

FAQ / Application Note

Subject : To test whether EMX-H61 is able to support 4 displays.

FAQ Document No:

Date: 2012/03/23

Model Name: EMX-H61

Rev.

Category: General H/W S/W Others, 寫小分類

Purpose:

To verify whether EMX-H61 with a VGA Card is able to support 4 displays.

If we want to use EMX-H61 for 4 displays, we have to add a VGA card, and then the BIOS has to be set for 2 steps.

VGA card for test: ASUS ENGT220(VGA,HDMI,DVI port)

1.BIOS->Chipset->North Bridge->Initate ->IGD

The purpose of this setting is making the onboard graphic as primary display when booting.

Otherwise, if setting it as "PEG", the additional VGA card will display firstly, and then the onboard graphic will be disable.

2.BIOS->Chipset->North Bridge->IGD Multi-monitor->Enabled.

The purpose of this setting is enable the multi-display.

There are the test result for the combinations of displays as below.

onboard HDMI+VGA and ASUS HDMI+VGA => OK

onboard DVI+VGA and ASUS DVI+VGA => OK

onboard HDMI+VGA and ASUS DVI+VGA => OK

onboard DVI+VGA and ASUS HDMI+VGA => OK

onboard HDMI+DVI and ASUS HDMI+DVI => OK

We can see the last combination, which is OK to dual digital displays(HDMI+DVI).

Due to the graphic chip offers two pipe, we can choose "Analog + Digital" or "Digital + Digital".

However, the graphic chip has only two pipes, so it is unable to support three even four displays.

That means, onboard graphic and additional graphic(VGA card) is able to support 2+2=4 displays, but isn't able to support 5 or 6 displays.

Avalue Technology Inc.

7F, 228, Lian-Cheng Road, Chung Ho City, Taipei, Taiwan R.O.C.

www.avalue.com.tw
sales@avalue.com.tw
Tel:+886-2-82262345
Fax:+886-2-82262777

Avalue Europe
sales.europe@avalue.com.tw
Tel: +45-7025-0310
Fax: +45-4975-5026

Avalue USA
sales@avalue-usa.com
Tel: +1-732-578-0200
Fax: +1-732-578-0250

BCM Advanced Research
BCMSales@bcmcom.com
Tel: +1-949-470-1888
Fax: +1-949-470-0971

Avalue China
sales.china@avalue.com.cn
Tel: +86-21-5426-3399
Fax: +86-21-6495-0370



Below are the preliminary test results for reference:

BIOS->Chipset->North Bridge->Initate ->IGD

```
Aptio Setup Utility - Copyright (C) 2011 American  
Chipset  
Memory Information  
Total Memory                2048 MB (DDR3 1333)  
Memory Slot1                 0 MB (DDR3 1333)  
Memory Slot2                 2048 MB (DDR3 1333)  
Low MMIO Align               [1024M]  
DMI Gen2                     [Enabled]  
VT-d                         [Disabled]  
Initate Graphic Adapter      [IGD]  
IGD Memory                   [96M]  
Render Standby               [Enabled]  
IGD Multi-Monitor            [Enabled]  
DVMT Mode Select             [DVMT Mode]  
DVMT/FIXED Memory            [256MB]
```

BIOS->Chipset->North Bridge->IGD Multi-monitor->Enabled

```
Aptio Setup Utility - Copyright (C) 2011 American  
Chipset  
Memory Information  
Total Memory                2048 MB (DDR3 1333)  
Memory Slot1                 0 MB (DDR3 1333)  
Memory Slot2                 2048 MB (DDR3 1333)  
Low MMIO Align               [1024M]  
DMI Gen2                     [Enabled]  
VT-d                         [Disabled]  
Initate Graphic Adapter      [PEG/IGD]  
IGD Memory                   [96M]  
Render Standby               [Enabled]  
IGD Multi-Monitor            [Enabled]  
DVMT Mode Select             [DVMT Mode]  
DVMT/FIXED Memory            [256MB]
```

Avalue Technology Inc.

