

ASUSTeK COMPUTER INC.	RX580 Standard Operation Procedure	Doc. No:	
		Date: Dec.26.2019	
		Revision:1.99	
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Rev.	Modified Chapters	Modification Description	Issued Dept.	Issued by	Revised Date
1.00		First Release	GRTD	Maico_Zhang	Apr.17.2017
1.01		Add new PN(YV0AK1-A01)	GRTD	Maico_Zhang	Apr.17.2017
1.02		Add new PN(YV0AK2-A01)	GRTD	Maico_Zhang	Apr.17.2017
1.03		Add new PN(YV0AQ0-B02)	GRTD	Maico_Zhang	Apr.20.2017
1.04		Add new PN(YV0AQ1-A01)	GRTD	Maico_Zhang	Apr.20.2017
1.05		Add new PN(YV0AQ2-A01)	GRTD	Maico_Zhang	Apr.20.2017
1.06		Add new PN(YV0AQ3-A01)	GRTD	Maico_Zhang	Apr.20.2017
1.07		Add new PCBA(YV0AQ1-A11)	GRTD	Maico_Zhang	May.3.2017
1.08		Add new PCBA(YV0AQ3-A11)	GRTD	Maico_Zhang	May.3.2017
1.09		Add new PCBA(YV0AK0-A14)	GRTD	Maico_Zhang	May.19.2017
1.10		Add new PCBA(YV0AK1-A14)	GRTD	Maico_Zhang	May.19.2017
1.11		Add new PCBA (YV0AK2-A14)	GRTD	Maico_Zhang	May.19.2017
1.12		Add new PCBA (YV0AK3-A01)	GRTD	Maico_Zhang	May.19.2017
1.13		Add new PCBA (YV0AK3-A11)	GRTD	Maico_Zhang	May.19.2017
1.14		Add new PCBA (YV0AQ4-A01)	GRTD	Maico_Zhang	Jul.6.2017
1.15		Add new PCBA (YV0AQ0-B14)	GRTD	Maico_Zhang	Aug.22.2017
1.16		Add new PCBA (YV0AQ1-A22)	GRTD	Maico_Zhang	Aug.22.2017
1.17		Add new PCBA (YV0AQ1-A31)	GRTD	Maico_Zhang	Aug.22.2017
1.18		Add new PCBA (YV0AQ2-A12)	GRTD	Maico_Zhang	Aug.22.2017
1.19		Add new PCBA (YV0AQ3-A22)	GRTD	Maico_Zhang	Aug.22.2017
1.20		Add new PCBA (YV0AQ3-A31)	GRTD	Maico_Zhang	Aug.22.2017
1.21		Add new PN(YV0AK0-A26)	GRTD	Maico_Zhang	Sep.22.2017
1.22		Add new PN(YV0AK0-A35)	GRTD	Maico_Zhang	Oct.24.2017
1.23		Add new PCBA(YV0AQ0-B24)	GRTD	Maico_Zhang	Nov.2.2017
1.24		Add new PCBA(YV0AQ2-A22)	GRTD	Maico_Zhang	Nov.17.2017
1.25		Add new PCBA(YV0AK0-A65)	GRTD	Maico_Zhang	Dec.7.2017
1.26		Add new PCBA(YV0AK2-A35)	GRTD	Maico_Zhang	Dec.7.2017
1.27		Add new PCBA(YV0AK0-A76)	GRTD	Maico_Zhang	Dec.20.2017
1.28		Add new PCBA(YV0AK3-A32)	GRTD	Maico_Zhang	Dec.20.2017
1.29		Add new PN(YV0AQ0-B34)	GRTD	Maico_Zhang	Jan.18.2018
1.30		Add new PN(YV0AQ2-A32)	GRTD	Maico_Zhang	Jan.18.2018
1.31		Add new PCBA(YV0AQ3-A42)	GRTD	Maico_Zhang	Jan.25.2018
1.32		Add new PN(YV0AQ5-A02)	GRTD	Maico_Zhang	Feb.8.2018

