

ASUSTeK COMPUTER INC.	RTX2070 Standard Operation Procedure	Doc. No:	
		Date: Dec.12.2019	
		Revision:1.69	
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0Rev.	Modified Chapters	Modification Description	Issued Dept.	Issued by	Revised Date
1.00		First release	GRTD	Maico_Zhang	Oct.26.2018
1.01		Add new PCBA(YV0C91-A04)	GRTD	Maico_Zhang	Oct.26.2018
1.02		Add new PCBA(YV0C92-A04)	GRTD	Maico_Zhang	Oct.26.2018
1.03		Add new P/N(YV0C82-A06)	GRTD	Maico_Zhang	Oct.26.2018
1.04		Add new P/N(YV0C83-A14)	GRTD	Maico_Zhang	Oct.26.2018
1.05		Add new P/N(YV0C84-A06)	GRTD	Maico_Zhang	Oct.26.2018
1.06		Add new PCBA(YV0C85-A06)	GRTD	Maico_Zhang	Oct.26.2018
1.07		Add new P/N(YV0C42-A04)	GRTD	Maico_Zhang	Oct.26.2018
1.08		Add new P/N(YV0C43-A03)	GRTD	Maico_Zhang	Oct.26.2018
1.09		Add new P/N(YV0C34-A01)	GRTD	Maico_Zhang	Oct.26.2018
1.10		Add new PCBA(YV0C90-A15)	GRTD	Maico_Zhang	Oct.26.2018
1.11		Add new PCBA(YV0C91-A15)	GRTD	Maico_Zhang	Oct.26.2018
1.12		Add new PCBA(YV0C92-A15)	GRTD	Maico_Zhang	Oct.26.2018
1.13		Add new PCBA(YV0C90-A26)	GRTD	Maico_Zhang	Oct.26.2018
1.14		Add new PCBA(YV0C91-A25)	GRTD	Maico_Zhang	Oct.26.2018
1.15		Add new PCBA(YV0C92-A25)	GRTD	Maico_Zhang	Oct.26.2018
1.16		Add new P/N(YV0C82-A1A)	GRTD	Maico_Zhang	Oct.26.2018
1.17		Add new P/N(YV0C83-A27)	GRTD	Maico_Zhang	Oct.26.2018
1.18		Add new PCBA(YV0C84-A28)	GRTD	Maico_Zhang	Oct.26.2018
1.19		Add new PCBA(YV0C85-A17)	GRTD	Maico_Zhang	Oct.26.2018
1.20		Add new P/N(YV0C84-A17)	GRTD	Maico_Zhang	Oct.26.2018
1.21		Add new PCBA(YV0C83-A38)	GRTD	Maico_Zhang	Nov.20.2018
1.22		Add new PCBA(YV0C86-A02)	GRTD	Maico_Zhang	Nov.20.2018
1.23		Add new PCBA(YV0C87-A01)	GRTD	Maico_Zhang	Nov.20.2018
1.24		Add new P/N(YV0CE0-A23)	GRTD	Maico_Zhang	Nov.20.2018
1.25		Add new P/N(YV0C92-A35)	GRTD	Maico_Zhang	Nov.20.2018
1.26		Add new PCBA(YV0CE0-A04)	GRTD	Maico_Zhang	Dec.13.2018
1.27		Add new PCBA(YV0C93-A16)	GRTD	Maico_Zhang	Dec.19.2018
1.28		Add new PCBA(YV0C94-A16)	GRTD	Maico_Zhang	Dec.19.2018
1.29		Add new PCBA(YV0C95-A16)	GRTD	Maico_Zhang	Dec.19.2018
1.30		Add new PCBA(YV0CE4-A01)	GRTD	Maico_Zhang	Feb.2.2019
1.31		Add new P/N(YV0CP0-A02)	GRTD	Maico_Zhang	Mar.14.2019
1.32		Add new P/N(YV0CN1-A02)	GRTD	Maico_Zhang	Mar.19.2019

