVF	16GB	G1
Samsung	M474A2K43DB1-CWE	16GB	G1
Samsung	M474A1K43DB1-CVF	8GB	D1
Samsung	M474A1K43DB1-CWE	8GB	D1
SK	HMA82GS7DJR8N-WMT0	16GB	G1
SK	HMA82GS7DJR8N-XNT0	16GB	G1
SK	HMA81GS7DJR8N-WMT0	8GB	D1

DDR4 2933 ECC SoDIMM, 1DIMM/ch, 2 channels, tested at 1.2V Vdd:

DRAM Supplier	DRAM Part Number	DRAM Density	DRAM Width	DRAM Date Code	Die Revision
Micron	MT40A2G8VA-062E:B	16Gb	x8	1946	В
Samsung	K4AAG085WA-BCVF	16Gb	X8	1946	А
Samsung	K4AAG085WA-BCWE	16Gb	X8	2004	А
Samsung	K4A8G085WD-BCVF	8Gb	X8	1949	D
Samsung	K4A8G085WD-BCWE	8Gb	X8	2004	D
Samsung	K4A8G085WD-BCVF	8Gb	X8	1949	D
Samsung	K4A8G085WD-BCWE	8Gb	X8	2001	D
SK Hynix	H5AN8G8NDJR-WMC	8Gb	X8	2001	D
SK Hynix	H5AN8G8NDJR-XNC	8Gb	X8	2010	D
SK Hynix	H5AN8G8NDJR-WMC	8Gb	X8	2001	D



2.5. Function Block Diagram





2.6. Hardware Assembly

2.6.1. CPU Cooler Assembly

Step 1:



- Note: Slightly tighten all four screws in diagonal order. Then, repeat with torque 3~5 kgf-cm with proper tools.
- Note: According to the CPU spec, the CPU Tcase should be kept at or below 85°C for your thermal design consideration.



Step 2:





3. AMI BIOS Setup

3.1. System Test and Initialization

These routines test and initialize board hardware. If the routines encounter an error during the tests, you will either hear a few short beeps or see an error message on the screen. There are two kinds of errors: fatal and non-fatal. The system can usually continue the boot up sequence with non-fatal errors.

System configuration verification

These routines check the current system configuration stored in the CMOS memory and BIOS NVRAM. If system configuration is not found or system configuration data error is detected, system will load optimized default and re-boot with this default system configuration automatically.

There are four situations in which you will need to setup system configuration:

- 1. You are starting your system for the first time.
- 2. You have changed the hardware attached to your system.
- 3. The system configuration is reset by Clear-CMOS jumper.
- 4. The CMOS memory has lost power and the configuration information has been erased.

The ACM-ICLDE7 CMOS memory has an integral lithium battery backup for data retention. However, you will need to replace the complete unit when it finally runs down.

3.2. AMI BIOS Setup

AMI BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM and BIOS NVRAM so that it retains the Setup information when the power is turned off.

Entering Setup

Power on the computer and press or <ESC> immediately. This will allow you to enter Setup.

Main

Set the date, use tab to switch between date elements.

Advanced

Enable disable boot option for legacy network devices.

Platform Configuration

Chipset and ME Parameters.



Socket Configuration

Processor and Memory Parameters.

Security

Set setup administrator password

Boot

Enables/disable quiet boot option.

Save & Exit

Exit system setup after saving the changes.

3.3. Setup Submenu: Main





3.4. Setup Submenu: Advanced

Ap	tio Setup – AMI	
Main Advanced Platform Configuration	SOCKET CONTIGURATION	Security Boot Save & Exit
 Trusted Computing NVMe Configuration Hardware Monitor SID Configuration Serial Port Console Redirection BIOS Robot 		Trusted Computing Settings ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.22.	1285 Copyright (C) 202	2 AMI

3.4.1. Trusted Computing

Advanced	Aptio Setup – AMI	
TPM 2.0 Device Found Firmware Version: Vendor:	7.2 NTC	Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and
Security Device Support Active PCR banks Available PCR banks	[Enable] SHA256 SHA-1,SHA256,SHA384	INTIA interface will not be available.
SHA-1 PCR Bank SHA256 PCR Bank SHA384 PCR Bank	[Disabled] [Enabled] [Disabled]	
Pending operation Platform Hierarchy Storage Hierarchy Endorsement Hierarchy TFM 2.0 UEFI Spec Version Physical Presence Spec Version TFM 2.0 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>
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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.
- SHA384 PCR Bank Enable or Disable SHA384 PCR Bank.
- SM3_256 PCR Bank Enable or Disable SM3_256 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.
- TPM 2.0 UEFI Spec Version
 Select the TCH2 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. NVMe Configuration



