

# **RTC-700A(RTC-700R)**

## **Test Report**

<b>Initiated by</b>	Mike Lee	<b>Job Title</b>	Engineer	<b>Originate Date</b>	2012/12/21
<b>Reviewed by</b>	Jack Huang	<b>Job Title</b>	Engineer	<b>Revision</b>	A0.1
<b>Approved by</b>	Tom Lin	<b>Job Title</b>	Manager	<b>Report No</b>	12R010003

REVISION HISTORY

<b>Date</b>	<b>Version</b>	<b>Description</b>	<b>Creator</b>
2010/10/21	0.1	Initial document issued	Howard Hu
2011/4/8	0.2	Update LCD spec	Howard Hu
2011/7/19	0.3	Update CPU, LCD, battery & O.S spec	Howard Hu

<b>RTC-700R</b>	
<b>Model Name: RTC-700R</b>	
<b>S/W number</b>	Version:HTK75.RTC-0.5.0.0-201202161630
<b>Processor &amp; Memory controller</b>	
<b>CPU Type</b>	NVIDIA® Tegra™ 2 1.0GHz Dual-core CPU
<b>System Memory</b>	
<b>Memory Type</b>	DDR2 1GB SDRAM
<b>Chipset</b>	
<b>Display</b>	
<b>LCD Monitor</b>	7" WXGA (1280 x 800) TFT LCD with Projected Capacitive Touch screen panel
<b>Audio</b>	
<b>Codec</b>	Wolfson.WM8903
<b>Power Connector</b>	
<b>AC / DC Adapter</b>	AC Power input : 100V-240V, 50Hz-60Hz, 24W output : 12V, 2A
<b>Battery</b>	
<b>Model</b>	Lithium-Polymer high capacity battery (27.3Whr), 6 Hours Battery Life, TBC
<b>Network</b>	
<b>Wireless/Communications</b>	WLAN 802.11 b/g/n Bluetooth 2.1 + EDR (Bluetooth keyboard/Mouse support) Optional: 3G modem module
<b>Navigation</b>	GPS E-compass
<b>Others</b>	Built-in Light Sensor Built-in G-Sensor Built-in 3-axis digital gyroscope Built-in vibrator
<b>I/O</b>	One Mini USB port One Mini HDMI port One 3.5-mm stereo headphone jack One DC-In Jack Built-in Speaker & Microphone
<b>Expansion</b>	Micro SD Card Slot x1
<b>Camera</b>	Front: 1.2M Pixel camera Back: 5M Pixel AF camera
<b>Storage</b>	eMMC Flash 16GB
<b>Chipsets</b>	PMIC : TI.TPS658621 Battery charger : TI.BQ24740 Wi-Fi + BT Module : AzureWave AW-NH615 GPS module : BROADCOM.BCM4751 G-sensor : Kionix.KXTF9-4100 3-axis digital gyroscope : InvenSense.MPU-3050
<b>Mechanical Specifications</b>	
<b>Architecture</b>	Close-frame
<b>Color</b>	Black, TBC
<b>Construction</b>	Rugged design, Al-Mg alloy frame inside
<b>Dimension (W x H x D)</b>	132mm x 210mm x 22mm, TBC
<b>Carton dimension</b>	TBD
<b>Gross Weight</b>	Under 1.3lb (600g), TBC
<b>Packing Filler</b>	Paper+EPE
<b>Others</b>	Power button , on the top side of panel Aeon logo on the right side of panel