Authorize by		Review by		Originator By	Maico
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1.33		Add new P/N(YV0CN0-A02)	GRTD	Maico_Zhang	Mar.19.2019
1.34		Add new P/N(YV0CN2-A02)	GRTD	Maico_Zhang	Mar.19.2019
1.35		Add new PCBA(YV0CN1-A12)	GRTD	Maico_Zhang	Mar.19.2019
1.36		Add new PCBA(YV0CN0-A12)	GRTD	Maico_Zhang	Mar.19.2019
1.37		Add new PCBA(YV0CN2-A12)	GRTD	Maico_Zhang	Mar.19.2019
1.38		Add new PCBA(YV0CN0-A22)	GRTD	Maico_Zhang	Mar.19.2019
1.39		Add new PCBA(YV0CN0-A32)	GRTD	Maico_Zhang	Mar.19.2019
1.40		Add new P/N(YV0CP1-A02)	GRTD	Maico_Zhang	Apr.17.2019
1.41		Add new PCBA(YV0CP2-A02)	GRTD	Maico_Zhang	Apr.17.2019
1.42		Add new PCBA(YV0D40-A01)	GRTD	Maico_Zhang	Jun.21.2019
1.43		Add new PCBA(YV0C96-A01)	GRTD	Maico_Zhang	Jun.21.2019
1.44		Add new P/N(YV0C66-A01/A11)	GRTD	Maico_Zhang	Jul.18.2019
1.45		Add new PCBA(YV0C67-A01/A11)	GRTD	Maico_Zhang	Jul.18.2019
1.46		Add new P/N(YV0DI0-A01)	GRTD	Maico_Zhang	Jul.18.2019
1.47		Add new PCBA(YV0DI1-A01)	GRTD	Maico_Zhang	Jul.18.2019
1.48		Add new PCBA(YV0DI2-A01)	GRTD	Maico_Zhang	Jul.18.2019
1.49		Add new P/N(YV0DK0-A01)	GRTD	Maico_Zhang	Jul.18.2019
1.50		Add new PCBA(YV0DK2-A01)	GRTD	Maico_Zhang	Jul.18.2019
1.51		Add new PCBA(YV0DK3-A01)	GRTD	Maico_Zhang	Jul.18.2019
1.52		Add new P/N(YV0DK1-A01)	GRTD	Maico_Zhang	Aug.22.2019
1.53		Add new PCBA(YV0DK4-A01)	GRTD	Maico_Zhang	Aug.22.2019
1.54		Add new PCBA(YV0DK5-A01)	GRTD	Maico_Zhang	Aug.22.2019
1.55		Add new PCBA(YV0DI0-A12)	GRTD	Maico_Zhang	Sep.30.2019
1.56		Add new PCBA(YV0DI1-A12)	GRTD	Maico_Zhang	Sep.30.2019
1.57		Add new PCBA(YV0DI2-A12)	GRTD	Maico_Zhang	Sep.30.2019
1.58		Add new PCBA(YV0DK0-A14)	GRTD	Maico_Zhang	Sep.30.2019
1.59		Add new PCBA(YV0DK2-A14)	GRTD	Maico_Zhang	Sep.30.2019
1.60		Add new PCBA(YV0DK3-A14)	GRTD	Maico_Zhang	Sep.30.2019
1.61		Add new P/N(YV0E50-A01)	GRTD	Maico_Zhang	Nov.29.2019
1.62		Add new PCBA(YV0DI0-A24)	GRTD	Maico_Zhang	Nov.29.2019
1.63		Add new PCBA(YV0DI1-A24)	GRTD	Maico_Zhang	Nov.29.2019
1.64		Add new PCBA(YV0DI2-A24)	GRTD	Maico_Zhang	Nov.29.2019
1.65		Add new P/N(YV0EC0-A01)	GRTD	Maico_Zhang	Nov.29.2019
1.66		Add new PCBA(YV0EC1-A01)	GRTD	Maico_Zhang	Nov.29.2019
1.67		Add new PCBA(YV0DK4-A12)	GRTD	Maico_Zhang	Nov.29.2019
1.68		Add new PCBA(YV0DK5-A12)	GRTD	Maico_Zhang	Nov.29.2019
1.69		Add new PCBA(YV0E51-A01)	GRTD	Maico_Zhang	Dec.12.2019

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1. Objectives

Create test procedure.

