

Report No: 19D010013

UPCP-CR-NPL4 (NET-PLUS) with UPC-PLUS

Board Level Product Bulletin 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

2019-07-29

QE Supervisor

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Platform Information

Item	Device Information
Product of department	DMS
I/O Board / Version	NET-PLUS Rev A0.3_0_0
Driver folder	NET-PLUS
Storage	Innodisk 2.5" SATA SSD 64GB - 3MG2-P
Chipset Information	
Ethernet Chipset	Intel ® I210 Gigabit Network Intel ® I211 Gigabit Network
Item	Device Information
Product of department	DMS
PCB Model / Version	UPC-PLUS Rev A0.4_0_0
BIOS / Version	UPC-PLUS R1.0 (UPCPSM10)(02/19/2019)
Driver folder	UPC-PLUS\20181017
CPU Type	Intel ® Atom ™ Processor E3950 @ 1.60GHz
Memory Type	Onboard memory LPDDR4 8GB
USB DVD-ROM	Pioneer DVR-XU01TW
LCD Monitor	DELL U2713HM
Operating System	<input checked="" type="checkbox"/> Ubuntu 16.04.4 LTS / kernel: 4.13.0-36-generic #40
Power Supply	FSP040-DHAN3 12V 3.33A
Chipset Information	
SOC Bridge	Intel ® Apollo Lake SoC
Graphics Chipset	Intel ® HD Graphics

1. Basic Function Test

1.1. USB Ports Function Test

Procedure:

Step1. Connect USB keyboard and check it works properly under BIOS/DOS/Ubuntu 16.04.4 LTS

Step2. Connect USB flash, check system can boot from USB flash and USB flash can work properly under Ubuntu 16.04.4 LTS

Step3. Connect USB2.0/3.0 Flash, check system can boot from USB flash and USB flash can work properly under Ubuntu 16.04.4 LTS

Step4. Check USB3.0 flash read speed can meet the Flash specification

<Read command#: hdparm -t /dev/sdaX>

<Write command#: time dd if=/dev/zero of=/var/test bs=2k count=1000000>

Test Result

No	Test item	Result			Remark
		Pass	Fail	N/A	
1	Boot from USB DVD-ROM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install OS
2	USB 1.1/2.0/3.0 devices (Flash, keyboard, mouse, DVD ROM) can work properly on USB 3.0 port	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3	USB3.0 port R/W speed should meet specification	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Read: 100MB/s Write: 94MB/s

1.2. LED Function Test

Procedure:

Step1. To check Ethernet LED status can follow below methods

A. Use LAN cable to connect 1GB switch between Server PC and DUT, transmit some packets between Server PC and DUT

B. Use LAN cable to connect 100MB switch between Server PC and DUT, transmit some packets between Server PC and DUT

C. Use LAN cable to connect 10MB switch between Server PC and DUT, transmit some packets between Server PC and DUT

	Speed LED
1GB/s	Color Orange
100MB/s	Color Green
10MB/s	Color Blank

	Link/Act LED
Un-Linked	TBD
Linked	TBD
Transmit	LED Blink

Test result

No	Test item	Result			Remark
		Pass	Fail	N/A	
1	1000M connection LAN LED action as below: Speed LED: Orange	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

	Link LED: Green / Blinking				
2	100M connection LAN LED action as below: Speed LED: Green Link LED: Green / Blinking	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3	10M connection LAN LED action as below: Speed LED: Blank Link LED: Green / Blinking	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.3. LAN Function Test

Configuration:

1G switch: D-Link DGS-1210-16

100M switch: D-Link DES-1008A

10M HUB: SVEC FD916H

Procedure:

Step1. Each LAN port connect DHCP server

Step2. Connect internet and ping Google (8.8.8.8)

Step3. Test each LAN port WOL function properly which from OS shutdown

Step4. Client PC to install and execute iperf and host PC execute iperf -s (Windows OS)

Step5. Iperf test with 1G, 100M, 10M switch/Hub

<#apt-get install iperf>

<#iperf3 -c 172.16.12.50 -i 1 -t 120>

Test result

Test item	LAN 1~4			Note
	Pass	Fail	N/A	
Internet Browser (DHCP Server) Ping website(8.8.8.8) should work properly	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wake On LAN WOL should work properly when resume from S5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAN I210 MAC :00-07-32-60-B2-02 MAC :00-07-32-60-B2-03 MAC :00-07-32-60-B2-05 MAC :00-07-32-60-B2-04 LAN I211 MAC : 00-07-32-61-04-67 MAC : 00-07-32-61-04-68 MAC : 00-07-32-61-04-6A MAC : 00-07-32-61-04-69
1Gbps connection Iperf test result should not loss and max bandwidth must be in 900MB or more	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
100Mbps connection Iperf test result should not loss and max bandwidth must be in 90MB or more	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10Mbps connection Iperf test result should not loss and max bandwidth must be in 9MB or more	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2. Hardware Compatibility Test

2.1. USB Compatibility Test

Procedure:

Step1. Insert USB device to USB3.0 port

Step2. Test each USB device function

O.S: Ubuntu 16.04.4 LTS / kernel: 4.13.0-36-generic #40

Test Result

Test Result

Test Item		Result			Note
		Pass	Fail	N/A	
USB devices function should work properly					
Keyboard	KINYO KB-14U	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mouse	Microsoft 1113	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DVD ROM	Pioneer DVR-XU01TW	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HUB	CLiPtec USB2.0 4Port Hub	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HDD	Transcend USB3.0 500GB - TS500GSJ25D3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB2.0 Flash	ADATA PD4 512MB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB3.0 Flash	Transcend 32GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Transcend 128GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	