3.4.3. Hardware Monitor

Advanced	Aptio Setup – AMI	
PC Health Status		Smart Fan Configuration
CPU Temperature Suptom Temperature	: +42 °c	
System Temperature 2	: +37 °	
System FAN	: 3823 RPM	
5VSB	: +4.910 V	
+12V	: +11.533 V	
VMEM	: +1.202 V	the Colort Concor
P1V05	: +1.055 V	t↓: Select Item Enter: Select
▶ Fan 1 Mode Configuration		+/-: Change Opt.
		F1: General Help
		E3: Optimized Defaults
		F4: Save & Exit
		ESC: Exit
Ve	rsion 2.22.1285 Copyright (C)	2022 AMI

System Fan

Smart fan configuration.



PWM signal

Select output PWM of inverting or non-uninverting signal.

3.4.4. SIO Configuration



3.4.5. Serial Port Configuration





Use This Device

Enable or Disable this Logical Device.

Possible:

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

3.4.6. Serial Port Console Redirection



- Console Redirection
 Console Redirection Enable or Disable.
- Console Redirection EMS
 Console Redirection Enable or Disable.



3.4.7. BIOS Robot

Advanced	Aptio Setup – AMI	
Advanced BIOS Robot Sends watch dog before BIOS POST POST Timer (second) Sends watch dog before booting OS OS Timer (minute) Delayed POST (IFEI phase) Delayed POST (IFEI phase) Delayed time (second) Reset system once Soft or hard reset Device detecting configuration	Aptio Setup - AMI [Disabled] 30 [Disabled] 3 [Disabled] 10 [Disabled] 10 [Disabled] [Soft reset]	Enabled - Robot set Watch Dog Timer(WDT) right after power on, before BIDS start PDST process. And then Robot will clear WDT on compeletion of PDST. WDT will reset system automatically if it is not cleared before its timer counts down to zero. +: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults
		F4: Save & Exit ESC: Exit
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Sends watch dog before BIOS POST

Enabled - Robot set Watch Dog Timer (WDT) right after power on, before BIOS start POST process. And then Robot will clear WDT on completion of POST. WDT will reset system automatically if it is not cleared before its timer counts down to zero.

• POST Timer (second)

Timer count set to Watch Dog Timer for POST. Warning: Do not set to a value equal or shorter than normal POST time, otherwise system may never complete POST unless clearing BIOS settings. More than 2 x normal POST time is suggested.

Sends watch dog before booting OS

Enabled - Robot set Watch Dog Timer (WDT) after POST completion, before BIOS transfer control to OS. Warning: Before enabling this function, a program in OS must be in responsible for clearing WDT. Also, this function should be disabled if OS is going to update itself.

• OS Timer (minute)

Timer count set to Watch Dog Timer for OS loading.

Delayed POST (PEI phase)

Enabled - Robot holds BIOS from starting POST, right after power on. This allows BIOS POST to start with stable power or start after system is physically warmed-up.

Note: Robot does this before 'Sends watch dog'.

Delayed time (second)

Period of time for Robot to hold BIOS from POST.



Delayed POST (DXE phase)

Enabled - Robot holds BIOS before POST completion. This allows BIOS POST to start with stable power or start after system is physically warmed-up. Note: Robot does this after 'Sends watch dog before BIOS POST'.

Delayed time (second)

Period of time for Robot to hold BIOS from POST.

Reset system once

Enabled - Robot resets system for one time on each boot. This will send a soft or hard reset to onboard devices, thus puts devices to more stable state.

Soft or hard reset

Select reset type robot should send on each boot.

3.4.8. Power Management

Advanced	Aptio Setup – AMI	
Power Management		Select system power mode.
Power Mode Restore AC Power Loss	[ATX Type] [Last State]	
Wake Events RTC wake system from S5	[Disabled]	
		++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Ver	sion 2.21.1278 Copyright ((C) 2021 AMI

- 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 minute(s).



3.4.9. Digital IO Port Configuration

Advanced	Aptio Setup – AMI	
Advanced Digital IO Port Configuration DIO1 DIO2 DIO3 DIO4 DIO5 Output Level DIO6 Output Level DIO7 Output Level DIO8 Output Level	Aptio Setup - AMI [Input] [Input] [Input] [Input] [Output] [High] [Output] [High] [Output] [High]	Set DIO as Input or Output ++: 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	2.22.1285 Copyright (C) 2022	2 AMI

- **DIO Port*** Set DIO as Input or Output.
- Output Level Set output level when DIO pin is output.



