

Report NO: 17E100036

GENE-KBU6

Intel KabyLake SoC

Board / System Level Product
 ATRF / SAP
 Compatibility Test Report

Summary	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> Pass with Deviation (Comment: _____)			
	Test Results Category			
	Critical	Major	Minor	Enhancement
Defect Found	0	0	0	0
Defect Unsolved	0	0	0	0

Issue date

2017-05-05

QE Manager

KJ Wang

Test Engineer

Aslen Hsieh

Summary Table of DTS:

Defect No.	Severity	Description	Issue status

Version Released Records

Date	Version	Change History	Note
5/26/2015	C0	1. Add UEFI,GPS,CANBUS,POE, Cold boot test item	
3/22/2016	C1	1. Add issue status 2. Update CTOS devices. 3. Add HDMI 5M cable compatibility test. 4. Modified boot up without display test. 5. Add Touch Function test. 6. Add DC adapter compatibility test 7. Add Windows10 compatibility test. 8. Update Benchmark tool. 9. Update DOS / Windows on/off test rule. 10. Add DDR4 SO-DIMM. 11. Update Linux to Ubuntu16.04 12. Add Stability Test \ Memory test.	
10/21/2016	C2	1. Remove Smartbits test item. 2. Update chapter7.2 \ LVDS type support. 3. Add chapter9.6. System stability after S3 / S4 / S5 cycles	

Note :

For all test items in this report, 3 results have been defined and described as following:

- Pass: Functionality work perfectly
- Fail: Functionality failed and must be resolved in the next version
- N/A: Functionality Not Applicable or Not Available

This test report would be updated when re-test completed in product next change version.

Specification Validation

Main Specification

Item	Specification	Result			Note	
		Pass	Fail	N/A		
Form Factor	3.5" SubCompact Board	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
CPU	IntelR Kabylake-U SoC Processor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
CPU Frequency	TBD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Chipset	IntelR Kabylake-U SoC Processor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Memory Type	DDR4 1866/2133, SODIMM x1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Max. Memory Capacity	Up to 16GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
BIOS	UEFI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Wake On LAN	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Watchdog Timer	255 Levels	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Power Requirement	+9~36V or +12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Power Supply Type	AT/ ATX	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Dimension	5.75" x 4" (146mm x 101.7mm)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Display						
CRT/ LCD Controller	IntelR Skylake-U SoC Processor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Video Output	Type	_ Support 3 independent display _ Display configuration: DVI-D+LVDS, DP+LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	VGA	Chrontel CH7517, Resolution: up to 2560 x 1600 @ 60 Hz (internal)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	LVDS	NXP PTN3460, 18/24-bit dual channel LVDS LCDs , Resolution: up to 3840x 2160@ 60 Hz (Pixel clock: 25-112 MHz)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DP	Resolution: up to 3840 x 2160@ 60 Hz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DVI	NXP PTN3366, Resolution: up to 2048 x 1152@ 60 Hz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Backlight inverter supply	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
I/O						
Ethernet	Intel i210, 10/100/1000Base, RJ 45 x2 (Support EtherCAT)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Audio	Realtek ALC892, line-in/ line-out/ Mic-in	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
USB Port	USB 3.0 x 4 (on rear I/O) USB 2.0 x 2 (internal)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
I/O Chips	Fintek F81866	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Serial Port	RS-232 x 1 , RS-232/422/485 x 3 (internal pinheader)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	COM1: RS-232 COM2/3/4: RS-232/422/485, support Ring / +5V / +12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
HDD Interface	SATA 3.0 x 1 +5V SATA power connector x 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
SSD	mSATA (share with half-size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

	miniCard and selective by BIOS)				
Expansion Slot	1. BIO x 1 2. Mini Card x 2 and default is 2.1. mSATA x 1 (half-size) 2.2. miniCard x 1(Full-size)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DIO	8 Bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SIM	Micro-SIM x 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TPM	ATMEL AT97SC3204 x 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Touch	PenMount 14S4600004 via USB port, supports 4/5/8-wire resistive touch screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Others	1. Fan connector (12V) x 1, support 3/4 PIN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BIO (Pin define Follow BIO design)					
PCIe	PCIe x 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB	USB3.0 x 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio	Line-out x 1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Others	SM Bus, LPC	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

O.S. Support

Item	Specification	Result			Note
		Pass	Fail	N/A	
Microsoft Windows	Windows 7 English 32/64 bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Windows8.1 English 32/64bit	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Windows10 English 64bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Linux	Kernel 2.6 above	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Platform Information

Item	Device Information	Note
Product of department	ECD	
PCB Model / Version	GENE-KBU6 Rev A1.0	
CPU Board	GENE-KBU6	
BIOS / Version	GENE-KBU6 R0.3 (GKBUAM03) (03/03/2017) GENE-KBU6 R1.0 (GKBUAM10) (04/20/2017)	
Driver folder	X:\Products\GENE-KBU6\20170109	
CPU Type	Intel® Core™ i7-7600U Processor 2.80 GHz (4M Cache, up to 3.90 GHz)	
Memory Type	Transcend DDR4-2400 16GB(SEC 622 K4A8G085WB BCRC)	
SATA HDD	OCZ / TRN100-25SAT3-240G 2.5" SATA 3 6Gb/s	
USB DVD-ROM	BUFFALO BDXL-PC6U2	
LCD Monitor	Asus PA238Q / 1920*1080 / 23" monitor BENQ BL2710 / WQHD 2560 x 1440 / 27" monitor	
Expansion Board	BIO-ST03-P2U1 BIO-ST05-H1L1	
Operating System	<input checked="" type="checkbox"/> Windows 10 Enterprise English Version 64Bit	
Power Supply	ATX Power Supply : be quiet Straight Power E7 Golden 550W AT Power Supply: N/A DC Adapter : N/A	
Chipset Information		
North Bridge	Intel KabyLake-U SOC	
Super IO Chipset	Fintek F81866	
Audio Chipset	Realtek ALC892	
Ethernet Chipset	Intel i210	