<b>Physical Feature</b>	
<b>Temperature / humidity</b>	Operating Environment Temperature : -20°C ~60°C Storage Environment Temperature : -55°C ~75°C Operating Humidity : 10%~95%
<b>Vibration</b>	Meet Mil Std 810G-514.6, Procedure I Cat. 24, Fig. 514.6E-1 & 514.6E-2 (Unit is non-operating) ASTM 4169-99 Truck Assurance Level II, Schedule E (Unit is operating)
<b>Drop Specification</b>	26 drops of 48" height to 2" plywood over concrete with bumpers & unit off 2 units to pass Mil Std 810G-516.6, Procedure IV
<b>Water Sealing</b>	Mil Std 810G-506.5 Procedure II. Unit is not operating IPX5
<b>Dust Proof</b>	Meet IEC 60529 IP-6X standard, No ingress of dust; complete protection against contact
<b>ESD</b>	Air +/- 8KV , Contact +/- 4KV (Test Result must be free of operational, display, and calculation error)
<b>EMI / Safety</b>	CE / FCC Class B / UL
<b>OS List</b>	
<b>OS Support List</b>	Android V3.2

**Product View**

**TOP VIEW**



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<b>Hardware Function Test</b>	
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1.2 Basic Function	Audio playback , Audio Function, WiFi Function, Configuration, Transmission, Installation & Un-Installation, Connection, Light Sensor, G-Sensor , 5M pixel AF camera , Speaker Function ,Miss Operation, SD Card,USB Port Function ,Bootng Timer
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**\*\* Notes: Test items and test contents depend on spec.**

# Contents Function

Test Engineer	Jack Huang	Date 2012/03/07	Pass	Fail	Enhancement
Test Configuration			97	0	0
<b>Item</b>					
Model name	RTC-700R				
PCB version & ID	A0.1				
CPU type	NVIDIA® Tegra™ 2 1.0GHz Dual-core CPU				
Software type	HTK75.RTC-0.5.0.0-201202161630				
DRAM type	DDR2 1GB SDRAM				
Adapter type	AC / DC Adapter AC Power input : 100V-240V, 50Hz-60Hz, 24W output : 12V, 2A				
NAND Flash type	eMMC Flash 16GB				
Mirco SD type	Transcend Micro SD HC Class2 16GB Transcend Micro SD HC Class10 16GB				
OS type	Android V3.2				
Test Stage	DVT				
Battery Model	Lithium-Polymer high capacity battery (27.3Whr), 6 Hours Battery Life, TBC				

Contents Function Test	Method	Test Stage	Result	Note/ Issue ID	
Outline	Confirm the contents of the directory	DVT	Pass		
Wireless & Networks	Confirm Action and connection function is properly(For Mac)	DVT	Pass		
Sound	Confirm Action and function whether properly	DVT	Pass		
Screen (For Touch )	Confirm Action and function whether properly	DVT	Pass		
Location & security	Confirm Action and function whether properly	DVT	Pass		
Applications	Confirm Action and function whether properly	DVT	Pass		
Accounts & sync	Confirm Action and function whether properly	DVT	Pass		
Privacy	Confirm Action and function whether properly	DVT	Pass		
Storage	Confirm Action and function whether properly	DVT	Pass		
Language & input	Confirm Action and function whether properly	DVT	Pass	Test En & CH	
Accessibility	Confirm Action and function whether properly	DVT	Pass		
Date & time	Confirm Action and function whether properly	DVT	Pass		
About tablet	Confirm Action and function whether properly	DVT	Pass		

Wireless & Networks Function Test	Method	Test Stage	Result	Note/ Issue ID	
Airplane mode	Disable all wireless connections	DVT	Pass		
Wi-Fi settings	Confirm Action and function whether properly	DVT	Pass		
Bluetooth settings	Confirm Action and function whether properly	DVT	Pass		
Tethering & portable hotspot	Share your tablet's mobile data connection via USB or Bluetooth	DVT	Pass		
VPN settings	Confirm Action and function whether properly	DVT	Pass		
Mobile networks	Confirm Action and function whether properly	DVT	Pass		