Authorize by		Review by		Originator By	Maico
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1.33	Add new PCBA(YV0AQ5-A12)	GRTD	Maico_Zhang	Feb.8.2018
1.34	Add new PCBA(YV0AQ1-A42)	GRTD	Maico_Zhang	Feb.11.2018
1.35	Add new PCBA(YV0AQ1-A52)	GRTD	Maico_Zhang	Feb.11.2018
1.36	Add new PCBA(YV0AQ3-A52)	GRTD	Maico_Zhang	Feb.11.2018
1.37	Add new PN(YV0BU0-A01)	GRTD	Maico_Zhang	Mar.15.2018
1.38	Add new PN(YV0BU0-A11)	GRTD	Maico_Zhang	Mar.15.2018
1.39	Add new PCBA(YV0AQ0-B44)	GRTD	Maico_Zhang	Mar.15.2018
1.40	Add new PCBA(YV0AQ2-A42)	GRTD	Maico_Zhang	Mar.15.2018
1.41	Add new PN(YV0AQ6-A01)	GRTD	Maico_Zhang	Mar.15.2018
1.42	Add new PCBA(YV0AK0-A45)	GRTD	Maico_Zhang	Mar.20.2018
1.43	Add new PCBA(YV0AK0-A55)	GRTD	Maico_Zhang	Mar.20.2018
1.44	Add new PCBA(YV0AK1-A25)	GRTD	Maico_Zhang	Mar.20.2018
1.45	Add new PCBA(YV0AK2-A25)	GRTD	Maico_Zhang	Mar.20.2018
1.46	Add new PCBA(YV0AK3-A22)	GRTD	Maico_Zhang	Mar.20.2018
1.47	Add new PN(YV0BU1-A01)	GRTD	Maico_Zhang	Mar.23.2018
1.48	Add new PCBA(YV0AQ0-B54)	GRTD	Maico_Zhang	Mar.23.2018
1.49	Add new PCBA(YV0AQ2-A52)	GRTD	Maico_Zhang	Mar.23.2018
1.50	Add new PCBA(YV0AK1-A35)	GRTD	Maico_Zhang	Apr.25.2018
1.51	Add new PN(YV0BS0-A01)	GRTD	Maico_Zhang	May.2.2018
1.52	Add new PN(YV0BS1-A01)	GRTD	Maico_Zhang	May.2.2018
1.53	Add new PN(YV0BS2-A01)	GRTD	Maico_Zhang	May.2.2018
1.54	Add new PN(YV0BS3-A01)	GRTD	Maico_Zhang	May.2.2018
1.55	Add new PCBA(YV0AQ9-A01)	GRTD	Maico_Zhang	May.2.2018
1.56	Add new PCBA(YV0AQ9-A11)	GRTD	Maico_Zhang	May.2.2018
1.57	Add new PCBA(YV0AQA-A01)	GRTD	Maico_Zhang	May.2.2018
1.58	Add new PCBA(YV0AQA-A11)	GRTD	Maico_Zhang	May.2.2018
1.59	Add new PCBA(YV0AQ7-A01)	GRTD	Maico_Zhang	May.2.2018
1.60	Add new PCBA(YV0AQ7-A11)	GRTD	Maico_Zhang	May.2.2018
1.61	Add new PCBA(YV0AQ8-A01)	GRTD	Maico_Zhang	May.2.2018
1.62	Add new PCBA(YV0AQ8-A11)	GRTD	Maico_Zhang	May.2.2018
1.63	Add new PCBA(YV0AK5-A01)	GRTD	Maico_Zhang	May.2.2018
1.64	Add new PCBA(YV0AK4-A01)	GRTD	Maico_Zhang	May.2.2018
1.65	Add new PCBA(YV0AK4-A11)	GRTD	Maico_Zhang	May.2.2018
1.66	Add new PCBA(YV0AK6-A01)	GRTD	Maico_Zhang	May.2.2018
1.67	Add new PCBA(YV0AK7-A01)	GRTD	Maico_Zhang	May.2.2018
1.68	Add new PCBA(YV0AQ9-A21)	GRTD	Maico_Zhang	May.18.2018
1.69	Add new PCBA(YV0AQ9-A31)	GRTD	Maico_Zhang	May.18.2018
1.70	Add new PCBA(YV0AQA-A21)	GRTD	Maico_Zhang	May.18.2018
1.71	Add new PCBA(YV0AQA-A31)	GRTD	Maico_Zhang	May.18.2018
1.72	Add new PCBA(YV0AK5-A11)	GRTD	Maico_Zhang	May.18.2018
1.73	Add new PCBA(YV0AK6-A11)	GRTD	Maico_Zhang	May.18.2018
1.74	Add new PCBA(YV0AK4-A31)	GRTD	Maico_Zhang	May.18.2018