www.avalue.com.tw
sales@avalue.com.tw
Tel:+886-2-82262345
Fax:+886-2-82262777

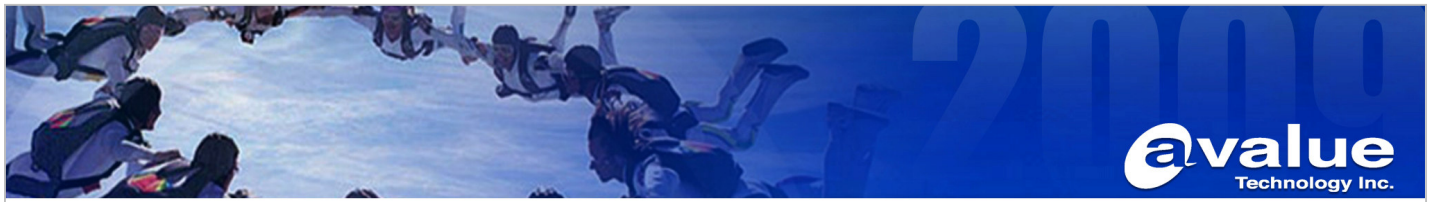
Avalue Europe
sales.europe@avalue.com.tw
Tel: +45-7025-0310
Fax: +45-4975-5026

Avalue USA
sales@avalue-usa.com
Tel: +1-732-578-0200
Fax: +1-732-578-0250

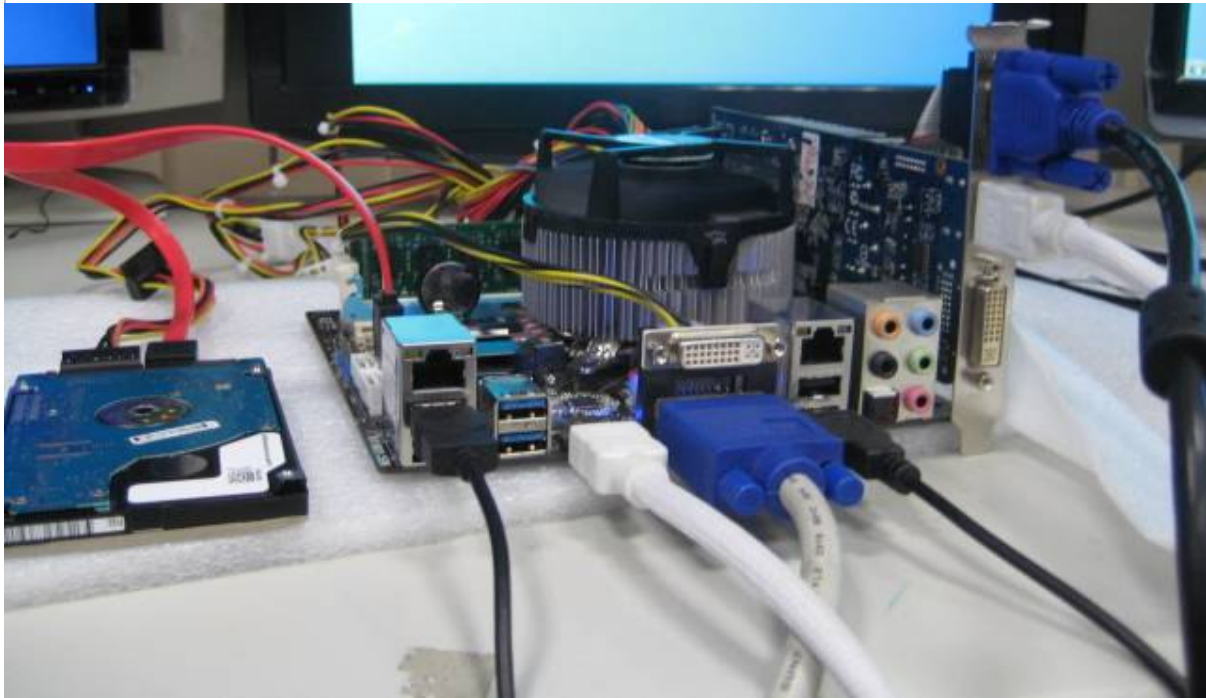
BCM Advanced Research
BCMSales@bcmcom.com
Tel: +1-949-470-1888
Fax: +1-949-470-0971