Sound Function Test	Method	Test Stage	Result	Note/ Issue ID	
Volume	Confirm Action and function whether properly	DVT	Pass		
Notification ringtone	Confirm Action and function whether properly	DVT	Pass		
Audible selection	Play sound when making screen selection	DVT	Pass		
Screen lock sounds	Play sound when locking and unlocking the screen	DVT	Pass		
Haptic feedback	Vibrate when pressing soft keys and on certain UI interactions	DVT	Pass		
Microphone	Confirm Action and function whether properly	DVT	Pass		
Screen Function Test	Method	Test Stage	Result	Note/ Issue ID	
Brightness	Confirm Action and function whether properly	DVT	Pass		
Auto-rotate screen	Confirm Action and function whether properly	DVT	Pass		
Screenshot	Capture screenshots by holding the Recent Apps Key	DVT	Pass		
Animation	Allwindow animations are shown	DVT	Pass		
Timeout	Confirm Action and function whether properly	DVT	Pass		
Location & Security Function Test	Method	Test Stage	Result	Note/ Issue ID	
Use wireless networks	Location determined by WiFi and/or mobile networks	DVT	Pass		
Use GPS satellites	When locating accurate to street level	DVT	Pass		
Use location for Google Search	Location used to improve Google Search results and other Google services.	DVT	Pass		
Configure lock screen	Confirm Action and function whether properly	DVT	Pass		
Encrypt tablet	Require a numeric PIN or password to decrypt your tablet each time you power it on	DVT	Pass		
Set up SIM card lock	Confirm Action and function whether properly	DVT	Pass		
Visible passwords	Show password as you type	DVT	Pass		
Device administrators	View or deactivate device administrators	DVT	Pass		
Install from storage	Install certificates form storage	DVT	Pass		
Set password	Set or change the password for credential storage	DVT	Pass		
Clear credentials	Remove all the contents and reset the password	DVT	Pass		
Applications Function Test	Method	Test Stage	Result	Note/ Issue ID	
Manage applications	Manage and remove Installed applications	DVT	Pass		
Running services	View and control currently running services	DVT	Pass		
Storage use	View storage used by applications	DVT	Pass		
Battery use	What has been using the battery	DVT	Pass		
Unknown sources	Allow installation of non-Market applications	DVT	Pass		
Development	Confirm Action and function whether properly	DVT	Pass		



Accounts & sync Function Test	Method	Test Stage	Result	Note/ Issue ID	
Background data	Applications can sync,send,and receive data at any time.	DVT	Pass		
Auto-sync	Applications sync data atuomatically	DVT	Pass		

Privacy Function Test	Method	Test Stage	Result	Note/ Issue ID	
Back up my data	Back up application data,WiFi passwords,andother settings to Google servers	DVT	Pass		
Backup account	Confirm Action and function whether properly	DVT	Pass		
Automatic restore	If I reinstall an application, restore backed up settings or other data	DVT	Pass		
Factory data reset	Erases all data on tablet	DVT	Pass		

Storage Function Test	Method	Test Stage	Result	Note/ Issue ID	
Internal Storage	Confirm Action and function whether properly	DVT	Pass		
Total space	Confirm Action and function whether properly	DVT	Pass		
Applications	Confirm Action and function whether properly	DVT	Pass		
Pictures,Videos	Confirm Action and function whether properly	DVT	Pass		
Downloads	Confirm Action and function whether properly	DVT	Pass		
Misc	Confirm Action and function whether properly	DVT	Pass		
Available	Confirm Action and function whether properly	DVT	Pass		

Language & input Function Test	Method	Test Stage	Result	Note/ Issue ID	
Select language	Confirm Action and function whether properly	DVT	Pass	Test En & CH	
User dictionary	Confirm Action and function whether properly	DVT	Pass		
Voice recognizer settings	Confirm Action and function whether properly	DVT	Pass		
Text-to-speech settings	Confirm Action and function whether properly	DVT	Pass		
Current input method	Confirm Action and function whether properly	DVT	Pass		
Input method selector	Confirm Action and function whether properly	DVT	Pass		
Configure input methods	Confirm Action and function whether properly	DVT	Pass		
Pointer speed	Confirm Action and function whether properly	DVT	Pass		