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1. Hardware Compatibility

1.1. CPU Compatibility Test

CPU Information (Information and frequency should show correct value)	Result			Note
	Pass	Fail	N/A	
Intel® Core™ i7-7600U Processor 2.80 GHz (4M Cache, up to 3.90 GHz)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.2. Memory Compatibility Test

Memory Information (a. Information and frequency should show correct value. b. System should boot up and into OS normally.)	AAEON P/N	Result			Note
		Pass	Fail	N/A	
DDR4 SO-DIMM					
Innodisk DDR4 2133 16GB SEC K4A8G085WB	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
InnoDisk DDR4-2133 8GB(SEC 446 BCPB K4A4G085WD)	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innodisk DDR4 2133 4GB M4S0-4GSSNCRG-26 SEC K4A4G085WD	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transcend DDR4 2133 16GB SEC K4A8G085WB	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transcend DDR4 2133 8GB TS9AAASESD00AA SEC K4A4G085WD	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transcend DDR4 2133 4GB TS8AAASESD00AA SEC K4A4G085WD	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transcend DDR4-2400 4GB(SEC 616 K4A4G085WE BCRC)	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transcend DDR4-2400 8GB(SEC 616 K4A4G085WE BCRC)	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transcend DDR4-2400 16GB(SEC 622 K4A8G085WB BCRC)	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.3. SATA Compatibility Test

1.3.1 Onboard SATA(IDE / AHCI) Test

SATA Device Information (Information and size should show correct value with IDE and AHCI mode)	AAEON P/N	Result			Note
		Pass	Fail	N/A	
Main Board project test with 80~100cm SATA cable , typical #1709070800					
SSD Transcend TS32GSSD370 2.5".32GB.SATA III SSD MLC.	968C032G2D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD Transcend.TS64GSSD370 2.5".64GB. SATA III.SSD.MLC	968C64G003	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD Transcend.TS128GSSD370 2.5" SATA3 SSD.128GB.MLC.	968C128G0W	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD 2.5" .16GB 3MG2-P 15nm.SATA III MLC SSD.Innodisk MLC .0°C ~ +70°C.DGS25-16GD81BC3SC-26	AP-SS968C016 G3K	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD (TF)2.5".32GB 3MG2-P 15nm.SATA SSD MLC.0~70°C.HIGH IOPS.innodisk.DGS25-32GD81B C3DC-26	AP-SS968C032 G1P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

SSD	(TF)2.5".64GB.SATA MLC SSD .3MG2-P 15nm.0~70°C.HIGH IOPS.innodisk.DGS25-64GD81B C3QC-26	968C064G39	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD	2.5' MLC SSD 128GB 3MG2-P 15nm.SATA 0°C~+70°C .InnoDisk.DGS25-A28 D81BC3QC-26	AP-SS968C128 G1P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD	2.5".256GB.SATA MLC SSD 3MG2-P 15nm.0~70°C.HIGH IOPS.innodisk.DGS25-B56D81BC 3QC-26	AP-SS968C256 G16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD	OCZ / TRN100-25SAT3-240G 2.5" SATA 3 6Gb/s		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SSD	Intel® SSD 530 Series 120GB, 2.5in SATA 6Gb/s, 20nm, MLC		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.4. Flash Card Compatibility Test

m-SATA Information (a. Information and size should show correct value (b. R/W and HDD LED should work properly)	AAEON P/N	Result			Note
		Pass	Fail	N/A	
Half Size					
Transcend.TS32GMSM360 half size 32GB	CTOS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transcend.TS64GMSM360I half size 64GB	CTOS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transcend.TS128GMSM360I half size 128GB	CTOS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innodisk half size mSATA.8GB 3ME3	AP-SS968C008 G1L	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innodisk half size mSATA.16GB 3ME3	AP-SS968C016 G3M	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innodisk half size mSATA.32GB 3ME3	AP-SS968C032 G3P	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innodisk half size mSATA.64GB 3ME3	AP-SS968C064 G3D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innodisk half size mSATA.128GB 3ME3	AP-SS968C128 G1T	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.5. Power Supply Compatibility Test

Power Supply Information a. System boot to OS should work properly. b. System OS shutdown function should work properly.	Result			Note
	Pass	Fail	N/A	
SeaSonic SSR-450RM 450W 80plus Gold	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*Must
FSP AS550 550W 80plus Gold	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cooler Master RS-750-AMAA-G1 750W 80plus Gold	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
be quiet Straight Power E7 Golden 550W	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.6. Monitor Compatibility Test