Avalue China
sales.china@avalue.com.cn
Tel: +86-21-5426-3399
Fax: +86-21-6495-0370

7F, 228, Lian-Cheng Road, Chung Ho City, Taipei, Taiwan R.O.C.



onboard HDMI+VGA & ASUS HDMI+VGA OK



Avalue Technology Inc.

www.avalue.com.tw
sales@avalue.com.tw
Tel:+886-2-82262345
Fax:+886-2-82262777

Avalue Europe
sales.europe@avalue.com.tw
Tel: +45-7025-0310
Fax: +45-4975-5026

Avalue USA
sales@avalue-usa.com
Tel: +1-732-578-0200
Fax: +1-732-578-0250

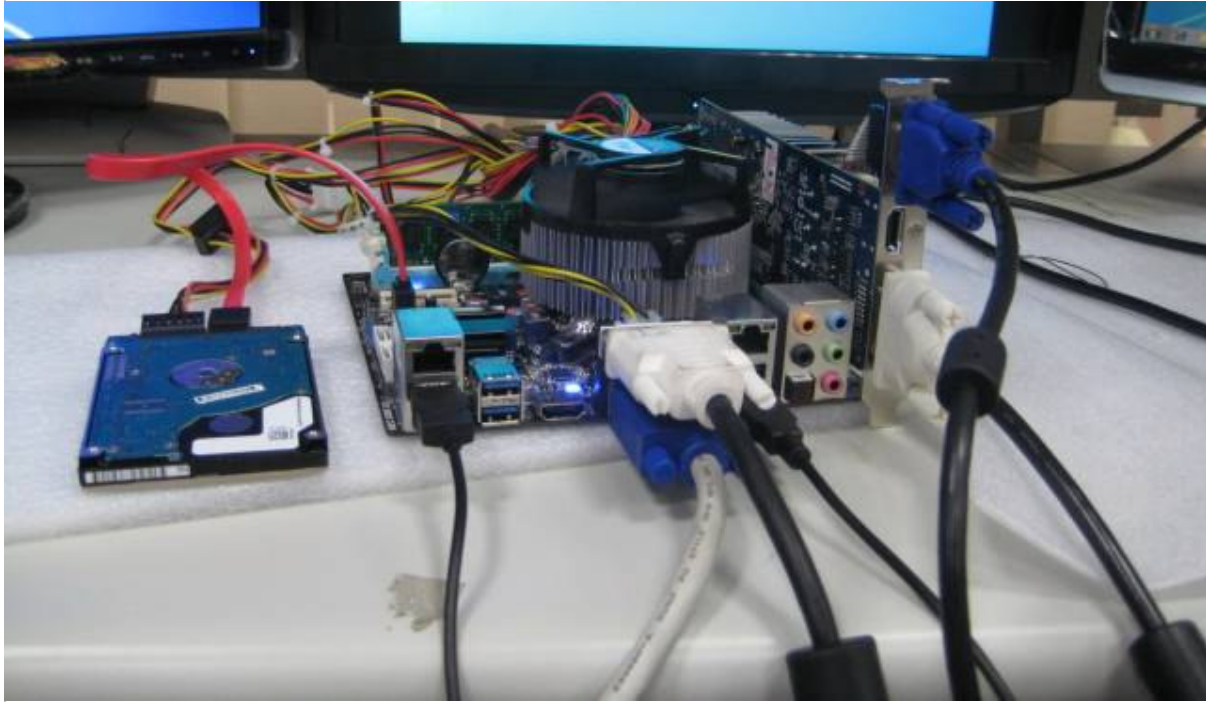
BCM Advanced Research
BCMSales@bcmcom.com
Tel: +1-949-470-1888
Fax: +1-949-470-0971

Avalue China
sales.china@avalue.com.cn
Tel: +86-21-5426-3399
Fax: +86-21-6495-0370

7F, 228, Lian-Cheng Road, Chung Ho City, Taipei, Taiwan R.O.C.



onboard DVI+VGA & ASUS DVI+VGA OK



Avalue Technology Inc.

