

Report NO: 15D010004

RDS-0310

Rugged tablet computer Docking Station

System Level Product Bulletin 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

07/20/2015

Approval

KJ Wang

Test Engineer

Louie Lee

Version Released Records

Date	Version	Change History	Note
5/26/2015	C0	1. Add UEFI,GPS,CANBUS,POE, Cold boot test item	

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	
Features	Front USB 2.0 x2, Back USB x2 10/100 Base-TX Ethernet x 1 DC-in x 1 RS-232 x1 LED indicator Apply on 700x series	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I/O	Four USB 2.0 One RJ-45 jack for 10/100 Base-TX Ethernet One RS-232	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
DC input	DC-12V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LED	One Power status: Yellow LED indicates Adapter in Blue LED indicates RTC connect on One Ethernet status: Green LED indicates Link status	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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1. Windows Compatibility Test

Configuration:

Item	Device Information	Note
Product of department	RMD	
Model	RTC-700C A1.0	
Docking Station	RDS-0310 A0.4.1	
BIOS / Version	RTC-700C BIOS R1.0 (12/17/2014)	
EC	RTC-700C EC R1.0	
CPU Type	Intel Atom CPU Z2760 1.8GHz	
Memory Type	Onboard 2GB	
Storage	SanDisk SEM64G 64GB	
Panel	1280x800	
Operating System	<input checked="" type="checkbox"/> Windows Embedded8.1 Industry Pro English Version 32Bit	
DC Adapter :	DC Adapter : L.T.E LTE24E-S2-2 12V DC output	
RDS-0310 information		
USB to UART	XR21V1410 USB UART / Driver: 2.2.0.0 (11/18/2014)	
USB to Fast LAN	ASIX AX88772B USB2.0 to Fast Ethernet Adapter / Driver: 3.16.10.0 (1/14/2015)	
USB to HDMI	MCT USB3.0 External Graphics Device(HDMI) / Driver: 1.1.15.122 (01/22/2015)	

1.1. USB LAN Function Test

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	ASIX AX88772B USB to Fast Ethernet Adapter				MAC Address			00-07-32-2F-A5-AE	
LAN Speed	Link / Speed LED	Active LED	LAN 1			LAN 2			Note
			Pass	Fail	N/A	Pass	Fail	N/A	
100MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	100Mbps
10MBps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Access 1GB file			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
LAN speed	Send: 98.5Mbps		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Receive: 98.5Mbps		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Internet Browser (DHCP Server)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

1.2.USB Ports Integration Test

1.2.1. Compatibility Test with USB devices

Item	USB Port	Function(Win8.1)			Note
		Pass	Fail	N/A	
USB HDD	Transcend TS500GSJ25D3 500GB USB3.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

USB FDD	FDD Mitsumi D353GUE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Keyboard	Logitech K200	<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"/>	
USB DVD ROM	ASUS SBW-06D2X-U	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Flash	KingSton Ultimate USB3.0 16GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Sandisk Cruzer USB2.0 8GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	PNY USB3.0 128GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Transcend USB2.0 16GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB HUB	ATake USB2.0 4port Hub	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.2.2. USB ports performance

USB2.0 Performance				
USB Flash				
Item	Comment / (unit)	Software	Transfer Rate (MB/s)	Note
USB2.0 port1	Maximum Read	ATTO Disk Benchmark	20MB/s	
	Maximum Write	ATTO Disk Benchmark	17MB/s	
USB2.0 port2	Maximum Read	ATTO Disk Benchmark	20.2MB/s	
	Maximum Write	ATTO Disk Benchmark	17.9MB/s	
USB2.0 port3	Maximum Read	ATTO Disk Benchmark	20.4MB/s	
	Maximum Write	ATTO Disk Benchmark	18.2MB/s	
USB2.0 port4	Maximum Read	ATTO Disk Benchmark	20.3MB/s	
	Maximum Write	ATTO Disk Benchmark	17MB/s	

1.3. COM Port Integration Test

Test Item	Result			Note
	Pass	Fail	N/A	
Serial Modem Dial Out	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
COM port mouse	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Serial Modem Ring In	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test by Modem Not supported.
Transmission with 115200bps / 15M cable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.4. LED Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
One Power status: Yellow LED indicates Adapter in Blue LED indicates RTC connect on	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
One Ethernet status: Green LED indicates Link status	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LED on RJ45 connector

