

ASUSTeK COMPUTER INC.	RX6900 Standard Operation Procedure	Doc. No:	
		Date: <b>Jan.28.2021</b>	
		Revision:1.00	
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Rev.	Modified Chapters	Modification Description	Issued Dept.	Issued by	Revised Date
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<b>Authorize by</b>		<b>Review by</b>		<b>Originator By</b>	<b>Maico</b>
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## 1. Objectives

Create test procedure.

## 2. Scope

Model: RX6900 series

PN:

## 3. Test Item

3.1 Diagnostic test in Ubuntu18.04\_64-bit Linux

## 3. Relevant Document

None.

## 5. Definition :

1. System Memory: 8GB for a single GPU test station.
2. 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 **AMD Matisse ( 3rd Ryzen )** CPU & CPU Fan.
- 6.2.2 Install DDR4 Memory to DIMM. **(This model needs 8GB memory)**
- 6.2.3 Plug USB Mouse and Keyboard into MB.
- 6.2.4 Plug VGA Card 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

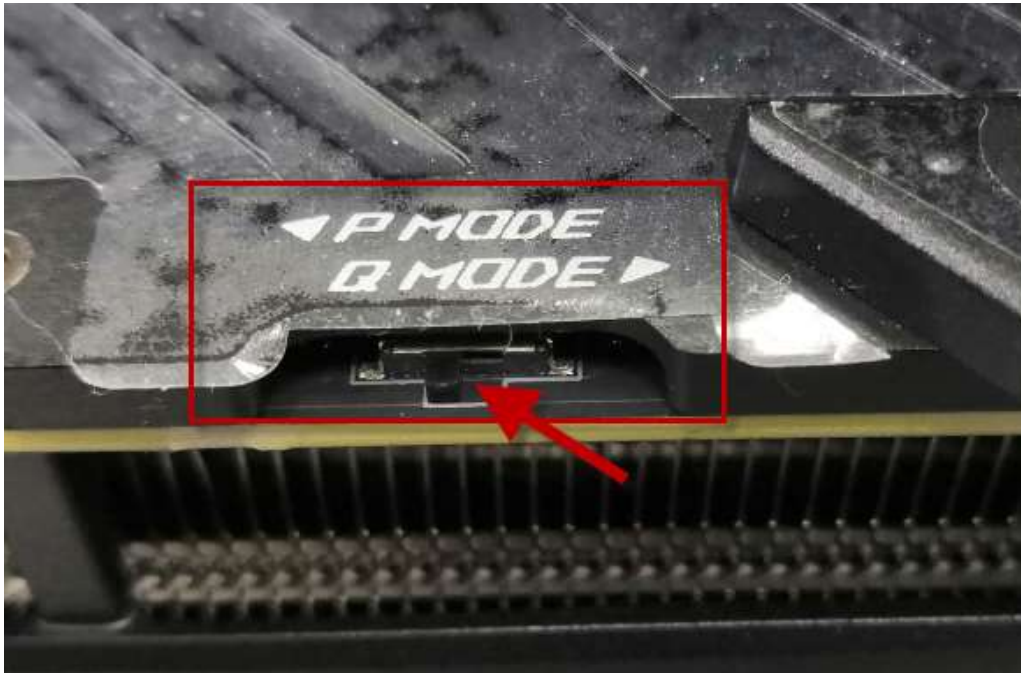


- 6.2.7 Plug 4PIN 12V power **(a minimum power of 850W)** cable into CON12V.
- 6.2.8 Plug ATX Power on Power **(a minimum power of 850W)** Connector.



## 6.3 Certain test.

- 6.3.1 Diagnostic test in **64-bit LINUX system**
  - 6.3.1.1 **Test specifications should be used to control Q-MODE.**



6.3.1.2 Please connect LCD monitor & card's HDMI(DP) CON via a HDMI(DP) cable.



6.3.1.3 Plug type-C cable of mobile SSD into Type-C port of VGA card (For Type-C port model).

6.3.1.4 Press Power Switch then turn on power button.

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

**EXIT -> Load Setup Defaults.**

6.3.1.6 Run test program in 64-bit Linux system.

Run `./amd.sh`, input Serial No. and 60Part No.as below.

```

Ubuntu 14.04.5 LTS ASUS-ACS-1204 tty1
ASUS-ACS-1204 login: root (automatic login)
Last login: Fri Jun 19 13:26:10 CST 2020 on tty1
Welcome to Ubuntu 14.04.5 LTS (GNU/Linux 3.13.0-135-generic x86_64)

 * Documentation:  https://help.ubuntu.com/

317 packages can be updated.
0 updates are security updates.

root@ASUS-ACS-1204:~# ./amd.sh
#####
# AMD VGA LINUX TEST PROGRAM #
#       Ver. 2.1       #
#####
Please input SN:
SN:j4c0yz224894
Please input PN (Ex.YV0BIO):
PN:yv0ah8
Please input PCB (Ex.A03 -> A0):
PCB:a0

