DIVA Labs.

ECR (Engineering Change Request)

Proposed Change : ☑1. Design modification 設計修改 ☐2. Material change 材料變更 ☐3. Manufacturer change 製造商變更 ☐4. Factory change 工廠變更 ☐5. Process sequency change 工序變更 ☐6. Equipment / Tooling change 設備/ 模具變更 ☐7. Process / Method / Condition change 加工流程/方法/條件變更 ☐8.Add second source 新增替代料 ☐9. Others 其他：_____	**Initiator :** Anderson 01/16 1715
Reason for Change : (1) Add Support of Timing. (See detial in firmware version history.) (2) Improve speed of dial brightness when bright bar off. (3) Set default setting of bright bar to off.	**EC No :** EC26011201
Model / Part No. : 1A2A15280200800 VLD15906 / 1A2A15285200800 VLD15906GTF / 1A2A1528Y700800 VLD15906PCAP 1A2A15280200801 VLD15906S / 1A2A17280200800 VLD17906 / 1A2A17285200800 VLD17906GTF 1A2A19280700800 VLD19906 / 1A2A19285700800 VLD19906GTF / 1A2A19280700801 VLD19906S	**Issue Date :** 2026/01/12
	Requester Dept. : DV115001
Implementation Type : ☑1. Immediately Change 立即切換 ☐2. Running Change 自然切換 ☐3. Other 其他：_____	**Customer Approval :** ☐Needed ☑Not needed (confirmed by PM)

Material Change Description (Please add pages as needed if the provided space is insufficient.)
物料變更說明（如不敷使用請逕行增頁）

No.	Subassembly		Part No.	Description	Q'ty	Location	Stock	Remark
1	2AAD648R027	B	8SWD648V010	FW (VLD159_211230R0V01)	1	2AAD567R138 (U301)		
		A	8SWD648V01A	FW (VLD159_240930R0V01)	1	2AAD567R138 (U301)		
2	2AAD650R027	B	8SWD650V01A	FW (VLD179_221212R0V01)	1	2AAD567R138 (U301)		
		A	8SWD650V01B	FW (VLD179_240930R0V01)	1	2AAD567R138 (U301)		
3	2AAD638R027	B	8SWD638V01B	FW (VLD199_240905R0V01)	1	2AAD567R138 (U301)		
		A	8SWD638V01C	FW (VLD199_241218R0V01)	1	2AAD567R138 (U301)		

Comments 會簽意見

R&D		Department 會簽部門								Approval
Initiator	Initiator's Direct Supervisor	DQE	PM	Sales	PE	PMC	SCM	PD	QA	R&D Director
Anderson 01/12 1000	01/12 1350	01/12 1355	01/12 1355	01/12 1400	01/13 1000	01/14 1000	X	01/15 1530	01/15 0920	01/15 1605

ECR (Engineering Change Request)

Engineering Change Assessment Item List 工程變更評估項目清單			
Document	Confirm	Authorized Dept.	Remark
1. Application for Revision of Specification or Drawing(s) for delivery 是否有修改交貨的規格或圖面	☐Yes ☑No need	RD	
2. Standards or Regulatories Impact 是否有評估適用之標準或主管機關之相關法規的申請	☐Yes ☑No need	DQE	無影響
3. Change point of PCB mounting PCBA插件位置是否變更	☐Yes ☑No need	RD	
4. PCBA Process Changes PCBA製程是否變更	☐Yes (Continue checking below) ☑No	PE	無影響
4-1) Change of Reflow temperature 迴焊溫度是否變更	☐Yes ☐No need		
4-2) Change of bonding temperature 膠合溫度是否變更	☐Yes ☐No need		
4-3) Change of Manual Soldering temperature 人工手焊工具之溫度是否變更	☐Yes ☐No need		
4-4) Change of storage condition after protection humidity package 防潮包裝完成後的儲存條件是否變更	☐Yes ☐No need		
5. Reliability test report (Test result and data) 是否有可靠性測試報告（測試結果及數據）	☑Yes ☐No need	DQE	
6. Process FMEA（Medical only） 是否有進行製程失效模式與效應分析	☐Yes ☑No need	PE	無影響
7. Design FMEA（Medical only） 是否有進行設計失效模式與效應分析	☐Yes ☑No need	RD	
8. Risk Management（Medical only） 是否有進行風險管理評估	☐Yes ☑No need	RD	
9. Change points due to the modification 是否此修改會延伸導致其他變更點	☐Yes ☑No need	RD	