3.5. Setup Submenu: Platform Configuration



3.5.1. PCH-IO Configuration





3.5.2. PCI Express Configuration

Platform	Aptio Setup – AMI Configuration	
PCI Express Configuration		PCI Express Root Port Settings.
 PCI Express Root Port 1 PCI Express Root Port 2 PCI Express Root Port 3 PCI Express Root Port 5 PCI Express Root Port 6 PCI Express Root Port 7 PCI Express Root Port 8 PCI Express Root Port 10 PCI Express Root Port 11 PCI Express Root Port 12 		+*: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
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- PCI Express Root Port* Control the PCI Express Root Port.
- ASPM

Control the PCI Express Root Port.

- PCI Express Root Port* PCI Express Active State Power Management settings.
- Hot Plug
 PCI Express Hot Plug Enable/Disable.
- PCle Speed

Configure PCIe Speed Auto is equal to Gen2 or Gen3 depending on DTR soft strap.



3.5.3. SATA Configuration

Platform Configurat	Aptio Setup – AMI ion	
SATA Controller Configuration		SATA test settings
SATA Configuration		
SATA Port 0 Port 0 Hot Plug	[Not Installed] [Enabled] [Disabled]	
SATA Port 1 Port 1 Hot Plug	HGST HTE725032 - 320.0 GB [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
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- SATA Configuration SATA test settings.
- Port*

Enable or Disable SATA Port.

Hot Plug

Designates this port as Hot Pluggable.



3.5.4. Server ME Configuration

++: Select Screen 1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

3.6. Setup Submenu: Socket Configuration

Ap Main Advanced Platform Configuration	tio Setup – AMI Socket Configuration Security Boot Save & Exit	t
 Processor Configuration Hemory Configuration IIO Configuration 	Displays and provides opti to change the IIO Settings	ion s
	++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	
Version 2.22.		



3.6.1. Processor Configuration

	Aptio Setup — AMI Socket Configuration	
Processor Configuration Processor BSP Revision Processor Socket Processor ID	606C1 - ICX-D LCC B Socket 0 Socket 1 000606C1*	Enables Hyper Threading (Software Method to Enable/Disable Logical Processor threads.
Processor Frequency Processor Max Ratio Processor Min Ratio Microcode Revision L1 Cache RAM(Per Core) L2 Cache RAM(Per Core) L3 Cache RAM(Per Package)	2.0006H2 14H 08H 010001A0 80KB 1280KB 15360KB	
Hypen-Threading [ALL]	THE CPU @ 2.00GHz	++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit F4: Save & Exit
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Hyper-Threading [ALL]

Enable Hyper Threading (Software Method to Enable/Disable Logical Processor threads).

3.6.2. Memory Configuration





Memory Frequency

Maximum Memory Frequency Selections in MHz. If Enforce POR is disabled, user will be able to run at higher frequencies than the memory support (limited by processor support). Do not select Reserved.

3.6.3. Memory Topology





3.6.4. IIO Configuration



3.6.5. Socket0 Configuration



• IOU0 (IIO PCIe Port 1)

Selects PCIe port Bifurcation for selected slot(s).



3.7. Setup Submenu: Security

Main Huvanceu Chipset Security boot sa	VE & EXIT
Password Description	Set Administrator Password
If ONLY the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup. If ONLY the User's password is set, then thi is a power on password and must be entered t boot or enter Setup. In Setup the User will have Administrator rights. The password length must be in the following range: Minimum length 3 Newtere Length 20	S O
Administrator Password User Password	++: Select Screen 11: Select Item Enter: Select +/-: Change Opt.
▶ Secure Boot	F1: General Heip F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
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Change User/Super visor Password

You can install a Super visor password, and if you install a super visor password, you can then install a user password. A user password does not provide access to many of the features in the Setup utility.

If you highlight these items and press Enter, a dialog box appears which lets you enter a password. You can enter no more than six letters or numbers. Press Enter after you have typed in the password. A second dialog box asks you to retype the password for confirmation. Press Enter after you have retyped it correctly. The password is required at boot time, or when the user enters the Setup utility.

Removing the Password

Highlight this item and type in the current password. At the next dialog box press Enter to disable password protection.