```

6.3.1.7 Select 5 to run final test.

```

root@ASUS-ACS-1204:~# ./amd.sh
#####
# AMD VGA LINUX TEST PROGRAM #
#       Ver. 2.1       #
#####
Please input SN:
SN:j4c0yz224894
Please input PN (Ex.YV0BIO):
PN:yv0ah8
Please input PCB (Ex.A03 -> A0):
PCB:a0
#### Diag Ver. Baffin_BD-PROD_16-07-09 ####
Please input one test item:
1.Diag Test
2.Update VBIOS
3.VRAM Test
4.Unload Test Result by Case
5.Final Test
6.Upload All Test Result
9.Check PPID
0.Exit

input:5
Diag folder exist

```

6.3.1.8 BIOS flash

a. Single BIOS

-- Select 2, auto update VBIOS.

```
root@ASUS-ACS-1204:~# ./AMD.SH
-bash: ./AMD.SH: No such file or directory
root@ASUS-ACS-1204:~# ./amd.sh
#####
# AMD VGA LINUX TEST PROGRAM #
#       Ver. 2.1       #
#####
Please input SN:
SN:j4c0yz224894
Please input PN (Ex.YV0BIO):
PN:yv0ah8
Please input PCB (Ex.A03 -> A0):
PCB:a0
#### Diag Ver. Baffin_BD-PROD_16-07-09A ####
Please input one test item:
1.Diag Test
2.Update VBIOS
3.VRAM Test
4.Upload Test Result by Case
5.Final Test
6.Upload All Test Result
9.Check PPID
0.Exit
```

#### b. Dual-VBIOS

-- Please use the following command to flash VBIOS in DIAG folder.

Path: refer to Diag Ver. as below.

```
root@ASUS-ACS-1204:~# ./amd.sh
#####
# AMD VGA LINUX TEST PROGRAM #
#       Ver. 2.1       #
#####
Please input SN:
SN:j4c0yz224894
Please input PN (Ex.YV0BIO):
PN:yv0ah8
Please input PCB (Ex.A03 -> A0):
PCB:a0
#### Diag Ver. Baffin_BD-PROD_16-07-09 ####
Please input one test item:
1.Diag Test
2.Update VBIOS
```

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

#### 6.3.2 If test OK, please NTF test.



## 7. Appendix

NO#	Equipment Description	ASUS Part#	Photo	ASP Source	ASUS Source	Q'ty
1	LCD Monitor with HDMI/Display Port 4096 x 2304 @ 60 Hz			Local	Local	1
2	USB MOUSE			Local	Local	1
3	USB KEYBOARD			Local	Local	1
4	ATX POWER SUPPLY (a minimum power of 850W) -- ROG-THOR-850P	90YE0090-B001X0		Local	ASUS	1
4-1	ROG-THOR-850P Cable	90YE0090-B001Y0		Local	ASUS	1
5	AMD AM4 Socket 3rd Ryzen Processors (Support PCIe 4.0x16)	*You can select one for below 3 Part No.		Local	ASUS	1
	AMD CPU R5-3600 3.6G/32M	01002-01320300				
	AMD CPU R7-3700X 3.6G/32M	01002-01320100				
	AMD CPU R7-3800X 3.9G/32M	01002-01320000				
6	Heat sink + FAN			Local	Local	1
7	DDR4 2400 4G	03A08-00011700		Local	ASUS	1
8	SATA HDD	03B01-00131800		Local	ASUS	1
9	SATA HDD Cable			Local	Local	1
11	HDMI extend cable (Buying a local HDMI cable by yourself)			Local	Local	1
12	X570 Series MB (Support PCIe 4.0x16) -- ASUS ROG STRIX X570-F GAMING	90MB1160-M0AAY0		Local	ASUS	1

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13	Display port cable (Buying a local Display port cable by yourself)			Local	Local	1
14	Mobile SSD with Type-C port			Local	Local	1
15	Type-C cable			Local	Local	1