ECR (Engineering Change Request)

Engineering Change Assessment Item List 工程變更評估項目清單			
Document	Confirm	Authorized Dept.	Remark
10. Initial Supply Control implements plan or result. 是否有實施供料控制評估	☑Yes ☐No need	PMC	
10-1) Confirm the work order or order number or date for the implementation start of the engineering change. 確認工程變更開始實施之工單或訂單號碼或日期。	☑Yes ☐No need		工單1007503. 日期:2026.1.28 VLD15906(執行)
10-2) Coordinate the handling methods for related products and materials. 協調相關產品及材料處理方法。	☑Yes ☐No need		
10-3) Arrange the production schedule. 處理生產日程之安排。	☑Yes ☐No need		
10-4) Control the changed materials. 變更材料之管制。	☐Yes ☑No need		
10-5) Establish relevant execution control records for EC materials, register traceability data for each material. 建立有關工程變更物料之相關執行管控記錄、登錄各項物料追溯性資料。	☑Yes ☐No need		
11. Training Requirement 若此一變更影響製程或檢驗，是否需要再做人員訓練	☑Yes ☐No need	PE	
12. Modification contents (For example, the following documents) 是否有評估此變更之各項相關文件（如下） ☐ MDF ☐ DMR ☑ SOP ☑ SIP ☑ QC control plan ☐ Approval Sheet ☐ Engineering Spec ☐ Others	☑Yes ☐No need	QA	

anderson_wei

寄件者: Dennis <Dennis_liu@diva.com.tw>
寄件日期: 2025年12月2日星期二 下午 3:49
收件者: 'anderson_wei'
副本: 'sharon_yeh 葉文琴'; 'kevin_peng 彭閎熙'
主旨: RE: MAV VLDxx9 640 x 350 timing (Firmware版本確認)
附件: RE: VLDxx9 firmware changes (37.3 KB)

重要性: 高

Dear Anderson,

Olorin確認FW版本如附, 再請協助幫忙跑系統EC流程, 感謝

Please use 240930R0V01 for VLD159, VLD179

and for VLD199, 241218R0V01.

Thanks & Best Regards
Dennis Liu

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M: +886-937-314-799 | Skype ID: willowdenis
A: 9F., No.351, Sec. 2, Zhongshan Road, Zhonghe District , New Taipei City 235602, Taiwan R.O.C.

From: anderson_wei <anderson_wei@diva.com.tw>
Sent: Wednesday, September 24, 2025 9:40 AM
To: 'Dennis' <Dennis_liu@diva.com.tw>
Cc: 'sharon_yeh 葉文琴' <sharon_yeh@diva.com.tw>; kevin_peng 彭閎熙 <kevin_peng@diva.com.tw>
Subject: RE: MAV VLDxx9 640 x 350 timing (Firmware版本確認)

Main board	Description	Latest Firmware (For production)	Remark
2AAD648R027	MAIN BD SKD ASSY (VLD15906GTF)	VLD159_211230R0V01	VLD159_240930R0V01測試中
2AAD650R027	MAIN BD SKD ASSY (VLD17906)	VLD179_221212R0V01	VLD179_240930R0V01測試中
2AAD638R027	MAIN BD SKD ASSY (VLD19906)	VLD199_240905R0V01	VLD199_241218R0V01測試中 VLD199_250813R0V01測試中
2AAD640R027	MAIN BD SKD ASSY (VLD22906GTF)	VLD229_240905R0V01	
2AAD641R027	MAIN BD SKD ASSY (VLD24906GTF)	VLD249_240905R0V01	

Firmware Version History Release Note

Model Name	1A2A15280200800 / VLD15906
Location	3PD567F011A / U301 / MAIN BD (MSD92LCBW1,MAV,#A)
Part	2AAD567R138 / MAIN BD ASSY (VLD19906PCAP,#A)

Document No. / Rev.：QRC-L-016 / Rev. A

Status	Own	Frimware Vesion Description	Mark	Description of Changes
PP	Anderson	VLD159_211230R0V01		PP Version.
PP	Anderson	VLD159_240930R0V01		1. Modify base on version "VLD159_211230R0V01" 2. Improve speed of dial brightness when bright bar off. 3. Set default setting of bright bar to off. 4. Add Timing support of 720x480@60Hz. 5. Add Timing support of 640x350@60Hz for DVI-A Input. 6. Add Timing support of 1280x1024@60Hz. 7. Add Timing support of 1280x1024@75 Hz for DVI-A input.