3.7.1. Secure Boot

	Aptio Setup – AMI Security	
System Mode	Setup	Secure Boot feature is Active
Secure Boot	[Disabled] Not Active	Platform Key(PK) is enrolled and the System is in User mode. The meda change program
Secure Boot Mode ► Restore Factory Keys ► Reset To Setup Mode	(Custom)	platform reset
▶ Key Management		
		<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>
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Secure Boot

Secure Boot feature is Active if Secure Boot is Enabled, Platform Key (PK) is enrolled and the System is in User mode. The mode change requires platform reset.

Secure Boot Mode

Secure Boot mode options: Standard or Custom.

In Custom mode, Secure Boot Policy variables can be configured by a physically present user without full authentication.

Restore Factory Keys

Force System to User Mode. Install factory default Secure Boot key databases.

Reset to Setup Mode

Delete all Secure Boot key databases from NVRAM.



3.7.2. Secure Boot

Aptio Setup – AMI <mark>Security</mark>					
Vendor Keys	Valid	Install factory default Secure			
Factory Key Provision • Restore Factory Keys • Reset To Setup Mode • Export Secure Boot var. • Enroll Efi Image	[Disabled] iables	reset and while the System is in Setup mode			
Device Guard Ready > Remove 'UEFI CA' from [> Restore DB defaults	8				
Secure Boot variable ▶ Platform Key(PK)	Size Keys Key Source 0 0 No Keys	++: Select Screen			
▶ Key Exchange Keys	0 0 No Keys	14: Select Item			
 Authorized Signatures Forbidden Signatures 	0 0 NO KEYS 0 0 NO KEYS	Enter: Select			
▶ Authorized TimeStamps	0 0 No Keys	F1: General Help			
▶ OsRecovery Signatures	0 0 No Keys	F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit			
	Version 2 21 1278 Conuright (C) 202	1 AMT			

• Factory Key Provision

Secure Boot feature is Active if Secure Boot is Enabled, Platform Key (PK) is enrolled and the System is in User mode. The mode change requires platform reset.

- **Restore Factory Keys** Force System to User Mode. Install factory default Secure Boot key databases.
- Reset to Setup Mode
 Delete all Secure Boot key databases from NVRAM.
- Export Secure Boot variables Copy NVRAM content of Secure Boot variables to files in a root folder on a file system device.
- Enroll Efi Image

Allow the image to run in Secure Boot mode. Enroll SHA256 Hash certificate of a PE image into Authorized Signature Database (db).

- Remove 'UEFI CA' from DB Device Guard ready system must not list 'Microsoft UEFI CA' Certificate in Authorized Signature database (db).
- Restore DB defaults
 Restore DB variable to factory defaults.





- Platform Key (PK)
- Key Exchange Keys
- Authorized Signatures
- Forbidden Signatures
- Authorized Timestamps
- OS Recover y Signatures Enroll Factory Defaults or load certificates from a file:
 - 1. Public Key Certificate:
 - a) EFI_SIGNATURE_LIST
 - b) EFI_CERT_X509 (DER)
 - c) EFI_CERT_RSA2048 (bin)
 - d) EFI_CERT_SHAXXX
 - 2. Authenticated UEFI Variable
 - 3. EFI PE/COFF Image (SHA256)

Key Source: Factory, External, Mixed

3.8. Setup Submenu: Boot



- Quiet Boot Enable or Disable Quiet Boot option.
- UEFI PXE Support
 Enable/Disable UEFI Network Stack.



• FIXED BOOT ORDER Priorities Sets the system boot order.

3.8.1. BBS Priorities

	Aptio Setup – AMI	Boot
Boot Option #1	[Windows Boot Manager (P1: HGST HTE725032A7E630]	<pre>Sets the system boot order ++: 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	2.22.1285 Copyright (C) 2022	2 AMI



3.9. Setup Submenu: Save & Exit

Aptio Setup – AMI Main Advanced Chipset Security Boot <mark>Save & Exit</mark>	
Save Options	Reset the system after saving
Save Changes and Reset Discard Changes and Exit	the changes.
Default Options Restore Defaults	
	↔: Select Screen ↑↓: Select Item
	Enter: Select +/−: Change Opt.
	F1: General Help F2: Previous Values
	F3: Optimized Defaults F4: Save & Exit
	ESC: Exit
Version 2.21.1278 Copyright (C) 2021	. AMI

- Save Changes and Reset Reset the system after saving the changes.
- **Discard Changes and Exit** Exit system setup without saving any changes.
- Restore Defaults Restore/Load Default values for all the setup options.