www.avalue.com.tw
sales@avalue.com.tw
Tel:+886-2-82262345
Fax:+886-2-82262777

Avalue Europe
sales.europe@avalue.com.tw
Tel: +45-7025-0310
Fax: +45-4975-5026

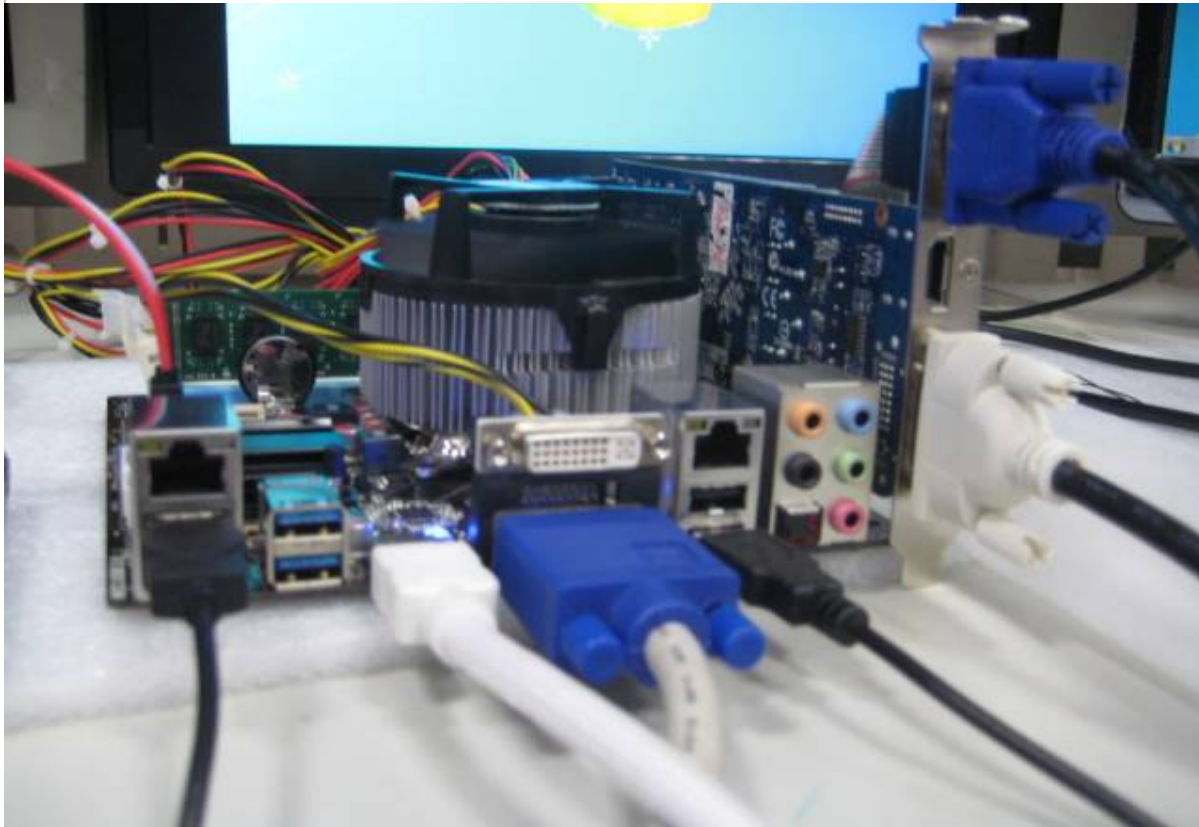
Avalue USA
sales@avalue-usa.com
Tel: +1-732-578-0200
Fax: +1-732-578-0250

BCM Advanced Research
BCMSales@bcmcom.com
Tel: +1-949-470-1888
Fax: +1-949-470-0971

Avalue China
sales.china@avalue.com.cn
Tel: +86-21-5426-3399
Fax: +86-21-6495-0370

7F, 228, Lian-Cheng Road, Chung Ho City, Taipei, Taiwan R.O.C.

onboard HDMI+VGA & ASUS DVI+VGA OK



Avalue Technology Inc.