Monitor Information	Result			Note
	Pass	Fail	N/A	
a. Monitor should display under DOS and OS environment.				
b. Monitor should not appear ghost or ripples.				
VGA				
LG Flatron E2260 / 1920*1080 / 22" monitor	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(at least 3 monitors)
Asus PA238Q / 1920*1080 / 23" monitor	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
BENQ BL2710 / WQHD 2560 x 1440 / 27" monitor	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
DVI				
Asus PA238Q / 1920*1080 / 23" monitor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BENQ BL2710 / WQHD 2560 x 1440 / 27" monitor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Display port				
Asus PA238Q / 1920*1080 / 23" monitor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(Tested 3 monitors at least)
BENQ BL2710 / WQHD 2560 x 1440 / 27" monitor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SAMSUNG LU28D590 4K	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2. Basic Function Test

2.1. Video Function Test

2.1.1. Single Output Function Test

Configuration													
CPU	Intel® Core™ i7-7600U Processor 2.80 GHz (4M Cache, up to 3.90 GHz)												
Memory	Transcend DDR4-2400 16GB(SEC 622 K4A8G085WB BCRC)												
SATA HDD	OCZ / TRN100-25SAT3-240G 2.5" SATA 3 6Gb/s												
DVI / Display port	Asus PA238Q / 1920*1080 / 23" monitor BENQ BL2710 / WQHD 2560 x 1440 / 27" monitor												
Operating system													
Color Quality	<input checked="" type="checkbox"/> 16bit <input type="checkbox"/> 24bit <input checked="" type="checkbox"/> 32bit												
Resolution	VGA			DVI			DP			LVDS			Note
	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	Pass	Fail	N/A	
800X600	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1024X768	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X600	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X720	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X768	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X800	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1280X960	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1280X1024	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1360X768	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1366X768	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1400X1050	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1440X900	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X900	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1600X1200	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1680X1050	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1920X1080	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1920X1200	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
1920X1440	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2048X1152	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2560X1440	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3840 X 2160	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SAMSUNG LU28D590 4K
EDID check	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Hot plug	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Rotation(0/90/ 180/270)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DOS Display	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note: Pay attention to Full Screen under POST screen and Text Mode.

2.1.2. Multi-Display Output Test

Selection	Output	Result			Note
		Pass	Fail	N/A	
Dual Display Clone	DVI + DP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Clone	DVI+LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Clone	DP+LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Extended Desktop		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dual Display Clone	DVI+DP+LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Extended Desktop	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
------------------	-------------------------------------	--------------------------	--------------------------

2.1.3. Boot up Without Display Test

Process step:

1. BIOS disable LVDS.
2. Power on without inserting any VGA/DVI/HDMI/DP connector until system reaches Windows desktop
3. Plug VGA connector into test machine while system reaches Windows then check Graphics driver and display.
4. Check VGA output Brightness is normal and it shows "Ghost Image" / " Flicker" or not
5. Repeat step2~4 for DVI / HDMI / DP testing.

Test item		Result			Note
		Pass	Fail	N/A	
Display should working normal in Windows Desktop	VGA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	DVI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	HDMI	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Display port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.1.4. LCD Panel Test

LVDS Panel Model (LVDS display should full screen and no flicker)	Result			Note		
	Pass	Fail	N/A			
18bit	800x600	AUO G104SN02 V.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	For IPC_BU
	800x600	AUO G084SN05 V.8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Standard
	1024x768	AUO LED backlight G121XN01-V0 1024*768 18bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IPC_BU and standard
	1280x768	Toshiba /12.1"/1280 x 768 x 18bit (16:9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Standard
	1280x800	HannStar HSD101PWW1 /10.1"/ 1280 x 800 x 18bit (16:9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Standard
24bit	1024x768	AU M150XN07 V.2 / 15" / 1024x768 / 24bit (4:3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Standard
	1366x768	AUO G185XW01 V0 / 18" / 1366x768 / 24bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Standard
48bit	1920x1080	AUO M215HW03 V1 / 21"/ 1920*1080 / 48bit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IPC_BU and standard







2.2. Audio Function Test

[] No Support

Function Test	Result			Note	
	Pass	Fail	N/A		
L (Left) Channel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
R (Right) Channel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
AMP (Left and Right)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	AMP should mute when Audio jack plug in	
CD_In	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Line In	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
MICROPHONE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
6-channel mode for 5.1 speaker output	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
8-channel mode for 7.1 speaker output	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
S/P DIF function Test	Input	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Output	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
HDMI Audio	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
DP Audio	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

2.3. LAN Function Test

[] No Support

Connect two computers via different speed LAN HUB by using "Ping" instruction (1000 times) Command: ping xxx.xxx.xx.xx -l 65500 -n 1000										
1000MBps LAN HUB	D-Link DGS-1008D									
100MBps LAN HUB	Accton Desktop-3005									
10MBps LAN HUB	SVEC FD916H									
OnBoard LAN1	Intel I210 Gigabit Network						MAC Address	00-00-5A-15-00-01		
OnBoard LAN2	Intel I210 Gigabit Network						MAC Address	00-00-5A-15-00-02		
LAN Speed	Link / Speed LED	Active LED	LAN 1			LAN 2			Note	
			Pass	Fail	N/A	Pass	Fail	N/A		
1000MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
100MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
10MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Wake On LAN			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	S3/S4/S5	
LAN Boot (PXE)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Internet Browser (DHCP Server)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Access 1GB file. Download from ftp http://xxx.xx.14.125/			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

2.4. COM Ports Test

Test Item	Result			Note
	Pass	Fail	N/A	
Serial Modem Dial Out	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Modem Ring In	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test by Modem
Serial Modem +12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test by Multimeter
Serial Modem +5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test by Multimeter
Transmission Test <115200bps / 15M>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.5. RS-422 / RS-485 Test