4. Drivers Installation

4.1. Drivers Download and Installation

Drivers for the ACM-ICLDE7 can be downloaded from the product page on the Acrosser website by following this link:

https://www.acrosser.com/en/Support/Download/

Download the driver(s) you need and extract the zip. Then, follow the steps below to install the drivers.

Chipset Driver (Windows 10)

- 1. Open the folder where you unzipped the Chipset Drivers
- 2. Run the SetupChipset.exe file in the folder
- 3. Follow the instructions
- 4. Drivers will be installed automatically

• LAN Drivers (Windows 10)

- 1. Open the folder where you unzipped the LAN Drivers
- 2. Click the ProWinx64.exe file in the folder.
- 3. Follow the instructions
- 4. Drivers will be installed automatically

• Network Adapter Drivers (Windows 10)

- 1. Open the folder where you unzipped the Network Adapter Drivers
- 2. Click the **Autorun.exe** file in the folder.
- 3. Follow the instructions
- 4. Drivers will be installed automatically



5. Appendix

5.1. I/O Information

5.1.1. I/O Address Map

✓ Input/output (IO)

	[000000000000000 - 00000000000000F] Direct memory access controller
	[00000000000000 - 00000000000CF7] PCI Express Root Complex
	[000000000000010 - 00000000000001F] Motherboard resources
	[000000000000020 - 00000000000003D] Programmable interrupt controller
	[000000000000040 - 000000000000043] System timer
	[000000000000050 - 000000000000053] System timer
	[00000000000061 - 000000000000061] System speaker
	[000000000000070 - 000000000000071] System CMOS/real time clock
	[000000000000072 - 000000000000073] System CMOS/real time clock
	[000000000000074 - 00000000000077] System CMOS/real time clock
	[00000000000080 - 00000000000080] Motherboard resources
	[00000000000081 - 00000000000083] Direct memory access controller
	[00000000000084 - 0000000000086] Motherboard resources
	[00000000000087 - 00000000000087] Direct memory access controller
	[00000000000088 - 00000000000088] Motherboard resources
	[00000000000089 - 0000000000088] Direct memory access controller
	[0000000000008C - 000000000008E] Motherboard resources
	[0000000000008F - 000000000008F] Direct memory access controller
	[000000000000000 - 0000000000009F] Motherboard resources
	[0000000000000A0 - 00000000000BD] Programmable interrupt controller
	[00000000000000 - 00000000000DF] Direct memory access controller
	[0000000000000F0 - 000000000000F0] Numeric data processor
Ψ,	[000000000002F8 - 000000000002FF] Communications Port (COM2)
Ŵ	[000000000003F8 - 000000000003FF] Communications Port (COM2)
÷.	[000000000003F8 - 000000000003FF] Communications Port (COM1)
	[0000000000000400 - 00000000000041F] Motherboard resources
	[0000000000004D0 - 000000000004D1] Programmable interrupt controller
	[0000000000000500 - 000000000005FE] Motherboard resources
	[0000000000000500 - 000000000005FE] Motherboard resources
	[0000000000001000 - 000000000005FFF] PCI Express Root Complex
1	[0000000000004000 - 000000000004FFF] CDF PCIeRP[9] - 18AE
-	[0000000000005020 - 000000000000503F] Standard SATA AHCI Controller
Ŵ	[0000000000005040 - 000000000005047] CDF HSUART - 18D8 (COM5)
÷.	[000000000005050 - 00000000005057] CDF HSUART - 18D8 (COM4)
Ŵ	[0000000000005060 - 000000000005067] CDF HSUART - 18D8 (COM3)
-	[0000000000005070 - 000000000005073] Standard SATA AHCI Controller
-	[0000000000005080 - 000000000005087] Standard SATA AHCI Controller
	[0000000000006000 - 00000000000AFFF] PCI Express Root Complex
-	[000000000000000 - 000000000000007F] NVIDIA GeForce GT 1030
	[000000000000000 - 00000000000AFFF] Intel(R) PCI Express Root Port A - 347A
	[000000000000B000 - 0000000000FFFF] PCI Express Root Complex