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1.75		Add new PCBA(YV0AQ1-A62)	GRTD	Maico_Zhang	Jun.15.2018
1.76		Add new PN(YV0C00-A01)	GRTD	Maico_Zhang	Jun.15.2018
1.77		Add new PN(YV0C01-A01)	GRTD	Maico_Zhang	Jul.3.2018
1.78		Add new PN(YV0CK0-A01)	GRTD	Maico_Zhang	Jan.22.2019
1.79		Add new PN(YV0CK1-A01)	GRTD	Maico_Zhang	Jan.22.2019
1.80		Add new PN(YV0CK1-A16)	GRTD	Maico_Zhang	Sep.26.2019
1.81		Add new PN(YV0DN0-A02)	GRTD	Maico_Zhang	Sep.26.2019
1.82		Add new PN(YV0DN1-A01)	GRTD	Maico_Zhang	Sep.26.2019
1.83		Add new PCBA(YV0DN1-A11)	GRTD	Maico_Zhang	Dec.2.2019
1.84		Add new PCBA(YV0AK0-A88)	GRTD	Maico_Zhang	Dec.2.2019
1.85		Add new PN(YV0AQ1-A73)	GRTD	Maico_Zhang	Dec.2.2019
1.86		Add new PCBA(YV0AQ9-A41)	GRTD	Maico_Zhang	Dec.2.2019
1.87		Add new PN(YV0AQ3-A62)	GRTD	Maico_Zhang	Dec.2.2019
1.88		Add new PCBA(YV0AQA-A41)	GRTD	Maico_Zhang	Dec.2.2019
1.89		Add new PN(YV0AK2-A47)	GRTD	Maico_Zhang	Dec.2.2019
1.90		Add new PN(YV0AK1-A47)	GRTD	Maico_Zhang	Dec.26.2019
1.91		Add new PCBA(YV0AK0-A98)	GRTD	Maico_Zhang	Dec.26.2019
1.92		Add new PN(YV0AK3-A43)	GRTD	Maico_Zhang	Dec.26.2019
1.93		Add new PCBA(YV0AK3-A53)	GRTD	Maico_Zhang	Dec.26.2019
1.94		Add new PN(YV0AQ1-A82)	GRTD	Maico_Zhang	Dec.26.2019
1.95		Add new PCBA(YV0AQ9-A51)	GRTD	Maico_Zhang	Dec.26.2019
1.96		Add new PN(YV0AQ3-A72)	GRTD	Maico_Zhang	Dec.26.2019
1.97		Add new PCBA(YV0AQA-A51)	GRTD	Maico_Zhang	Dec.26.2019
1.98		Add new PN(YV0E90-A01)	GRTD	Maico_Zhang	Dec.26.2019
1.99		Add new PN(YV0E91-A01)	GRTD	Maico_Zhang	Dec.26.2019

1.Objectives

Create test procedure.