Accessibility Function Test	Method	Test Stage	Result	Note/ Issue ID	
Touch & hold delay	Confirm Action and function whether properly	DVT	Pass		

Date & time Function Test	Method	Test Stage	Result	Note/ Issue ID	
Automatic date & time	Use network-provided time	DVT	Pass		
Automatic time zone	Use network-provided time zone	DVT	Pass		
Set date	Confirm Action and function whether properly	DVT	Pass		
Set time	Confirm Action and function whether properly	DVT	Pass		
Select time zone	Confirm Action and function whether properly	DVT	Pass		
Use 24-hour format	Confirm Action and function whether properly	DVT	Pass		
Select date format	Confirm Action and function whether properly	DVT	Pass		

About tablet Function Test	Method	Test Stage	Result	Note/ Issue ID	Version
System Firmware Update	Confirm Action and function whether properly	DVT	Pass	N/A not test	
Status	Status of the battery , network,and other Information	DVT	Pass		
Battery use	What has been using the battery	DVT	Pass		
Legal information	Confirm Action and function whether properly	DVT	Pass		
Model number	Confirm Action and function whether properly	DVT	Pass		ETBW11AA
Android version	Confirm Action and function whether properly	DVT	Pass		3.2.1
Baseband version	Confirm Action and function whether properly	DVT	Pass		
GPS version	Confirm Action and function whether properly	DVT	Pass		V5.5.8
Wi-Fi version	Confirm Action and function whether properly	DVT	Pass		V5.2.58
Bluetooth version	Confirm Action and function whether properly	DVT	Pass		V6.24
Kernel version	Confirm Action and function whether properly	DVT	Pass		2.6.36.3 android@Uranus# 1
Build number	Confirm Action and function whether properly	DVT	Pass		HTK75.RTC- 0.5.0.0- 201202161630

Modular System Industrial Workstation Function Test	Method	Test Stage	Result	Note/ Issue ID	Version
AC power outlet / inlet	Confirm Action and function whether properly	DVT	Pass		I.T.E.ADAPTOR- LTE24E-S2-3 INPUT:100-240V 50/60Hz 1A OUTPUT:12V 2A MAX:24W
Power On / Off	Confirm Action and function whether properly	DVT	Pass		
Battery Icon(Charge / Discharge)	Confirm Action and function whether properly	DVT	Pass		
Micro USB	Confirm Action and function whether properly	DVT	Pass		
Micro SD	Confirm Action and function whether properly	DVT	Pass		
Sound	Confirm Action and function whether properly	DVT	Pass		

OS icon Function Test	Method	Test Stage	Result	Note/ Issue ID	Version
Battery icon	Confirm Action and function whether properly	DVT	Pass		
Wifi/3G/Bluetooth icon	Confirm Action and function whether properly	DVT	Pass		
Clock icon	Confirm Action and function whether properly	DVT	Pass		

# Basic Function Test

Test Engineer	Jack Huang	Date : 2012/03/07	Pass	Fail	Enhancement
Test Configuration			54	0	0
Item					
Model name	RTC-700R				
PCB version & ID	A0.1				
CPU type	NVIDIA® Tegra™ 2 1.0GHz Dual-core CPU				
Software type	HTK75.RTC-0.5.0.0-201202161630				
DRAM type	DDR2 1GB SDRAM				
Adapter type	AC / DC Adapter AC Power input : 100V-240V, 50Hz-60Hz, 24W output : 12V, 2A				
NAND Flash type	eMMC Flash 16GB				
Mirco SD type	Transcend Micro SD HC Class2 16GB Transcend Micro SD HC Class10 16GB				
OS type	Android V3.2				
Test Stage	DVT				
Battery Model	Lithium-Polymer high capacity battery (27.3Whr), 6 Hours Battery Life, TBC				