 Image: Construction of the state o

5.1.2. Memory Address Map

Memory

	[0000000000A0000 - 000000000BFFFF] PCI Express Root Complex
	[0000000000C8000 - 000000000CFFFF] PCI Express Root Complex
	[0000000090000000 - 00000000B3FFFFFF] PCI Express Root Complex
P	[0000000B3D00000 - 0000000B3D1FFFF] Intel(R) I210 Gigabit Network Connection
	[0000000B3D00000 - 0000000B3DFFFFF] CDF PCIeRP[9] - 18AE
P	[0000000B3D20000 - 0000000B3D23FFF] Intel(R) I210 Gigabit Network Connection
	[00000000B3E80000 - 0000000B3EFFFFF] Intel (R) PMON MSM Registers - 09A7
	[00000000B3F00000 - 00000000B3F7FFFF] Intel (R) PMON MSM Registers - 09A7
	[00000000B3F80000 - 00000000B3F81FFF] Standard SATA AHCI Controller
	[00000000B3F82000 - 00000000B3F83FFF] Intel (R) MSM Registers - 09A6
	[00000000B3F87000 - 00000000B3F877FF] Standard SATA AHCI Controller
	[00000000B3F88000 - 00000000B3F880FF] Standard SATA AHCI Controller
Ψ.	[00000000B3FFFD00 - 00000000B3FFFDFF] CDF HSUART - 18D8 (COM3)
÷.	[00000000B3FFFE00 - 00000000B3FFFEFF] CDF HSUART - 18D8 (COM4)
Ψ.	[00000000B3FFFF00 - 00000000B3FFFFFF] CDF HSUART - 18D8 (COM5)
	[00000000B4000000 - 0000000D7FFFFFF] PCI Express Root Complex



	🏣 [0000000006000000 - 000000000070FFFFF] Intel(R) PCI Express Root Port A - 347A
	Tail [0000000D70FC000 - 0000000D70FFFFF] High Definition Audio Controller
	Tan [0000000008000000 - 00000000FB7FFFFF] PCI Express Root Complex
	Tage [000000000000000000000000000000000000
	[00000000FD000000 - 00000000FD69FFFF] Motherboard resources
	iii (0000000FD6F0000 - 00000000FDFFFFFF) Motherboard resources
	[00000000FDC20000 - 0000000FDC21FFF] Unknown device
	🙀 [00000000FDC50000 - 00000000FDC51FFF] Unknown device
	[00000000FE000000 - 0000000FE01FFFF] Motherboard resources
	Tage [00000000FE010000 - 00000000FE010FFF] CDF SPI - 18E0
	[00000000FE010000 - 00000000FE010FFF] PCI Express Root Complex
	Tail [00000000FE200000 - 00000000FE7FFFF] Motherboard resources
	[00000000FEC00000 - 0000000FECFFFF] Advanced programmable interrupt controller
	Tem [0000000FED00000 - 0000000FED003FF] High precision event timer
	[000000000000000000000000000000000000
	[00000000FF000000 - 0000000FFFFFFF] Motherboard resources
	Tem [0000000FF000000 - 0000000FFFFFFF] Motherboard resources
	Tem [0000020FFFA00000 - 0000020FFFA1FFFF] CDF PCIeRP[9] - 18AE
	[0000020FFFA40000 - 0000020FFFA4FFFF] Intel(R) USB 3.0 eXtensible Host Controller - 1.0 (Microsoft)
	The [0000020FFFA77000 - 0000020FFFA77FFF] CDF ME:HECI#3 - 18D6
	Tem [0000020FFFA78000 - 0000020FFFA78FFF] CDF ME:HECI#2 - 18D4
	Tem [0000020FFFA79000 - 0000020FFFA79FFF] CDF ME:HECI#1 - 18D3
	- [0000021EEEE00000 - 0000021EEEE1EEEE1 Intel/P) PCI Express Poot Port A - 347A
	[0000021111100000 - 000002111111111] Intel(R) PCI Express Root Poil & - 347A [0000022ED80000000 - 0000022EDEEEEEE1 Intel(R) Ethernet Connection E922 I ///557 AT 10GBASE T #2
i	[0000022FD8000000 - 0000022FDFFFFFF] Intel(k) Ethemet Connection E825-E/XD31-AT 103BASE-1 #3
	[0000022FD0000000 - 0000022FFC4FFFF] PCI Express Root Port [0000022FF0000000 - 0000022FFC4FFFF] PCI Express Root Port [0000022FF0000000 - 0000022FFC4FFFF] PCI Express Root Port
	[0000022FE0000000 - 0000022FE/FFFFF] Intel(K) Ethernet Connection E823-L/X557-AI 10GBASE-1 #2
	[0000022FE8000000 - 0000022FEFFFFFF] Intel(K) Ethernet Connection E823-L/X557-AI 10GBASE-1
	[0000022FF0000000 - 0000022FF/FFFFF] Intel(K) Ethernet Connection E823-L/X55/-AI 10GBASE-1 #4
	[0000022FFC4C0000 - 0000022FFC4CFFFF] Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #3
	[0000022FFC4D0000 - 0000022FFC4DFFFF] Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #2
	[0000022FFC4E0000 - 0000022FFC4EFFF] Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T
	[0000022FFC4F0000 - 0000022FFC4FFFF] Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #4

SSER



IRQ Mapping Chart 5.1.3.