Firmware Version History Release Note

Model Name	1A2A17280200800 / VLD17906
Location	3PD567F011A / U301 / MAIN BD (MSD92LCBW1,MAV,#A)
Part	2AAD567R138 / MAIN BD ASSY (VLD19906PCAP,#A)

Document No. / Rev.：QRC-L-016 / Rev. A

Status	Own	Frimware Vesion Description	Mark	Description of Changes
PP	Anderson	VLD179_221212R0V01		PP Version.
PP	Anderson	VLD179_240930R0V01		1. Modify base on version "VLD179_221212R0V01" 2. Improve speed of dial brightness when bright bar off. 3. Set default setting of bright bar to off. 4. Add Timing support for 720 x 480 @60 Hz for DVI-A Input. 5. Add Timing support of 640x350@60Hz for DVI-A Input. 6. Add Timing support of 1600x1200@60Hz. 7. Add Timing support of 1600x1200@75Hz for DVI-A Input.

Firmware Version History Release Note

Model Name	1A2A19280700800 / VLD19906
Location	3PD567F011A / U301 / MAIN BD (MSD92LCBW1,MAV,#A)
Part	2AAD567R138 / MAIN BD ASSY (VLD19906PCAP,#A)

Document No. / Rev.：QRC-L-016 / Rev. A

Status	Own	Frimware Vesion Description	Mark	Description of Changes
PP	Anderson	VLD199_240905R0V01		PP Version.
PP	Anderson	VLD199_241218R0V01		1. Modify base on version "VLD199_240905R0V01" 2. Add Timing support of 1600x1200@60Hz. 3. Add Timing support of 1600x1200@75Hz for DVI-A Input. 4. Adjust the tolerance of the Vertical frequency of the signal from 1.5 Hz to 2.5 Hz.

鈺緯科技開發股份有限公司

設計變更審查會議記錄

會議名稱	ECN/ECR	日期	2026/01/12	時間	09:00-10:00	地點	802 會議室
會議種類	例會						
主席	PM_Sharon	與會人員	Sharon, Kevin_Peng , Anderson				
會議記錄	Kevin_Peng	缺席人員	無				

主席指示事項：

No	工作項目	負責人
1.	進行功能,性能及安全性評估	FW: Anderson Wei

決議事項：

No	工作項目	負責人	狀態
1.	1. Add Support of Timing. (See detial in firmware version history.) 2. Improve speed of dial brightness when bright bar off. 3. Set default setting of bright bar to off. 設定如下: 1st 8SWD648V010 / FW (VLD159_211230R0V01) 2nd 8SWD648V01A / FW (VLD159_240930R0V01) 3rd 8SWD650V01A / FW (VLD179_221212R0V01) 4th 8SWD650V01B / FW (VLD179_240930R0V01) 5th 8SWD638V01B / FW (VLD199_240905R0V01) 6th 8SWD638V01C / FW (VLD199_241218R0V01)	FW Anderson Wei	

追蹤事項：

No	工作項目	負責人	完成日期	狀態	
1.	無				

會議記錄內容：*(XXX)紅色部分表示該事項負責人

機種名稱: 1A2A15280200800 VLD15906 / 1A2A15285200800 VLD15906GTF /
1A2A1528Y700800 VLD15906PCAP / 1A2A15280200801 VLD15906S /
1A2A17280200800 VLD17906 / 1A2A17285200800 VLD17906GTF /
1A2A19280700800 VLD19906 / 1A2A19285700800 VLD19906GTF / 1A2A19280700801 VLD19906S

設計變更原因： 1. Add Support of Timing. (See detial in firmware version history.)
2. Improve speed of dial brightness when bright bar off.
3. Set default setting of bright bar to off.