2. Scope

Model: RTX2070

PN: YV0C90(A04/A15/A26) YV0C91(A04/A15/A25) YV0C92(A04/A15/A25)
YV0C82(A06/A1A) YV0C83(A14/A27/A38) YV0C84(A06/A17/A28) YV0C85(A06/A17)
YV0C86(A02) YV0C87(A01) YV0CE0(A04/A23) YV0C92(A35) YV0C93(A16)
YV0C94(A16) YV0C95(A16) YV0CE4(A01) YV0CP0(A02) YV0CN1(A02/A12)
YV0CN0(A02/A12/A22/A32) YV0CN2(A02/A12) YV0CP1(A02) YV0CP2(A02)

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YV0D40(A01) YV0C96(A01) YV0C66(A01/A11) YV0C67(A01/A11)
YV0DI0(A01/A12/A24) YV0DI1(A01/A12/A24) YV0DI2(A01/A12/A24)
YV0DK0(A01/A14) YV0DK2(A01/A14) YV0DK3(A01/A14) YV0DK1(A01)
YV0DK4(A01/A12) YV0DK5(A01/A12) YV0E50(A01) YV0EC0(A01) YV0EC1(A01)

3. Test Item

[3.1 Diagnostic test in Tiny Linux](#)

4. Relevant Document

None.

5. Definition : [Please install OS above Tinylinux18.07 ver. to test HDD.](#)

6. Operation Procedures:

6.1 Attention

- 6.1.1 To avoid damaging devices or M/B, please turn off A/C power then unplug VGA card.
- 6.1.2 While unplugging the card, do it in upright direction to avoid damaging slot & golden finger.
- 6.1.3 If any problem happens, please inform test supervisor. Base on ATX power specification, +5V standby voltage is existed while AC power is connecting. For safety reason, please turn off main power during break time or idling test.
- 6.1.4 Some test items should be tested under Windows environment. [\(Please install windows 7 test environment by yourself\).](#)

6.2 Fixture connect

- 6.2.1 Install Intel CPU & CPU Fan.
- 6.2.2 Install DDR Memory to DIMM1~4.
- 6.2.3 Plug USB Mouse and Keyboard into MB.
- 6.2.4 Plug VGA Card RTX2070 into PCIEX16.

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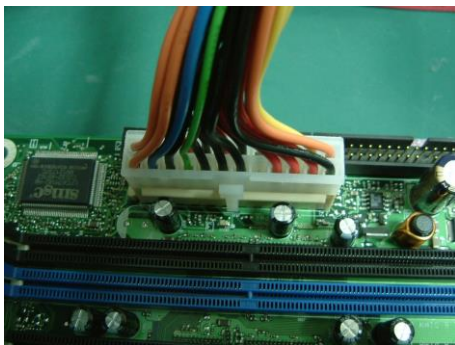
6.2.5 Connect power con of VGA card & Power supply via bundled power cable.

6.2.6 Connect SATA HDD with SATA CON.



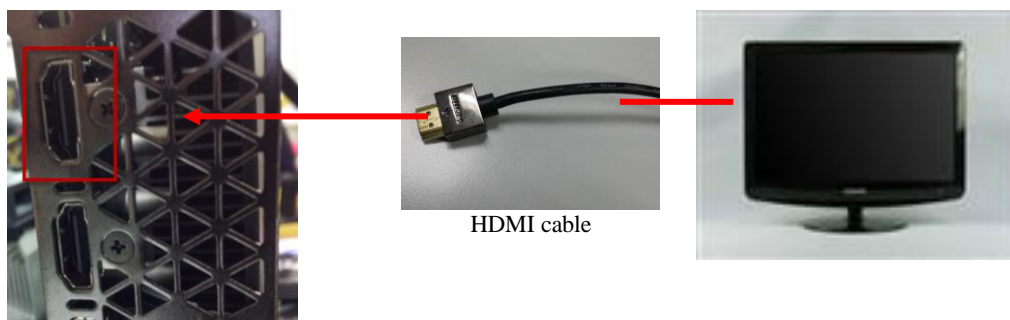
6.2.7 Plug 4PIN 12V (1200W) power cable into CON12V.