Ĩ	Int	errupt request (IRQ)	
		(ISA) 0x00000000 (00)	System timer
	Ŵ	(ISA) 0x0000003 (03)	Communications Port (COM2)
	÷.	(ISA) 0x00000004 (04)	Communications Port (COM1)
	Ŵ	(ISA) 0x00000004 (04)	Communications Port (COM2)
		(ISA) 0x0000008 (08)	System CMOS/real time clock
		(ISA) 0x000000D (13)	Numeric data processor
	- 🛣	(ISA) 0x00000015 (21)	Unknown device
		(ISA) 0x0000036 (54)	Microsoft ACPI-Compliant System
		(ISA) 0x0000037 (55)	Microsoft ACPI-Compliant System
		(ISA) 0x0000038 (56)	Microsoft ACPI-Compliant System
		(ISA) 0x0000039 (57)	Microsoft ACPI-Compliant System
		(ISA) 0x000003A (58)	Microsoft ACPI-Compliant System
		(ISA) 0x000003B (59)	Microsoft ACPI-Compliant System
		(ISA) 0x000003C (60)	Microsoft ACPI-Compliant System
		(ISA) 0x000003D (61)	Microsoft ACPI-Compliant System
		(ISA) 0x000003E (62)	Microsoft ACPI-Compliant System
		(ISA) 0x000003F (63)	Microsoft ACPI-Compliant System
		(ISA) 0x00000040 (64)	Microsoft ACPI-Compliant System
		(ISA) 0x00000041 (65)	Microsoft ACPI-Compliant System
		(ISA) 0x00000042 (66)	Microsoft ACPI-Compliant System
		(ISA) 0x00000043 (67)	Microsoft ACPI-Compliant System
		(ISA) 0x00000044 (68)	Microsoft ACPI-Compliant System
		(ISA) 0x00000045 (69)	Microsoft ACPI-Compliant System
		(ISA) 0x00000046 (70)	Microsoft ACPI-Compliant System
		(ISA) 0x00000047 (71)	Microsoft ACPI-Compliant System
		(ISA) 0x00000048 (72)	Microsoft ACPI-Compliant System
		(ISA) 0x00000049 (73)	Microsoft ACPI-Compliant System
	-	(ISA) 0x0000004A (74)	Microsoft ACPI-Compliant System
	-	(ISA) 0x0000004B (75)	Microsoft ACPI-Compliant System
	-	(ISA) 0x0000004C (76)	Microsoft ACPI-Compliant System
		(ISA) 0x0000004D (77)	Microsoft ACPI-Compliant System
		(ISA) 0x0000004E (78)	Microsoft ACPI-Compliant System
		(ISA) 0x0000004F (79)	Microsoft ACPI-Compliant System
		(ISA) 0x00000050 (80)	Microsoft ACPI-Compliant System
		(ISA) 0x00000051 (81)	Microsoft ACPI-Compliant System
		(ISA) 0x00000052 (82)	Microsoft ACPI-Compliant System
		(ISA) 0x00000053 (83)	Microsoft ACPI-Compliant System
		(ISA) 0x00000054 (84)	Microsoft ACPI-Compliant System
		(ISA) 0x00000055 (85)	Microsoft ACPI-Compliant System