設計變更描述: 1st 8SWD648V010 / FW (VLD159_211230R0V01)
2nd 8SWD648V01A / FW (VLD159_240930R0V01)
3rd 8SWD650V01A / FW (VLD179_221212R0V01)
4th 8SWD650V01B / FW (VLD179_240930R0V01)
5th 8SWD638V01B / FW (VLD199_240905R0V01)
6th 8SWD638V01C / FW (VLD199_241218R0V01)

導入時程：Urgent

客戶審查：Not needed

一. 研發課評估:

單位	審查內容	附加文件
EE :	與 EE 設計無關,不會造成軟體安全性影響	無
FW:	應業務需求,建議更換出貨韌體版本,經評估,材料與設計都符合原設計,並不會造成產品功能,性能及安全性影響.	無
ME:	與 ME 設計無關,並不會造成產品功能,性能及安全性影響.	無
SW:	與 SW 設計無關,不會造成軟體安全性影響	無
DQE:	DQE 已進行 FW 驗證, 結果顯示修改 FW 沒有異常現象, 無風險	Validation Report 附件 安規部門評估: 無法規問題

二 結論:

1. 此設計變更不會對產品用途造成影響
2. 開發單位各部門評估後,此設計變更不會對產品預期用途造成影響,
設計變更風險審查於風險評估報告中呈現

功能	設計變更內容無關功能影響
性能	設計變更內容,無關產品性能影響

可用性	無影響,沒有使用上的風險
安全性	組裝方式沒有改變, 沒有安全性風險,
法規	經審查,沒有影響法規內容

Product Validation Report

Product Name	**: MAV1532A**
Model Name	**: VLD15906**
Product Stage	**: MP**
Product No.	**: 1A2A15280200800**
Revision	**: A**

Prepared By : Joe Lin **Date : 2025/12/12**

Approved By : RongChi **Date : 2025/12/12**

Index & Content			
Part	**Test Item**	**Descriptions**	**Result**
S/W	Source Test	Test and verify input source and output source are working properly and according to spec.	**PASS**
S/W	Compatibility Test	To ensure compatibility between different OS and graphic card and must meet engineering and product spec.	**PASS**

Product Front View



Product Rear View



Available Connections



Source Test

Test Engineer	Joe Lin	Date	2025/12/12	Stage	Result
				MP	PASS

Test Propose

Test and verify input source and output source are working properly and according to spec.

Evaluation Environment

Temperature	24±2ºC
Relative humidity	50%±10%(RH)

Evaluation Equipment

Processor	Intel ® Core™ i5-4440 CPU@ 3.10	WIN7 32BIT I3 3220	
Graphics Card	K2000D - 411.95	K2000 - 385.90	
Graphics Card	VG 871B	Chroma VIDEO PATTERN GENERATOR Model 2403	
O.S	VG 871B	Chroma VIDEO PATTERN GENERATOR Model 2403	

Evaluation Unit Level

LCD	AUO G150XTN03.5
Power Adapter	12V5.0A,FSP060-DHAN3,FSP
F/W Version	VLD159_240930R0V01
Main Board	3PD567F011A / MAIN BD (MSD92LCBW1,MAV,#A)
Touch Panel	N/A
Touch Controller	N/A
Support Input Signal	HDMI/DVI-A/DP
Serial Number	RD220729001

Test Standard

DQE Source Test Specification

Criteria

1. All supported signal must display properly
2. When there's no signal, No Sync is displayed
3. When Off Mode is turn on, make sure monitor will go to sleep
4. Make sure when switching signal or plug/unplug signal LCD display properly
5. Follow Engineering Spec/Product Spec

Firmware Version History Release Note

Model Name	5A2A15280200800 / VLD15906
Location	3PD567F011A / U301 / MAIN BD (MSD92LCBW1,MAV,#A)
Part	2AAD567R138 / MAIN BD ASSY (VLD19906PCAP,#A)

Document No. / Rev. : QRC-L-016 / Rev. A

Status	Own	Frimware Vesion Description	Mark	Description of Changes
PP	Anderson	VLD159_211230R0V01		PP Version.
PP	Anderson	VLD159_231116R0V01		1. Modify base on version "VLD159_211230R0V01" 2. Improve speed of dial brightness when bright bar off. 3. Set default setting of bright bar to off. 4. Add Timing support of 720x480@60Hz.
PP	Anderson	VLD159_240905R0V01		1. Modify base on version "VLD159_231116R0V01" 2. Add Timing support of 640x350@60Hz for VGA Input.
PP	Anderson	VLD159_240930R0V01		1. Modify base on version "VLD159_240905R0V01" 2. Add Timing support of 1280x1024@60Hz. 3. Add Timing support of 1280x1024@75 Hz for DVI-A input.