6.2.8 Plug ATX Power (1200W) on Power Connector.



6.3 Diagnostic test in Tiny Linux.

6.3.1 Please connect LCD monitor & card's first HDMI CON via a HDMI cable.



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6.3.2 Press Power Switch then turn on power button.

6.3.3 Press “Del” to enter CMOS setup menu while boot screen is displaying.

EXIT -> Load Setup Defaults.



6.3.4 System will reboot, select Linux to run test program.

Path:RTX2070\ yv0c90a0.sh or yv0c91a0.sh or yv0c92a0.sh or yv0c90a1.sh or yv0c91a1.sh or yv0c92a1.sh or yv0c90a2.sh or yv0c91a2.sh or yv0c92a2.sh or yv0c93a1.sh or yv0c94a1.sh or yv0c95a1.sh or yv0c96a0.sh

Path:RTX20701\ yv0c82a0.sh or yv0c82a1.sh

Path:RTX20702\ yv0c84a0.sh or yv0c85a0.sh or yv0c84a2.sh or yv0c85a1.sh

Path:RTX20703\ yv0c83a1.sh or yv0c83a2.sh or yv0c83a3.sh or yv0c86a0.sh or yv0c87a0.sh

Path:RTX20704\ yv0ce0a2.sh or yv0ce0a0.sh or yv0ce4a0.sh or yv0d40a0.sh

Path:RTX20706\ yv0c84a1.sh

Path:RTX20707\ yv0cp0a0.sh

Path:RTX20708\ yv0cn1a0.sh or yv0cn1a1.sh

Path:RTX20709\ yv0cn0a0.sh or yv0cn0a3.sh

Path:RTX2070a\ yv0cn2a0.sh or yv0cn0a1.sh or yv0cn2a1.sh or yv0cn0a2.sh

Path:RTX2070b\ yv0cp1a0.sh or yv0cp2a0.sh

Path:RTX2070c\ yv0c66a0.sh or yv0c67a0.sh or yv0c66a1.sh or yv0c67a1.sh

Path:RTX2070d\ yv0di0a0.sh or yv0di1a0.sh or yv0di2a0.sh or yv0di0a1.sh or yv0di1a1.sh or yv0di2a1.sh or yv0di0a2.sh or yv0di1a2.sh or yv0di2a2.sh

Path:RTX2070e\ yv0dk0a0.sh or yv0dk2a0.sh or yv0dk3a0.sh or yv0dk0a1.sh or yv0dk2a1.sh or yv0dk3a1.sh

Path:RTX2070f\ yv0dk1a0.sh or yv0dk4a0.sh or yv0dk5a0.sh or yv0dk4a1.sh or yv0dk5a1.sh

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Path:RTX2070g\ yv0e50a0.sh or yv0e51a0.sh
Path:RTX2070h\ yv0ec0a0.sh or yv0ec1a0.sh
Path:RTX2070i\ yv0c92a3.sh

Run the test program refer to the prompt.

6.3.5 BIOS flash

If you want to check Vbios infor, Please run **biosinfo**

Please use the following command to flash bios and notice the size of character.

Path: Path:RTX2070\

Command: **nvflash xxx.rom -6 -A** or **iromflsh xxx.rom**

Notice:

If you can not flash bios because of the bios locked, please use **nvflash.exe /r** or **nvflash.exe -r** to unlock bios. And then, please use **nvflash.exe /w** or **nvflash.exe -w** to lock bios after updating latest bios.