Test Item	Result			Note
	Pass	Fail	N/A	
RS-422 for COM 2 ~ 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use loopback and WINSSD.exe to test RS-422 in Windows
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. The communication between the RS-422 port of two boards is linked by one 1.2km cable on Windows Terminal. 2. Confirm RS-422 can work properly from G3 status 3. Test baud rate is 115200bps
RS-485 for COM 2 ~ 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use ICP CON I-7044D D/IO Module in Windows(Support Auto flow control)
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. The communication between the RS-485 port of two boards is linked by one 1.2km cable on Windows Terminal 2. Confirm RS485 can work properly from G3 status 3. Test baud rate is 115200bps

2.7. Digital I/O Test

Test item	Result			Note
	Pass	Fail	N/A	
DIO VCC +5V or +3.3V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DIO Port 1 ~ DIO Port 8

2.8. USB Port Integration Test

Item	USB Port	USB2.0 ports (under OS)			USB3.0 ports (under OS)			Note
		Pass	Fail	N/A	Pass	Fail	N/A	
USB HDD:	Transcend TS500GSJ25D3 500GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Flash:	SanDisk Extreme USB3.0 64GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Kingston USB3.0 DT Ultimate G2 16GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB DVD ROM:	BUFFALO BDXL-PC6U2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB keyboard:	Logitech Y-U0011	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB mouse:	Logitech M-U0003	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB FDD:	Mitsumi D353GUE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB2.0 HUB:	Mini 4ports HUB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.12. Touch Function Test

Test item	Result			Note
	Pass	Fail	N/A	
The calibrating result is correct.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
After touch panel is calibrated, drawing test result is precise enough.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Windows icon should work properly when used touch to execute.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Right-Click function should work properly.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Multi touch should work properly	Multi draw	<input type="checkbox"/>	<input type="checkbox"/>	For multi touch panel
	Rotation / zoom	<input type="checkbox"/>	<input type="checkbox"/>	
Touch and right-click should work properly during Burnintest running.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BurninTest test item must include CPU/RAM/2D/3D/Video

2.13. Jumper and Connector Function Test

[] No Support

Test item	Result			Note
	Pass	Fail	N/A	
LVDS voltage jumper support 3.3V / 5V selection.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Inverter voltage jumper support 5V / 12V selection.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Brightness control jumper	PWM mode support 0~100% modulation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	DC mode support 0~100% modulation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
COM_VSET jumper support 12V / 5V / RI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Clear CMOS will clear CMOS date, time, setting, password.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Buzzer and 4 pin Speaker test	System boot: one short beep.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	No memory found: One long beep, two short beep, pause a period of time, and loop.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Power button	One touch for power on.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	One touch for power off in BIOS manual.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	One touch for system shutdown in Windows environment. (power manager need to set "press PWB for shutdown.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	> 4sec for H/W shutdown in Windows environment. (power manager need to set "press PWB do nothing.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Reset button, system reset under DOS or Windows.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Power LED, active when system boot.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD LED, active when SATA/CF/CFast/mSATA/M.2 access	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
CPU FAN	full speed can meet FAN specification	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
PS/2 KBMS, keyboard / mouse work properly under DOS and OS .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3. Expansion card and Application Test

3.1. Expansion Slot Compatibility Test

Test point: Make sure expansion slots are compatible with expansion cards.

Mini PCI Express Card		Result			Note
		Pass	Fail	N/A	
Full size	Quectel UC20 3G Card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If M/B support SIM slot
Full size	Sierra Wireless AirPrime MC7304 Qualcomm 4G	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Full size	SATA Sil3132ME	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gen1
Full size	AAEON PER-C11L Gigabit LAN card	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Full size	AAEON PER-C41C-A10 4 port RS-232	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Half size	AzureWave AW-NB100H 802.11b/g/n(PCI-e Wireless+ USB Bluetooth)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Half size	AzureWave AW-NB159H 802.11b/g/n(PCI-e Wireless+ USB Bluetooth)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Half size	AzureWave AW-CB161H 802.11a/b/g/n/ac (PCI-e Wireless+ USB Bluetooth) Realtek RTL8821AE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Half size	BOINTEC DPE909-AA 802.11a/b/g/n(PCI-e Wireless+ USB Bluetooth)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BIO Card		Result			Note
		Pass	Fail	N/A	
BIO-ST05-H1L1	LAN [RT8111E]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	USB3.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Mini Card [PCIe x 1]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Audio [Line-Out]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BIO-ST03-P2U1	LAN [i210AT]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	POE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3.2. Expansion Card Integration Test

Test Item	Result			Note
	Pass	Fail	N/A	
1. Connect devices to all of expansion slots. 2. No error during OS and driver installation 3. All of expansion cards should work normal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3.3. Display port Converter Compatibility Test

Test Item			Result			Note
			Pass	Fail	N/A	
DP to HDMI converter: LPC-1504	DOS display	Full screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	OS display	Full screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Max resolution:
DP to DVI converter: LPC-1503	DOS display	Full screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	OS display	Full screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Max resolution:

4. Power Consumption Test

Configuration	
CPU	Intel® Core™ i7-7600U Processor 2.80 GHz (4M Cache, up to 3.90 GHz)
Memory	Transcend DDR4-2400 16GB(SEC 622 K4A8G085WB BCRC)
Storage	OCZ / TRN100-25SAT3-240G 2.5" SATA 3 6Gb/s
O.S	Windows 10 Enterprise English Version 64Bit