2.Scope

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Model: RX580

PN: YV0AK0(A01/A14) YV0AK1(A01/A14/A25/A35) YV0AK2(A01/A14/A25)
YV0AQ0(B02/B14/B23/B34/B44/B54) YV0AQ1(A01/A11/A22/A31/A42/A52/A62/A73)
YV0AQ2(A01/A12/A22/A32/A42/A52) YV0AQ3(A01/A11/A22/A31/A42/A52/A62)
YV0AK3(A01/A11/A22) YV0AQ4(A01) YV0AK0(A26) YV0AK0(A35/A45/A55)
YV0AK0(A65/A88)YV0AK2(A35)YV0AK0(A76)YV0AK3(A32)YV0BS1(A01)YV0AQ5(A02/
A12)YV0BU0(A01/A11)YV0AQ6(A01)YV0BU1(A01)YV0BS2(A01)YV0BS3(A01)YV0BS0(
A01) YV0AQ7(A01/A11)YV0AQ8(A01/A11)YV0AQ9(A01/A11/A21/A31/A41)
YV0AQA(A01/A11/A21/A31/A41) YV0AK4(A01/A11/A31) YV0AK5(A01/A11)
YV0AK6(A01/A11) YV0AK7(A01) YV0C00(A01) YV0C01(A01) YV0CK0(A01)
YV0CK1(A01) YV0CK1(A16) YV0DN0(A02) YV0DN1(A01/A11)

3.Test Item

3.1 Diagnostic test in 14_04_64-bit Linux

4.Relevant Document

None.

5.Definition :

1. RX580 Test Program in 64-bit Linux system.

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 test environment by yourself).

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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 RX580 into PCIEX16_1.

6.2.5 If this card has 6 PIN or 8 PIN of Power supply, please connect power con of VGA card & Power supply via bundled power cable.

(6 PIN of Power supply to 6 PIN of VGA card)

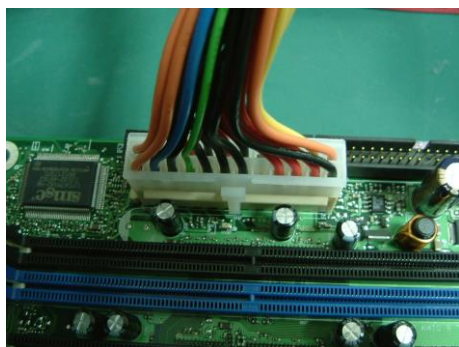
(8 PIN of Power supply to 8 PIN of VGA card)

6.2.6 Connect SATA HDD & SATA con via SATA cable



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

6.2.8 Plug ATX Power on Power(a minimum power of 1200W) Connector.



6.3 Certain test.

6.3.1 Diagnostic test in **64-bit LINUX system**

6.3.1.1 Please connect LCD monitor & card's DVI CON via a DVI cable.



Dual link DVI cable



6.3.1.2 Press Power Switch then turn on power button.

6.3.1.3 Press "Del" to enter CMOS setup menu while boot screen is displaying.

EXIT -> Load Setup Defaults.

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6.3.1.4 Run test program in 64-bit linux system.

Path:rx5801\ yv0ak1a0 or yv0ak1a1 or yv0ak1a2 or yv0ak1a3 or yv0ak5a0 or yv0ak5a1

Path:rx5802\ yv0ak2a0 or yv0ak2a1 or yv0ak2a2 or yv0ak3a0 or yv0ak3a1 or yv0ak2a3 or yv0ak3a3 or yv0ak3a2 or yv0ak6a0 or yv0ak7a0 or yv0ak6a1

Path:rx5803\ yv0aq0b0 or yv0aq0b1 or yv0aq0b2

Path:rx5804\ yv0aq1a0 or yv0aq1a1 or yv0aq1a2 or yv0aq1a3 or yv0aq1a4 or yv0aq1a5 or yv0aq9a0 or yv0aq9a1 or yv0aq9a2 or yv0aq9a3 or yv0aq1a6

Path:rx5805\ yv0aq2a0 or yv0aq2a1 or yv0aq2a2

Path:rx5806\ yv0aq3a0 or yv0aq3a1 or yv0aq3a2 or yv0aq3a3 or yv0aq3a4 or yv0aq3a5 or yv0aqaa0 or yv0aqaa1 or yv0aqaa2 or yv0aqaa3