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-		2
7	(PCI) 0xFFFFFFC2 (-62)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #3
7	(PCI) 0xFFFFFFC3 (-61)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #3
2	(PCI) 0xFFFFFFC4 (-60)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #3
	(PCI) 0xFFFFFFC5 (-59)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #3
	(PCI) 0xFFFFFFC6 (-58)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #3
2	(PCI) 0xFFFFFFC7 (-57)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #3
2	(PCI) 0xFFFFFC8 (-56)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #3
2	(PCI) 0xFFFFFFC9 (-55)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #3
2	(PCI) 0xFFFFFFCA (-54)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #3
	(PCI) 0xFFFFFCB (-53)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #3
	(PCI) 0xFFFFFFCC (-52)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #3
2	(PCI) 0xFFFFFFCD (-51)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #2
2	(PCI) 0xFFFFFFCE (-50)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #2
	(PCI) 0xFFFFFFCF (-49)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #2
2	(PCI) 0xFFFFFD0 (-48)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #2
2	(PCI) 0xFFFFFFD1 (-47)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #2
2	(PCI) 0xFFFFFFD2 (-46)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #2
2	(PCI) 0xFFFFFD3 (-45)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #2
	(PCI) 0xFFFFFFD4 (-44)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #2
	(PCI) 0xFFFFFFD5 (-43)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #2
2	(PCI) 0xFFFFFFD6 (-42)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #2
2	(PCI) 0xFFFFFFD7 (-41)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #2
	(PCI) 0xFFFFFFD8 (-40)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T
	(PCI) 0xFFFFFFD9 (-39)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T
2	(PCI) 0xFFFFFDA (-38)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T
2	(PCI) 0xFFFFFDB (-37)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T
	(PCI) 0xFFFFFFDC (-36)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T
2	(PCI) 0xFFFFFDD (-35)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T
	(PCI) 0xFFFFFDE (-34)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T
	(PCI) 0xFFFFFDF (-33)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T
	(PCI) 0xFFFFFE0 (-32)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T
	(PCI) 0xFFFFFE1 (-31)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T
	(PCI) 0xFFFFFE2 (-30)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T
	(PCI) 0xFFFFFE3 (-29)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #4
2	(PCI) 0xFFFFFFE4 (-28)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #4
7	(PCI) 0xFFFFFE5 (-27)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #4
	(PCI) 0xFFFFFE6 (-26)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #4
	(PCI) 0xFFFFFFE7 (-25)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #4
7	(PCI) 0xFFFFFE8 (-24)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #4
5	(PCI) 0xFFFFFFE9 (-23)	Intel(R) Ethernet Connection E823-L/X557-AT 10GBASE-T #4

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P	(PCI)	0xFFFFFFEE (-18)	Intel(R) I210 Gigabit Network Connection
Ţ	(PCI)	0xFFFFFFFF (-17)	Intel(R) I210 Gigabit Network Connection
	(PCI)	0xFFFFFFF0 (-16)	Intel(R) I210 Gigabit Network Connection
	(PCI)	0xFFFFFFF1 (-15)	Intel(R) I210 Gigabit Network Connection
	(PCI)	0xFFFFFF2 (-14)	Intel(R) I210 Gigabit Network Connection
Ţ	(PCI)	0xFFFFFF3 (-13)	Intel(R) I210 Gigabit Network Connection
Ţ	(PCI)	0xFFFFFFF4 (-12)	Intel(R) I210 Gigabit Network Connection
Ţ	(PCI)	0xFFFFFF5 (-11)	Intel(R) I210 Gigabit Network Connection
Ţ	(PCI)	0xFFFFFF6 (-10)	Intel(R) I210 Gigabit Network Connection
P	(PCI)	0xFFFFFFF7 (-9)	Intel(R) I210 Gigabit Network Connection
P	(PCI)	0xFFFFFF8 (-8)	Intel(R) I210 Gigabit Network Connection
Ţ	(PCI)	0xFFFFFF9 (-7)	Intel(R) I210 Gigabit Network Connection
ÿ	(PCI)	0xFFFFFFA (-6)	Intel(R) USB 3.0 eXtensible Host Controller - 1.0 (Microsoft)
	(PCI)	0xFFFFFFB (-5)	Standard SATA AHCI Controller
	(PCI)	0xFFFFFFC (-4)	PCI Express Root Port
	(PCI)	0xFFFFFFD (-3)	Intel(R) PCI Express Root Port A - 347A
	(PCI)	0xFFFFFFFE (-2)	CDF PCIeRP[9] - 18AE



6. FAQ

Q 1. Where can I find the serial number of this product?

• The serial number (S/N) is a label printed with alpha-numeric character. You can find the S/N label on the bottom of this product or on its packing box.



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 Care	לא:
Operating System & Version (e.g. Windo	ws 7 Embedded):
Special API or Driver:	
	(If yes, please provide it for debug.)
Running Applications:	
Others:	
Send the above information to one of • Acrosser Local Sales Representative • Acrosser Authorized Sales Channels	the following Acrosser contacts:





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