Audio playback Test	Method	Test Stage	Result	Note/ Issue ID	
*.wma	Confirm Action and function whether properly	DVT	Pass		
*.avi	Confirm Action and function whether properly	DVT	Pass		
*.MP3	Confirm Action and function whether properly	DVT	Pass		
*.MP4	Confirm Action and function whether properly	DVT	Pass		

Audio Function Test	Method	Test Stage	Result	Note/ Issue ID	
Microphone	Confirm Action and function whether properly	DVT	Pass		
Speak adjust volume	Confirm Action and function whether properly	DVT	Pass		
Alarm Clock volume	Confirm Action and function whether properly	DVT	Pass		

WiFi Function Test	Method	Test Stage	Result	Note/ Issue ID	
Turn On	Confirm Action and function whether properly	DVT	Pass		
Network notification	Confirm Action and function whether properly	DVT	Pass		
WiFi disconnect policy	When screen turns off(uses more mobile data) function whether properly	DVT	Pass		12R010003
	Never when plugged in function whether properly	DVT	Pass		
	Never (use morebattery power) function whether properly	DVT	Pass		

Configuration Test	Method	Test Stage	Result	Note/ Issue ID	
Device Enable/Disable	Confirm Action and function whether properly	DVT	Pass		
Encryption Test	Confirm Action and function whether properly	DVT	Pass		

Transmission Test	Method	Test Stage	Result	Note/ Issue ID	
Read / Write test	(Upload or Download/ Copy 1GB file(s))	DVT	Pass		

Installation & Un-Installation Test	Method	Test Stage	Result	Note/ Issue ID	
Setup Installation	Confirm Action and function whether properly	DVT	Pass		
Upgrade Test	Confirm Action and function whether properly	DVT	Pass		
Add/Remove	Confirm Action and function whether properly	DVT	Pass		

Connection Test	Method	Test Stage	Result	Note/ Issue ID	
Download file from internet	Confirm Download file whether properly or use	DVT	Pass		

Light Sensor Test	Method	Test Stage	Result	Note/ Issue ID	
Brightness Level	Confirm Action and function whether properly	DVT	Pass		
Suspend mode	Confirm system into suspend mode whether properly	DVT	Pass		

G-Sensor Test	Method	Test Stage	Result	Note/ Issue ID	
X、Y Reverse Test ( 90°、180°、360° )	Confirm Action and function whether properly	DVT	Pass		
Gravity G-Sensor Calibration (SUFBS)	Confirm Action and function whether properly	DVT	Pass		
Zoom in / out image	Confirm Action and function whether properly	DVT	Pass		

5M pixel AF camera Test	Method	Test Stage	Result	Note/ Issue ID	
Player image	Confirm Action and function whether properly	DVT	Pass		
Smart Auto	Confirm Action and function whether properly	DVT	Pass		
White balance	Confirm Action and function whether properly	DVT	Pass		
Color effect	Confirm Action and function whether properly	DVT	Pass		
Camera settings	Confirm Action and function whether properly	DVT	Pass		
Date Style	Confirm Action and function whether properly	DVT	Pass		
Special shooting Function	Confirm Action and function whether properly	DVT	Pass		
REC Mode (Snapshot、Movie、Image Size)	Confirm Action and function whether properly	DVT	Pass		

Speaker Function Test	Method	Test Stage	Result	Note/ Issue ID	
Remove memory then power on, there is warning beep from Buzzer (Speaker)	Confirm Action and function whether properly	DVT	Pass		
Mini Volume	Confirm Action and function whether properly	DVT	Pass		
Max Volume	Confirm Action and function whether properly	DVT	Pass		

Miss Operation Test	Method	Test Stage	Result	Note/ Issue ID	
Power off suddenly while OS is booting up.	Confirm Action and function whether properly	DVT	Pass		
Reset system while OS is booting up.	Confirm Action and function whether properly	DVT	Pass		

SD Card Test	Method	Test Stage	Result	Note/ Issue ID	
Confirm External Interface	Confirm Action and function whether properly	DVT	Pass		
Reset system while OS is booting up.	Confirm Action and function whether properly	DVT	Pass		