Path:rx5807\ yv0aq4a0

Path:rx5808\ yv0ak0a2

Path:rx5809\ yv0ak0a3 or yv0ak0a4 or yv0ak0a7 or yv0ak4a1

Path:rx580a\ yv0ak0a0 or yv0ak0a1 or yv0ak0a5 or yv0ak0a6 or yv0ak4a0 or yv0ak4a3

Path:rx580b\ yv0aq0b3 or yv0aq0b4 or yv0aq0b5 or yv0aq7a0 or yv0aq7a1

Path:rx580c\ yv0aq2a3 or yv0aq2a4 or yv0aq2a5 or yv0aq8a0 or yv0aq8a1

Path:rx580d\ yv0aq5a0 or yv0aq5a1

Path:rx580e\ yv0bu0a0

Path:rx580f\ yv0bu0a1

Path:rx580g\ yv0aq6a0

Path:rx580h\ yv0bu1a0

Path:rx580i\ yv0bs0a0

Path:rx580j\ yv0bs1a0

Path:rx580k\ yv0bs2a0

Path:rx580l\ yv0bs3a0

Path:rx580m\ yv0c00a0

Path:rx580n\ yv0c01a0

Path:rx580o\ yv0ck0a0

Path:rx580p\ yv0ck1a0

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Path:rx580r\ yv0ck1a1
 Path:rx580s\ yv0dn0a0
 Path:rx580t\ yv0dn1a0 or yv0dn1a1
 Path:rx580u\ yv0ak0a8 or yv0ak0a9
 Path:rx580v\ yv0aq1a7 or yv0aq9a4
 Path:rx580w\ yv0aq3a6 or yv0aqaa4
 Path:rx580x\ yv0ak2a4
 Path:rx580y\ yv0ak1a4
 Path:rx580z\ yv0ak3a4 or yv0ak3a5
 Path:rx580a1\ yv0aq1a8 or yv0aq9a5
 Path:rx580a2\ yv0aq3a7 or yv0aqaa5
 Path:rx580a3\ yv0e90a0
 Path:rx580a4\ yv0e91a0

6.3.1.5 Memory test

If you want to test memory, please run `./tserver -boardtest=memfa` or `./memtest.sh`
 Path:rx580\

6.3.1.6 BIOS Version

If you want to see the version of bios, please run `./atiflash -ai 0` or `./biosinfo`.
 Path:rx580\

6.3.1.7 BIOS flash

Please use the following command to flash bios and notice the size of character.
 Path:rx580\

Command: `./atiflash -p -f 0 xxx.rom` or `./amdvbflash -f 0 xxx.rom`

Notice:

If you can not flash bios because of the bios locked, please use `./atiflash -unlockrom 0` to unlock bios. And then, please use `./atiflash -lockrom 0` 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:



Check_SN



RMA_Config



RMAInfo

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.

```
CN  ← Server Select
1150231 ← Test ID

-----
# 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.

```

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
*yvb0at0a0.sh      559      Apr 21 2017      /RX560_diag
*yvb0at0a1.sh      559      Apr 21 2017      /RX570_diag
*yvb0at1a0.sh      559      Apr 21 2017      /RX580_diag
*yvb0at1a1.sh      559      Apr 21 2017      /System U~rmation
*yvb0at0a1.sh      44G/75G (59%)      /RMA_Upload_Tool_upda
Hint: To use the mouse cut and paste may require holding the sh
#
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:  HAC0YZ268879 PASS 06/03/2018 08:51:59 11502YQ

Please Wait For Ther Return Status:








Result:

SUCCESS
=====

```

6.5 If test OK, please NTF test.

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	Dual link DVI cable (Buying a local DVI cable by yourself)		local	1	
11	HDMI extend cable (Buying a local HDMI cable by yourself)		local	1	
12	ASUS Prime B250-PLUS MB		local	1	
13	Display port cable (Buying a local Display port cable by yourself)		local	1	