Input Source		Result	Note
Test Item	Description		
HDMI	1. Input digital signal to HDMI input and Check/switch source to HDMI input.	Pass	
	2. Check HDMI displays correctly and LED should show static green color and show HDMI message box.	Pass	
	3. Unplug HDMI input, make sure the display shows "No signal" and wait for monitor to go into Power Saving Mode. Check LED should show static orange color.	Pass	
	4. Input analog signal to HDMI input, make sure the image display correctly.	Pass	
	5. Execute AC off/on, make sure HDMI image display correctly, OSD Source Information shows HDMI input.(Confirm all signal screens exist)	Pass	
	6. Connect the all support signal at the same time, perform AC DC on/off, and check if the picture is in HDMI.	Pass	
	7.Switch to another input source signal (all source) and confirm that the signal source can be converted correctly.	Pass	
	8. After removing the HDMI, confirm whether to enter other sources.	Pass	
	9. Remove other signal sources in sequence to confirm that the Auto Source function is correct.	Pass	
	10. Repeat step 1 to 9 for 10 times.	Pass	
DVI-A	1. Input digital signal to DVI input and check/switch source to DVI input.	Pass	
	2. Check DVI displays correctly and LED should show static green color and show DVI message box.	Pass	
	3. Unplug DVI input, make sure the display shows "No signal" and wait for monitor to go into Power Saving Mode. Check LED should show static orange color.	Pass	
	4. Input DP signal, make sure the image display correctly.	Pass	
	5. Execute AC off/on, make sure DVI image display correctly, OSD Source Information shows DVI input.(Confirm all signal screens exist)	Pass	
	6. Connect the all support signal at the same time, perform AC DC on/off, and check if the picture is in DVI.	Pass	
	7.Switch to another input source signal (all source) and confirm that the signal source can be converted correctly.	Pass	
	8. After removing the DVI, confirm whether to enter other sources.	Pass	
	9. Remove other signal sources in sequence to confirm that the Auto Source function is correct.	Pass	
	10. Repeat step 1 to 9 for 10 times.	Pass	
Displayport	1. Input digital signal to DP input and check/switch source to DP input.	Pass	
	2. Check DP displays correctly and LED should show static green color and show DP message box.	Pass	
	3. Unplug DP input, make sure the display shows "No signal" and wait for monitor to go into Power Saving Mode. Check LED should show static orange color.	Pass	
	4. DP signal input, make sure the image display correctly.	Pass	
	5. Execute AC off/on, make sure DP image display correctly, OSD Source Information shows DP input. (Confirm all signal screens exist)	Pass	
	6. Connect the all support signal at the same time, perform AC DC on/off, and check if the picture is in DP.	Pass	
	7.Switch to another input source signal (all source) and confirm that the signal source can be converted correctly.	Pass	
	8. After removing the DP, confirm whether to enter other sources.	Pass	
	9. Remove other signal sources in sequence to confirm that the Auto Source function is correct.	Pass	
	10. Repeat step 1 to 9 for 10 times.	Pass	

Compatibility Test

Test Engineer	Joe Lin	Date	2025/12/12	Stage	Result
				MP	PASS

Test Propose

To ensure compatibility between different OS and graphic card and must meet engineering and product spec.