4.1. Power Consumption

Test Equipment						
Equipment	Digital Multimeter					
Manufacturer	HOLA					
Model name	DM-1240					
Test Environment						
ATX Power Model	be quiet Straight Power E7 Golden 550W/ATX					
Keyboard/Mouse	PS/2 Keyboard: Atake KJ118; PS/2 mouse: Genius NetScroll 120					
Note	Power consumption does not include HDD consumption.					
Power Supply	ATX Power					Note
(Full Loading Mode) Windows 8.1 with Prime 95 Full Loading Test	(+12V)	1.85	A	22.2	W	Prime95 Version 278
Full Loading Total Watt	22.2 (W)					
S3 mode: Measure the current value when system in S3 mode of windows and without running any	(+12V)	0.09	A	1.08	W	
Suspend Total Watt	1.08 (W)					
Win. Idle mode: Measure the current value when system in windows mode and without running any program	(+12V)	1.26	A	15.12	W	
Idle Total Watt	15.12 (W)					
S5 mode: Measure the current value when system in S5 mode of windows and without running any	(+12V)	0.08	A	0.96	W	Erp Disabled
Power On Total Watt	0.96 (W)					
S5 mode: Measure the current value when system in S5 mode of windows and without running any	(+12V)	0.05	A	0.6	W	Erp Enabled
Suspend Total Watt	0.6 (W)					

4.2. PC Health Status

Test Point:

Voltage deviation: ±5%.

Fan speed deviation: ±10%

CPU DTS Temp deviation: ±15°C

System Temp deviation: ±5°C

Voltage Monitoring Test	Result			BIOS (V)	Actual (V)	Note
	Pass	Fail	N/A			
CPU Temp	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	38	41	
System Temp	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	32	34	
System Fan Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4000 RPM	3899 RPM	
VCORE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.880	0.87	

VMEM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.208	1.21	
(+) 12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.056	12.16	
(+) 5V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.087	5.09	
(+) 5V VSB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.992	5.14	
(+) 3.3V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.328	3.32	
VBAT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.136	3.22	

4.3. Wide Voltage Test

4.3.1. Wide Voltage Test

Test Point:

Test voltage range is follow specification.

Test Environment (a. System should boot properly (b. System wasn't halt in following status.)	DC Power (9V~36V)	Current		Note
Windows 8.1 with Prime 95 Full Loading Test	(+8.5V)	2.57	A	
	(+37.8V)	0.60	A	
Windows 8.1 Without running any Software	(+8.5V)	2.10	A	
	(+37.8V)	0.46	A	

4.3.2. DC Adapter Compatibility Test

Test Point:

Confirm each adapter can be compatible with wide voltage design.

Adapter Information (a. System boot to OS should work properly.			AAEON P/N	Result			Note
				Pass	Fail	N/A	
12V	FSP084-DIBAN2 84W		1255900841	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
12V	FSP084-DMAA1 84W		1757908403	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
19V	FSP120-ABAN2 120W		1255901202	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
19V	FSP120-AAB 120W		1757912005	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
24V	SINPRO MPU100-108 100W		XXXXXXXXXX	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

4.4. CMOS Battery Test

Test Point: Calculated result should be > 5 years.

Battery: CR2032 / Capacity 225mAh

Check item	Measured Voltage		Measured Current		Calculate Result		Result			Note
							Pass	Fail	N/A	
Battery leakage 1. Voltage should be >3V. 2. Calculated result should be > 5 years.	3.06	V	2.3	uA	11.16	years	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Calculate result=225mAh/measured current / 365days/24hours

5. Time Accuracy Test

5.1. System Clock & RTC Clock Test

Under Room Temperature:

Function	Item	Time Interval	Criteria	Actual	Result			Note
					Pass	Fail	N/A	
RTC Clock in Power On Mode		24 hrs	+/-2 sec	-1 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RTC Clock in Power Off Mode		24 hrs	+/-2 sec	-1 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

5.2. Booting Timer Test

Installation	Actual	Note
System Booting Time	7.6 Sec	Press the Power Button till "Beep" Sound appears

5.3. Watchdog Timer Test

Use Function as below: Hi-Safe v2.2017.3.01

Time-Out Interval	Criteria	Actual	Result			Note
			Pass	Fail	N/A	
10 sec	+/- 10%	11 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
60 sec	+/- 10%	63 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
255 sec	+/- 10%	256 Sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note : Under Room Temperature:

6. O.S. Compatibility Test

6.1. Windows 10 Enterprise English Version 64Bit

64bit Driver Information	
Chipset Software	Intel Chipset Device Software 10.1.1(06/03/2015)
Graphics Media	Intel HD Graphics 520 20.19.15.4483 (07/01/2016)
Audio Driver	Realtek High Definition Audio: 6.0.1.7541(2015/06/18)
	Intel Display Audio 8.20.0.922 (04/16/2016)
LAN Driver	Intel I210 Gigabit Network Connection 12.12.226.0 (5/04/2015)

Install OS to SATA HDD/ mSATA Card:

Installation	Result			Note
	Pass	Fail	N/A	
English Windows10 Enterprise 64bit (UEFI)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Test Results:

Test Item	Result			Note
	Pass	Fail	N/A	
Single Display				
VGA -- Full Screen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
DVI -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920 x 1080
LVDS -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1920 x 1080
DP -- Full Screen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3840 x 2160
Basic Function Test				
Usable memory	32bit: N/A MB	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	64bit: 16 GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PS/2 Mouse and Keyboard	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB Mouse and Keyboard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM Port Mouse detect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LPT1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
USB 2.0	USB2.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Removable Devices	USB3.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Safe to remove icon	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Touch Function	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TPM Function	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN Function Test				
LAN1 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LAN2 --- Auto	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Audio Function Test				
Line Out Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Line In Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Microphone Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
S/P DIF Test	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Start Menu				
Log off User	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shut down (S5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sleep (S3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Restart	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hibernate (S4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7. BIOS Function Test

Configuration	
CPU	Intel® Core™ i7-7600U Processor 2.80 GHz (4M Cache, up to 3.90 GHz)
Memory	Transcend DDR4-2400 16GB(SEC 622 K4A8G085WB BCRC)
Storage	OCZ / TRN100-25SAT3-240G 2.5" SATA 3 6Gb/s
O.S	Windows 10 Enterprise English Version 64Bit

Test Point:
Confirm BIOS control items are working correctly.

7.1. Advanced Test

Test Item (Following item should work properly)	Result			Note	
	Pass	Fail	N/A		
CPU configuration	Hyper-threading	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled /Disabled
	Technology states	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled /Disabled
	Turbo Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled /Disabled
Trusted Computing	TPM SUPPORT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled /Disabled
	Pending operation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clear TPM
SATA configuration	SATA Controller	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled /Disabled
	Serial ATA port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled /Disabled
	mSATA port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled /Disabled
	Hot Plug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled /Disabled
Hardware Monitor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Smart Fan	Fan Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Super IO configuration	Serial port 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Serial port 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RS232	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RS422	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RS485	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Serial port 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RS232	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RS422	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RS485	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Serial port 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RS232	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RS422	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
RS485	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
USB configuration	Legacy USB Support	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dynamic Digital IO configuration	DIO Port 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input / Output
	Output Level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High / Low
	DIO Port 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input / Output
	Output Level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High / Low
	DIO Port 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input / Output
	Output Level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High / Low
	DIO Port 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input / Output
	Output Level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High / Low
	DIO Port 5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input / Output
	Output Level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High / Low
	DIO Port 6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input / Output
	Output Level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High / Low
	DIO Port 7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input / Output
	Output Level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High / Low
	DIO Port 8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Input / Output
	Output Level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High / Low

Power Management	Power Mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ATX/AT
	Power Saving(ERP) Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled /Disabled
	Restore AC Power Loss	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Last State/Always on/ Always off
	Resume from PCIE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Resume from LAN/RI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
S5 RTC Wake up	Wake system with fixed time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fixed Time /Disabled

7.2. Chipset Test

Test Item (Following item should work properly)		Result			Note	
		Pass	Fail	N/A		
System Agent (SA) Configuration	Boot Display	VBIOS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		CRT/DP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		DVI	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	LVDS Panel Configuration	LVDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled /Disabled
		Panel Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	640*480,800*480,800*600,1024*600,1024*768,1280*768,1280*800,1280*1024,1366*768.1440*900,1600*1200,1920*1080,1920*1200
		Color Depth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18 /24bit
		Backlight Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Normal/inverted
		Backlight Level	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0~100% DC: 100%=5.11V; 50%=2.42V; 0%=0.02V PWM: 100%=3.31V; 50%=1.69V; 0%=0V
		Backlight PWM Freq	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Memory Configuration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
PCH-IO Configuration	HD Audio	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto / Enabled / Disabled	
	PCI Express Root Port 5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Enabled /Disabled	
	PCIe Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Auto / Gen1 / Gen2 / Gen3	
	Half-MiniCard Slot Function	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SATA / PCIe	

7.3. Boot Test

Test Item (Following item should work properly)	Result			Note
	Pass	Fail	N/A	
Quiet Boot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Launch PXE OpROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot From Hard Disk	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot From CDROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot From USB HDD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot From USB Floppy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot From USB CD-ROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Boot from LAN	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Disable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7.4. CMOS Backup / Clear CMOS Test

Test Item (Following item should work properly)	Result			Note
	Pass	Fail	N/A	
CMOS Backup	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clear date, time, setting, password
Clear CMOS Test	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clear date, time, setting, password

7.5. AAEON Tag Check Utility

Test Item (Following item should work properly)	Result			Note
	Pass	Fail	N/A	
Check AAEON BIOS OK	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AONCHECK.EXE

7.6. Supervisor / User Password Test

Test Item (Following item should work properly)	Result			Note
	Pass	Fail	N/A	
Administrator Password	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
User Password	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7.7. Hi-safe Test (Test in P3 phase)

Test Item (Following item should work properly)	Result			Note	
	Pass	Fail	N/A		
Version(v2.2017.3.01)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
System Information	CPU Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Model Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Display Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	RAM Information	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Support single DIMM
H/W Monitor	Info	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Fan Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Voltage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DIO	DIO1~4 High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DIO1~4 Low	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DIO5~8 High	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DIO5~8 Low	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
WatchDog	10sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 11 sec
	1min	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 63 sec
	255sec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actual 261 sec
	Auto Reload	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SMBus	SMBus IO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SMBus Address 0xF040
	Read Byte	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Slave Address A0h,A2h,A4h
	Read Word	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Result / Read	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Smart FAN	Chipset	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Fan Speed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CPU, SYS, SYS2
	Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Speed control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Off Speed TMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Full Speed TMP	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7.8. Hi-Manager Test