1.5. Battery Charge Test

Test Item	Result			Note
	Pass	Fail	N/A	

Battery charge under windows.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Battery charge when sleep mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Battery charge when shutdown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.6. ACPI Test

Test Item	Result			Note
	Pass	Fail	N/A	
S3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
S5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Restart	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

1.7. Stability Test

1.7.1. Run-in Test

Under Room Temperature: 26 °C

OS: Windows Embedded8.1 Industry Pro English Version 32Bit

Test Item		Result			Note	
		Pass	Fail	N/A		
Burn In Test V8.0(1040) Duty: 100 Time: over 12 hours	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"/>	RDS-0310 COM port	
	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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RDS-0310 LAN port	
	Parallel	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	USB	2.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RDS-0310 USB port
		3.0	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	





Note: COM PORT Speed Set to 115200.

2. Android Compatibility Test

Configuration:

Item	Device Information	Note
Product of department	RMD	
Model	RTC-700AA1.0	
Docking Station	RDS-0310 A0.4.1	
CPU Type	ARM Cortex-A9 dual core 1GHz	
Memory Type	Onboard 1GB	
Storage	Onboard 16GB	
Operating System	<input checked="" type="checkbox"/> Android 4.0.3 kernel: 2.6.39.4	
DC Adapter :	DC Adapter : L.T.E LTE24E-S2-2 12V DC output	
RDS-0310 information		
USB to UART	XR21V1410 USB UART / Driver: 2.2.0.0 (11/18/2014)	
USB to Fast LAN	ASIX AX88772B USB2.0 to Fast Ethernet Adapter / Driver: 3.16.10.0 (1/14/2015)	

2.1. USB LAN Function Test

Configuration									
1000Mbps LAN HUB			D-Link DGS-1008D						
100Mbps LAN HUB			Accton Desktop-3005						
10Mbps LAN HUB			SVEC FD916H						
OnBoard LAN1		ASIX AX88772B USB to Fast Ethernet Adapter				MAC Address		00-07-32-2F-A5-AE	
LAN Speed	Link / Speed LED	Active LED	LAN 1			LAN 2			Note
			Pass	Fail	N/A	Pass	Fail	N/A	
100Mbps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	LED check
10Mbps			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	LED check
Download 1GB file			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Transfer rate: 6MB/s
Internet Browser (DHCP Server)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
APP: Speedtest			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Download: 92911kbps Upload:24492kbps
Iperf (command: "-c 192.168.XX.XX -t 1000 -i 10" and turn ON the button)			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Max Bandwidth: 93Mbits/s.

2.2.USB Ports Integration Test

2.2.1. Compatibility Test with USB devices

Item	USB Port	Function(Android)			Note
		Pass	Fail	N/A	
USB HDD	Transcend TS500GSJ25D3 500GB USB3.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB FDD	FDD Mitsumi D353GUE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Keyboard	Microsoft 1366	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB Mouse	Microsoft 1113	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB DVD ROM	ASUS SBW-06D2X-U	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Not support

USB Flash	KingSton Ultimate USB3.0 16GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Sandisk Cruzer USB2.0 8GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	PNY USB3.0 128GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Transcend USB2.0 16GB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
USB HUB	i-rocks ir4370HUB USB2.0 4port Hub	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.2.2. USB ports performance

USB2.0 Performance			
USB HDD	Transcend TS500GSJ25D3 500GB USB3.0		
Item	Access 1GB file	Transfer Rate (MB/s)	Note
USB ports	Read	14.62MB/s	
	Write	14.5MB/s	

2.3. COM Port Integration Test

Test Item	Result			Note	
	Pass	Fail	N/A		
APP: Serialport1_1.apk					
Transmission with 15M cable	9600bps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	115200bps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Loopback	9600bps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	115200bps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.4. LED Function Test

Test Item	Result			Note
	Pass	Fail	N/A	
One Power status: Yellow LED indicates Adapter in Blue LED indicates RTC connect on	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
One Ethernet status: Green LED indicates Link status	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LED on RJ45 connector

2.5. ACPI Test

Test Item	Result			Note
	Pass	Fail	N/A	
Sleep	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Shutdown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2.6. Battery Charge Test

Test Item	Result			Note
	Pass	Fail	N/A	
Battery charge under windows.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Battery charge when sleep mode	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Battery charge when shutdown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	