www.avalue.com.tw
sales@avalue.com.tw
Tel:+886-2-82262345
Fax:+886-2-82262777

Avalue Europe
sales.europe@avalue.com.tw
Tel: +45-7025-0310
Fax: +45-4975-5026

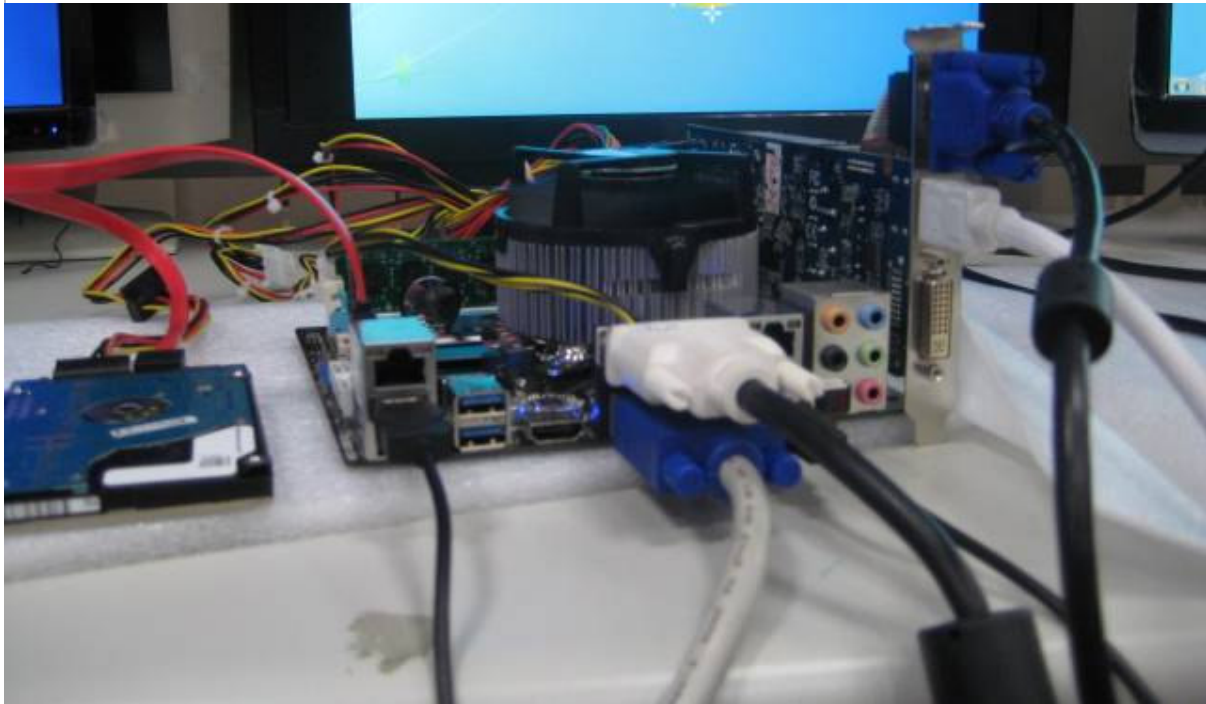
Avalue USA
sales@avalue-usa.com
Tel: +1-732-578-0200
Fax: +1-732-578-0250

7F, 228, Lian-Cheng Road, Chung Ho City, Taipei, Taiwan R.O.C.
BCM Advanced Research
BCMSales@bcmcom.com
Tel: +1-949-470-1888
Fax: +1-949-470-0971

Avalue China
sales.china@avalue.com.cn
Tel: +86-21-5426-3399
Fax: +86-21-6495-0370



onboard DVI+VGA & ASUS HDMI+VGA OK



Avalue Technology Inc.