Test Item (Following item should work properly)	Result			Note	
	Pass	Fail	N/A		
Version(20130819)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Power control	Power on	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Power off	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Reset	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Power on from G3 state	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Group Management	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Event log	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

Alarm Clock	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Remote Recovery		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Remote Reboot/ Reboot from CD ROM/Reboot from ISO (Reboot to BIOS no support)
KVM		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test with i7-4770T
Schedule		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

7.9. Negative Test

7.9.1 USB Keyboard Negative Test

Methods	Result			Note
	Pass	Fail	N/A	
1. Boot into BIOS setup manual. 2. Press Num Lock or Scr Lock and press arrow key. 3. confirm arrow key function are normally	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7.9.2 Suspend S3 Negative Test

Methods		Result			Note
		Pass	Fail	N/A	
1. Resume from S3. 2. Confirm com ports (RS232/422/485), DIO, smartfan, LVDS backlight control, USB ports, HDMI/DP audio can work properly.	RS232/422/485	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DIO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Smart Fan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	LVDS Backlight control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	USB ports	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	DP/HDMI audio	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7.9.3 UEFI Mode Negative Test

Methods	Result			Note
	Pass	Fail	N/A	
1. Install Windows with UEFI mode. 2. Clear CMOS. 3. Confirm BIOS\Boot device was not loss "Windows boot manager" and should boot into Windows properly.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8. Performance Test

Configuration	
CPU	Intel® Core™ i7-6600U Processor (4M Cache, up to 3.40 GHz)
Memory	Transcend DDR4-2400 16GB(SEC 622 K4A8G085WB BCRC)
Storage	OCZ / TRN100-25SAT3-240G 2.5" SATA 3 6Gb/s
O.S	Windows 10 Enterprise English Version 64Bit

8.1. System Performance Test

Test Result: (Display set 1920*1080 test)

Testing Software	Scope		Note
	AAEON	Ref.	
PCMark 8 _v2.3.293 (Creative)(Run Conventional)			
PCMarks	2395		PCMarks
Web Browsing-Jungle Pin	0.337s		
Web Browsing-Amazonia	0.137s		
Video Group Chat v2- Video Group Chat playback1 v2	30.0fps		
Video Group Chat v2- Video Group Chat playback2 v2	30.0fps		
Video Group Chat v2- Video Group Chat playback3 v2	30.0fps		
Video Group Chat v2- Video Group Chat encoding v2	133.3ms		
Photo Editing v2	0.900s		
Batch Photo Editing v2	52.3s		
Video Editing 1 v2	20.2s		
Video Editing 2 v2	189.7s		
Mainstream Gaming part 1	9.0FPS		
Mainstream Gaming part 2	4.8FPS		
Video To Go part 1	6.4s		
Video To Go part 2	9.2s		
Music To Go	24.60s		
Benchmark duration	1h 60min 7s		

Testing Software	Scope		Note
	AAEON	Ref.	
3Dmark2006 v120			
3Dmark Score	4622	-	
SM2.0 Score	1515	-	
HDR/SM3.0 Score	1909	-	
CPU Score	3374	-	
Benchmark (B)	-	-	
Average Efficiency	-	-	

3Dmark11 Advanced Edition _ v1.05			
Performance 1280*720 (Default)			
3Dmark 11Score	P1537	-	
Graphics Score	1437	-	
Physics Score	3416	-	
Combined Score	1185	-	

Testing Software	Scope		Note
	AAEON	Ref.	
Performance Test 8.0			
PassMark Rating	2447	-	
CPU Mark	3957	-	
2D Graphics Mark	582	-	
3D Graphics Mark	943	-	
Memory Mark	1876	-	
Disk Mark	4210	-	

8.2. Storage Performance Test

SATA Performance				
SATA SSD	Intel® SSD 530 Series 120GB, 2.5in SATA 6Gb/s, 20nm, MLC			
CPU	Intel® Core™ i7-6600U Processor (4M Cache, up to 3.40 GHz)			
Memory	Transcend DDR4-2400 16GB(SEC 622 K4A8G085WB BCRC)			
OS	Windows 10 Enterprise English Version 64Bit			
Item	Comment / (unit)	Software	Score	Note
SATAIII	Maximum Read	ATTO Disk Benchmark	552.8MB/s	SATAII 150~300MB SATAIII up 300M/B
	Maximum Write	ATTO Disk Benchmark	498.2MB/s	

SATA Performance				
SATA SSD	OCZ / TRN100-25SAT3-240G 2.5" SATA 3 6Gb/s			
CPU	Intel® Core™ i7-6600U Processor (4M Cache, up to 3.40 GHz)			
Memory	Transcend DDR4-2400 16GB(SEC 622 K4A8G085WB BCRC)			
OS	Windows 10 Enterprise English Version 64Bit			
Item	Comment / (unit)	Software	Score	Note
SATAIII	Maximum Read	ATTO Disk Benchmark	563.1 MB/s	SATAII 150~300MB SATAIII up 300M/B
	Maximum Write	ATTO Disk Benchmark	493.6 MB/s	