Evaluation Environment

Temperature	24±2°C
Relative humidity	50%±10%(RH)

Evaluation Equipment

Processor	Intel ® Core™ i5-4440 CPU@3.10GHz	WIN 10 64BIT CPU E5400	WIN10 64BIT I5 6400
Graphics Card	NVIDIA Quadro K2000D-Driver392.00	K2000 - 388.16	W5000 - 18.Q4
Test Equipment	VIDEO TEST GENERATOR VG 871		

Evaluation Unit Level

LCD	AUO G150XTN03.5
Power Adapter	12V5.0A,FSP060-DHAN3,FSP
F/W Version	VLD159_240930R0V01
DC Converter Board	2AADLW6R03E
Main Board	3PD567F011A / MAIN BD (MSD92LCBW1,MAV,#A)
Touch Panel	N/A
Touch Controller	N/A
Support Input Signal	HDMI/DVI-A/DP
Serial Number	RD220729001

Criteria

1. PC boot up, make sure monitor display normally. screen can't have any abnormality.
2. After monitor coming off suspend or screen saver, it must display normally.
3. Perform tests using graphic card and make sure no blank, blinking or other abnormal displays.
4. Follow Engineering Spec/Product Spec

Firmware Version History Release Note

Model Name	5A2A15280200800 / VLD15906
Location	3PD567F011A / U301 / MAIN BD (MSD92LCBW1,MAV,#A)
Part	2AAD567R138 / MAIN BD ASSY (VLD19906PCAP,#A)

Document No. / Rev. : QRC-L-016 / Rev. A

Status	Own	Frimware Vesion Description	Mark	Description of Changes
PP	Anderson	VLD159_211230R0V01		PP Version.
PP	Anderson	VLD159_231116R0V01		1. Modify base on version "VLD159_211230R0V01" 2. Improve speed of dial brightness when bright bar off. 3. Set default setting of bright bar to off. 4. Add Timing support of 720x480@60Hz.
PP	Anderson	VLD159_240905R0V01		1. Modify base on version "VLD159_231116R0V01" 2. Add Timing support of 640x350@60Hz for VGA Input.
PP	Anderson	VLD159_240930R0V01		1. Modify base on version "VLD159_240905R0V01" 2. Add Timing support of 1280x1024@60Hz. 3. Add Timing support of 1280x1024@75 Hz for DVI-A input.

Compatible Test									
Source Type	Desktop								
PC Name	CPU E5400			I5 3570			I5 6400		
O.S.	WIN 10 64BIT			WIN10 64BIT			WIN10 64BIT		
Graphic Card	K2000 - 388.16			K2000D - 418.81			W5000 - 18.Q4		
Source Connector	DVI	HDMI	DP	DVI-A	HDMI	DP	DVI-A	HDMI	DP
Monitor Connector	DVI	HDMI	DP	VGA	HDMI	DP	VGA	HDMI	DP

Compatible Function Test				
Test Item	Compatibility Test Description		Result	Note
Plug and Play Function Test	Normal Boot-Up		Pass	
	Normal Shutdown		Pass	
	Normal Reboot		Pass	
	Power Saving		Pass	
	Hot plug DUT AC cable while the monitor is DC on 5 times		Pass	
	Hot plug DUT AC cable while the monitor is DC off 5 times		Pass	
OSD Function Test	Brightness		Pass	
	Color Mode		Pass	
	Startup Status Message		Pass	
	Display timing information		Pass	
Power Management Test	Sleep while the monitor is DC off		Pass	
	Sleep while the monitor is AC off		Pass	
	Repeat sleep power management 5 times		Pass	
	Startup Status		Pass	
Input Switch Test	Auto Source on/off Check		Pass	
	Switch Inputs With Active Source (5 times)		Pass	
	Switch Inputs With Inactive Source (5 times)		Pass	
EDID/DDC Test	HDMI	DVA07CD	Pass	
	DVI	DVA07CC	Pass	
	DP	DVA07CE	Pass	
	Monitor name	Olorin VLD159	Pass	