7F, 228, Lian-Cheng Road, Chung Ho City, Taipei, Taiwan R.O.C.

www.avalue.com.tw
sales@avalue.com.tw
Tel:+886-2-82262345
Fax:+886-2-82262777

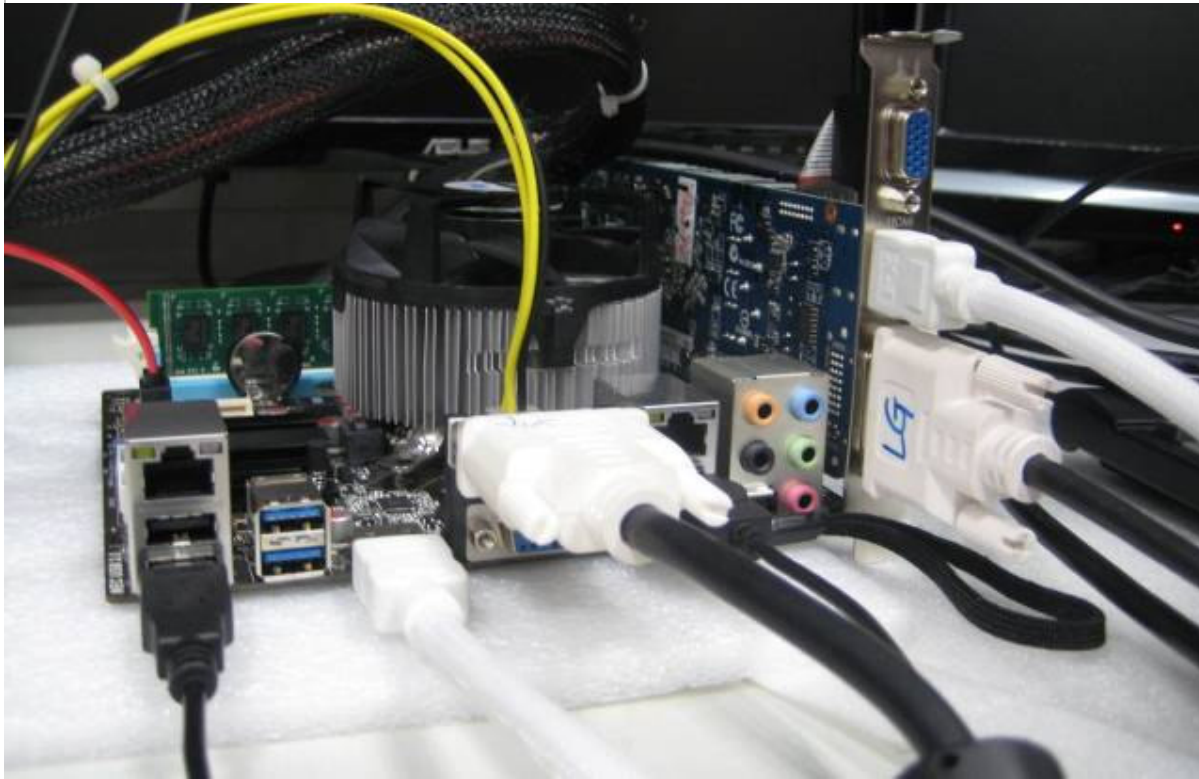
Avalue Europe
sales.europe@avalue.com.tw
Tel: +45-7025-0310
Fax: +45-4975-5026

Avalue USA
sales@avalue-usa.com
Tel: +1-732-578-0200
Fax: +1-732-578-0250

BCM Advanced Research
BCMSales@bcmcom.com
Tel: +1-949-470-1888
Fax: +1-949-470-0971

Avalue China
sales.china@avalue.com.cn
Tel: +86-21-5426-3399
Fax: +86-21-6495-0370

onboard HDMI+DVI & ASUS HDMI+DVI OK



AE :Fox

Date :2013/04/22

Avalue Technology Inc.

www.avalue.com.tw
sales@avalue.com.tw
Tel:+886-2-82262345
Fax:+886-2-82262777

Avalue Europe
sales.europe@avalue.com.tw
Tel: +45-7025-0310
Fax: +45-4975-5026

Avalue USA
sales@avalue-usa.com
Tel: +1-732-578-0200
Fax: +1-732-578-0250

7F, 228, Lian-Cheng Road, Chung Ho City, Taipei, Taiwan R.O.C.

BCM Advanced Research
BCM5Sales@bcmcom.com
Tel: +1-949-470-1888
Fax: +1-949-470-0971

Avalue China
sales.china@avalue.com.cn
Tel: +86-21-5426-3399
Fax: +86-21-6495-0370