USB3.0/2.0 Performance				
USB Flash	SanDisk Extreme USB3.0 64GB			
Item	Comment / (unit)	Software	Transfer Rate (MB/s)	Note
USB 3.0 Port 0 (CN18)	Maximum Read	ATTO Disk Benchmark	267.3 MB/s	
	Maximum Write	ATTO Disk Benchmark	161.7 MB/s	
USB 3.0 Port 1 (CN18)	Maximum Read	ATTO Disk Benchmark	267.3 MB/s	
	Maximum Write	ATTO Disk Benchmark	161.3 MB/s	
USB 3.0 Port 0 (CN19)	Maximum Read	ATTO Disk Benchmark	267.8 MB/s	
	Maximum Write	ATTO Disk Benchmark	159.4 MB/s	
USB 3.0 Port 1 (CN19)	Maximum Read	ATTO Disk Benchmark	267.8 MB/s	
	Maximum Write	ATTO Disk Benchmark	156.0 MB/s	
USB2.0 (CN20)	Maximum Read	ATTO Disk Benchmark	44.7 MB/s	
	Maximum Write	ATTO Disk Benchmark	44.1 MB/s	
USB2.0 (CN21)	Maximum Read	ATTO Disk Benchmark	44.8 MB/s	
	Maximum Write	ATTO Disk Benchmark	44.0 MB/s	

mSATA / CFast /CF performance				
mSATA	Transcend.TS128GMSM360I half size 128GB			
Item	Comment / (unit)	Software	Transfer Rate (MB/s)	Note
mSATA	Maximum Read	ATTO Disk Benchmark	229.4MB/s	
	Maximum Write	ATTO Disk Benchmark	78.4MB/s	

9. Stability test

Configuration	
CPU	Intel® Core™ i7-6600U Processor (4M Cache, up to 3.40 GHz)
Memory	Transcend DDR4-2400 16GB(SEC 622 K4A8G085WB BCRC)
Storage	Transcend.TS128GMSM360I half size 128GB
O.S	Windows 10 Enterprise English Version 64Bit

9.1. Run Burn In Test

Under Room Temperature:

OS: Windows 10 Enterprise English 64bit

Test Item	Result			Note
	Pass	Fail	N/A	
Burn In Test V8.1(1015 above) Duty: 100 Time: over 12 hours <System should not error or hang during testing.>	CPU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	RAM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	COM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	GPU	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Video	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3D	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Disk	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Sound	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Network <Advanced>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Parallel	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	USB	2.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.0		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note: COM PORT Speed Set to 115200.

9.2. Reboot Test

Under Room Temperature:

OS: Windows 10 Enterprise English 64bit

Test Tool: Passmark rebooter.exe

Test item	Result			Note
	Pass	Fail	N/A	
Reboot test for 500 cycles <a. System should not error or hang during testing.> <b. Device manager should not loss any devices or yellow bang >	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

9.3. ACPI G3 Cold Boot Test

Under Room Temperature:

OS: DOS

Test Point:

1. Make sure system boot up is stable.
2. Make sure boot function support AC power restored in short time.

Test item	Result			Note
	Pass	Fail	N/A	
G3(AC loss) cold boot over 1000 cycles Setting: Power on- 40sec ; Power off-- 20sec. <loss rate: 0 /1000 times>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> BIOS select “ power on” or <input type="checkbox"/> Jumper setting auto power button
G3(AC loss) cold boot over 20 cycles Setting: Power on- 40sec ; Power off- 5sec. <loss rate: 0 /20 times>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	H/W [auto power button] need to set enable..

9.4. ACPI S5 Cold Boot Test

Under Room Temperature:

OS: Windows 8.1 Enterprise English 64bit

Test item	Result			Note
	Pass	Fail	N/A	
S5(standby power) cold boot over 500 cycles < System should complete 500 cycles without any error or hang.>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. “PassMark Rebooter” set 500 cycles ; delay 30sec and enable “auto load Rebooter at startup”. 2. On/off fixture cycle time to set 150sec.

9.5. Memory Test

Under room temperature:

OS: DOS

Tool: Memtest86+ V5.01 above

Memory information: Transcend DDR4-2400 16GB (SEC 622 K4A8G085WB BCRC)

Test item	Result			Note
	Pass	Fail	N/A	
Memory Test for 3 loops. < Memtest result should not error or hang..>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Remark: If system support UEFI mode only, the test tool is [Memtest86 Version 5.0 Experimental UEFI Beta]

9.6. System stability after S3 / S4 / S5 cycles

Under Room Temperature:

OS: Windows 10 Enterprise English 64bit

Test item	Criteria	Result			Note
		Pass	Fail	N/A	
System stability after S3 cycles <Perform S3 cycles 5 times>	1.SUT boots to OS successfully . 2. No yellow bang observed if all the drivers are installed 3.SUT does S3-resume cycles successfully without any issues	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
System stability after S4 cycles <Perform S4 cycles 5 times>	1.SUT boots to OS successfully . 2. No yellow bang observed if all the	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

	drivers are installed 3.SUT does S4-resume cycles successfully without any issues				
System stability after S5 cycles <Perform S5 cycles 5 times>	1.SUT boots to OS successfully . 2. No yellow bang observed if all the drivers are installed 3.SUT does S5-resume cycles successfully without any issues	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

10. Front Panel Button and Mechanical Check

10.1. Front Panel Button Function Test

Test item	Function			Note
	Pass	Fail	N/A	
LCD Power on/off button	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Brightness+ button	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Brightness- button	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Speaker+ button	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Speaker- button	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
EXIT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

10.2. Mechanical Check

Test Item	Result			Note
	Pass	Fail	N/A	
System Case construction check	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CF/CFast slot construction check	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Expansion slots construction check	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
I/O symbol check	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	