6.4 Result upload to server (need connect to internet)

6.4.1 Download and copy RMA upload tool to diag folder by model (It don't need copy after 2018.5 uploaded model).

The tool of RMA upload tool include 3 files:

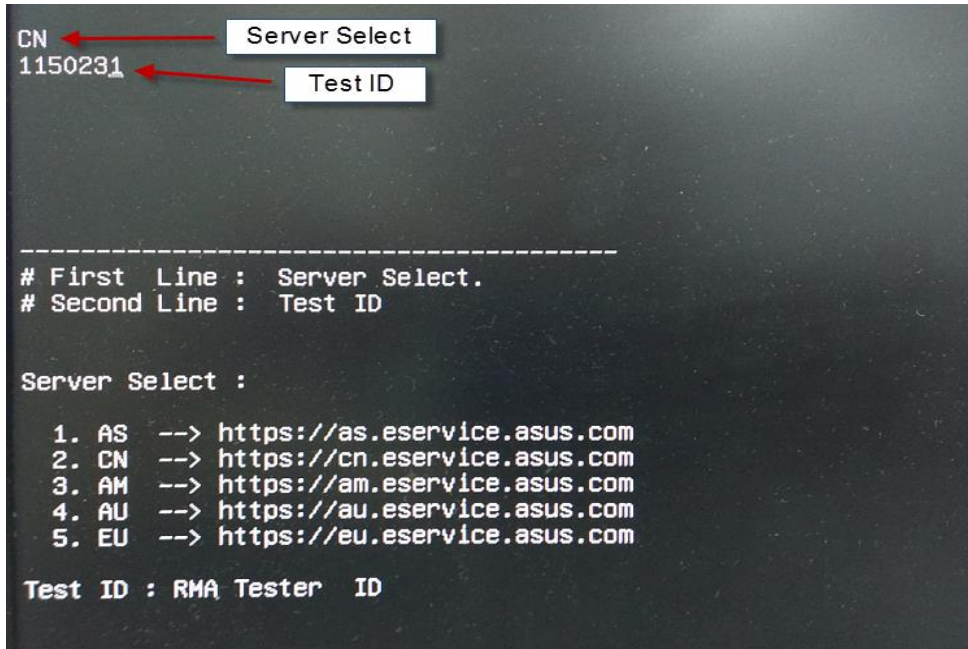


6.4.2 Edit **RMA_Config** file:

First line confirms the address of local sever, second line is Tester ID.

The **RMA_Config** only need modify one time.

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```

CN
1150231

-----
# First Line : Server Select.
# Second Line : Test ID

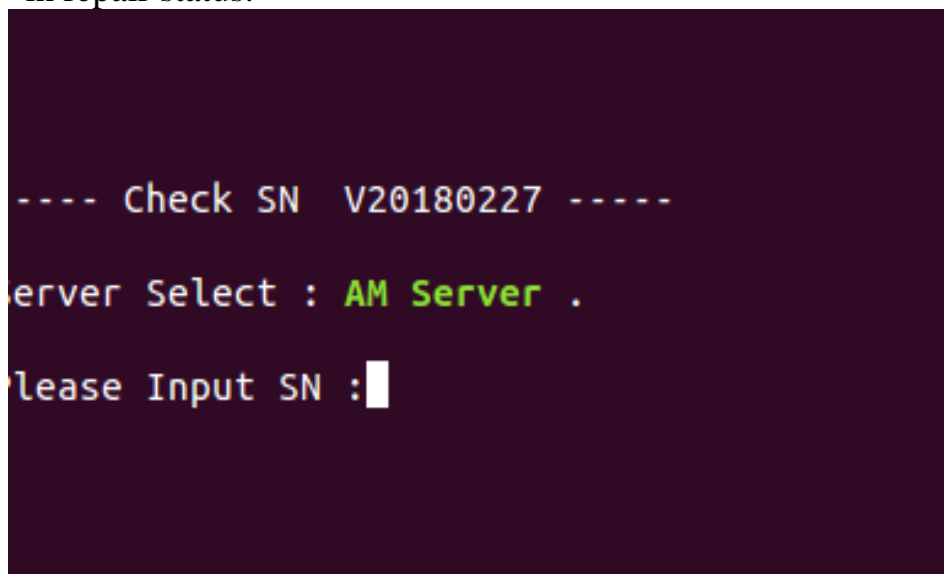
Server Select :