Auto detect	Confirm Action and function whether properly	DVT	Pass		
System information is correct	Confirm Action and function whether properly	DVT	Pass		
SD Card Removable Devices	Confirm Action and function whether properly	DVT	Pass		
Remove & Increase SD Card Device	Confirm Action and function whether properly	DVT	Pass		
Hot plug function is normal (for all channels)	Confirm Action and function whether properly	DVT	Pass		
Read/Write test (Copy 1GB file(s))	Confirm Action and function whether properly	DVT	Pass		

USB Port Function Test	Method	Test Stage	Result	Note/ Issue ID	
Auto detect (for all channels)	Confirm Action and function whether properly	DVT	Pass		
Hot plug function is normal (for all channels)	Confirm Action and function whether properly	DVT	Pass		
System information is correct	Confirm Action and function whether properly	DVT	Pass		
Read/Write test (Copy 1GB file(s))	Confirm Action and function whether properly	DVT	Pass		
USB 2.0 Removable Devices	Confirm Action and function whether properly	DVT	Pass		
Remove & Increase USB Device	Confirm Action and function whether properly	DVT	Pass		
USB Keyboard / USB Mouse / USB HDD	Confirm Action and function whether properly	DVT	Pass		
USB I/F(PassMark PMUSB02) Test	Confirm Action and function whether properly	DVT	No Test		

Booting Timer Test	Method	Test Stage	Result	Note/ Issue ID	
Shut down Time	Press the Power Button till "Beep" Sound appears	DVT	Pass	9.26 s	
System Booting Time	Press the Power Button till "Beep" Sound appears	DVT	Pass	22s	

# Performance

<b>Test Engineer</b>	Jack Huang	<b>Date</b>	2012/3/7	<b>Pass</b>	<b>Fail</b>	<b>Enhancement</b>
<b>Test configuration</b>				0	0	0
<b>Item</b>						
Model name	RTC-700R					
PCB version & ID	A0.1					
CPU type	NVIDIA® Tegra™ 2 1.0GHz Dual-core CPU					
Software type	HTK75.RTC-0.5.0.0-201202161630					
DRAM type	DDR2 1GB SDRAM					
Adapter type	AC / DC Adapter AC Power input : 100V-240V, 50Hz-60Hz, 24W output : 12V, 2A					
NAND Flash type	eMMC Flash 16GB					
Mirco SD type	Transcend Micro SD HC Class2 16GB Transcend Micro SD HC Class10 16GB					
OS type	Android V3.2					
Test Stage	DVT					
Battery Model	Lithium-Polymer high capacity battery (27.3Whr), 6 Hours Battery Life, TBC					

Performance Test	Comment	Score		
Antutu Benchmark	RAM Performance	839		
	CPU Integer Performance	1455		
	CPU Floating-point performance	1095		
	2D Graphics performance	290		
	3D Graphics performance	869		
	Performance database	270		
	SD card write speed	(5.9MB/s)59		
	SD card read speed	(13.5MB/s)135		
	Score	5012		
	CPU frequency	1000MHz		
Performance Test	Comment	Score		
benchmark	Graphic	420.8606		
	CPU	3014.4744		
	Memory	768.5056		
	Filesystem	349.23764		
Performance Test	Comment	Score		
SD Card Speed Test	Read	15.66(MB/s)		
	Write	3.9(MB/s)		
Performance Test	Comment	Score		
Speed Test(WiFi)	DOWNLOAD	5831kbps		
	UPLOAD	120kbps		
Performance Test	Comment	Score		
System Test	RAM Performance	288		
	CPU Integer Performance	776		
	CPU Floating-point performance	549		
	2D Graphics performance	384		
	3D Graphics performance	630		
	Performance database	374		
	SD card write speed	(7.3MB/s)73		
	SD card read speed	(25.2MB/s)252		
	Score	3326		
CPU frequency	999.42MHz			