1. AS --> https://as.eservice.asus.com
2. CN --> https://cn.eservice.asus.com
3. AM --> https://am.eservice.asus.com
4. AU --> https://au.eservice.asus.com
5. EU --> https://eu.eservice.asus.com

Test ID : RMA Tester ID

```

6.4.3 Run **Check_SN** and type in your VGA SN which need to be testing. The SN must be in repair status.



```

---- Check SN V20180227 ----

Server Select : AM Server .

Please Input SN : 

```

6.4.4 Run **Diag test** and the diag name is same as the PN of your VGA card.

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Left	File	Command	Options	Right		
<-	/mnt/nv/UTinyLinux/gt1030	.	[^]>	<- /mnt/usbkey		
'n	Name	Size	Modify time	'n	Name	\$
*tegraboards.jse	22036	Apr 18	2017	/60YV0615-VG0A02		
*tegracom~unc.jse	11556	Apr 18	2017	/60YV0BB0-VG0A76		
*tegraperf.jse	26572	Apr 18	2017	/ATI flash		
*test.cfg	2107	Apr 18	2017	/EX-P106-6GR1.01		
*test.sh	42325	Apr 18	2017	/GRUB		
*testlist.jse	37240	Apr 18	2017	/GTx1060		
*thermal.jse	16568	Apr 18	2017	/MINING-P104-4G		
*tofile.jse	5600	Apr 18	2017	/PH-GT103~2GD4-DI		
*tunetrim.jse	21924	Apr 18	2017	/R7240		
*tunevolt.jse	14036	Apr 18	2017	/RMA_Uplo~_update		
*vic_data.bin	16384	Apr 18	2017	/RX550-2G-DIS		
*vp2_stre.bin	203520	Apr 18	2017	/RX550-4G-DIS		
*yv0at0a0.sh	559	Apr 21	2017	/RX560_diag		
*yv0at0a1.sh	559	Apr 21	2017	/RX570_diag		
*yv0at1a0.sh	559	Apr 21	2017	/RX580_diag		
*yv0at1a1.sh	559	Apr 21	2017	/System U~rmation		
*yv0at0a1.sh				/RMA_Upload_Tool_upda		
44G/75G (59%)				66		
Hint: To use the mouse cut and paste may require holding the s						
#						
1Help 2Menu 3View 4Edit 5Copy 6RenMov 7Mkdir 8Dele						

6.4.5 After Diag test is finished, run **RMAInfo** and the test result will be sent to server.

```
=====
=      ASUS VGA RMA Infomation      =
=      Rev2018.02.27                =
=====

Tester ID = 11502YQ
Addr = AM Server .
Problem Code : MNTF01
NV Test Result = PASS
NV Error Code = 000000000000

Update Data To ASUS VGA Server.....

Update Data:  HAC0YZZ268879 PASS 06/03/2018 08:51:59 11502YQ

Please Wait For Ther Return Status:

Result:
SUCCESS
=====
```

6.5 If test OK, please NTF test.

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7. Appendix

NO#	Equipment Description	ASUS Part#	Supplier	Quantity	Remarks
1	LCD Monitor with HDMI/Display Port 4096 x 2304 @ 60 Hz		local	1	
2	USB MOUSE		local	1	
3	KEYBOARD		local	1	
4	ATX POWER SUPPLY (a minimum power of 700W)		local	1	
5	Intel CPU Intel(R) I5 7500 CPU		local	1	
6	Heat sink + FAN		local	1	
7	DDR4 2400 4G		local	2	
8	TEST HDD		local	1	
9	SATA HDD Cable		local	1	
10	HDMI cable (Buying a local HDMI cable by yourself)		local	1	
11	ASUS Prime B250-plus MB		local	1	
12	Display port cable (Buying a local Display port cable by yourself)		local	1	