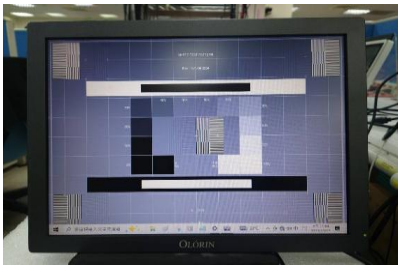
Resolution Test					
Display Timing	**Description**	**Result**	**Monitor Source**	**Result**	**Note**
1024x768 75Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**N/A**	
			HDMI	**N/A**	
			DP	**N/A**	
1024x768 70Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**N/A**	
			HDMI	**N/A**	
			DP	**N/A**	
1024x768 60Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**Pass**	
			HDMI	**Pass**	
			DP	**Pass**	
800x 600 70Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**N/A**	
			HDMI	**N/A**	
			DP	**N/A**	
800x 600 72Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**N/A**	
			HDMI	**N/A**	
			DP	**N/A**	
800x 600 60Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**Pass**	
			HDMI	**Pass**	
			DP	**Pass**	
720x400 56Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**N/A**	
			HDMI	**N/A**	
			DP	**N/A**	
640x 480 75Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**N/A**	
			HDMI	**N/A**	
			DP	**N/A**	
640x 480 72Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**N/A**	
			HDMI	**N/A**	
			DP	**N/A**	
640x 480 60Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**Pass**	
			HDMI	**Pass**	
			DP	**Pass**	
1280x 1024 75Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**N/A**	
			HDMI	**N/A**	
			DP	**N/A**	
1280x 1024 60Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**Pass**	
			HDMI	**Pass**	
			DP	**Pass**	

Support Timing Test					
Pattern Generator	Astro VG 859C		Astro VG 871B	Chroma 2403	
Test procedure				Result	Note
1. Validated according to the resolution standards provided by Engineer Spec.				Pass	
2. Verify the input source signal for each resolution and confirm the same frequency (approximation).				Pass	
3. Verify Scaling for each resolution and input source.				Pass	
4. Make sure that the screen does not appear blank or flash when switching between different Timing.				Pass	

Resolution	V Frequency (Hz)	H Frequency (kHz)	Source	Result	Note
720x400	70Hz	31.5 kHz	VGA	Pass	
			DVI	Pass	
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support
640x480	60 Hz	31.5 kHz	VGA	Pass	
			DVI	Pass	
			HDMI	Pass	
			DP	Pass	
640x480	72 Hz	37.9 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support
640x480	75 Hz	37.5 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support
800x600	56 Hz	35.1 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support
800x600	60 Hz	37.8 kHz	VGA	Pass	
			DVI	Pass	
			HDMI	Pass	
			DP	Pass	
800x600	72 Hz	48.1 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support

Resolution	V Frequency (Hz)	H Frequency (kHz)	Source	Result	
800x600	75 Hz	46.9 kHz	VGA	**Pass**	
			DVI	**N/A**	Diisplay timing no support
			HDMI	**N/A**	Diisplay timing no support
			DP	**N/A**	Diisplay timing no support
1024x768	60 Hz	48.3 kHz	VGA	**Pass**	
			DVI	**Pass**	
			HDMI	**Pass**	
			DP	**Pass**	
1024x768	70 Hz	56.4 kHz	VGA	**Pass**	
			DVI	**N/A**	Diisplay timing no support
			HDMI	**N/A**	Diisplay timing no support
			DP	**N/A**	Diisplay timing no support
1024x768	75 Hz	60 kHz	VGA	**Pass**	
			DVI	**N/A**	Diisplay timing no support
			HDMI	**N/A**	Diisplay timing no support
			DP	**N/A**	Diisplay timing no support
1280x1024	60 Hz	67.5 kHz	VGA	**Pass**	
			DVI	**Pass**	
			HDMI	**Pass**	
			DP	**Pass**	
1280x1024	75 Hz	63.9 kHz	VGA	**Pass**	
			DVI	**N/A**	Diisplay timing no support
			HDMI	**N/A**	Diisplay timing no support
			DP	**N/A**	Diisplay timing no support

Image Quality Test				
Test procedure			**Result**	**Note**
1. Open Test software and select different patterns for testing.			Pass	
2. Check whether the various Patterns screens are normal, and there should be no distortion or breakage.			Pass	
3. Verify against different resolutions.			Pass	
4. Tap the monitor to confirm if the screen will flash			Pass	
Pattern Test Description			**Result**	**Note**
Grayscale	Switch display to different gamma setting using 64/128/256 grayscales, check for over saturate lines, dots, color uniformity and smooth transition, check 64/128/256 grayscales for over saturated color,line, dots, make sure they are smooth.		Pass	
Color Bar	Use color bar pattern, check for over saturate lines, dot using Auto Color Balance to auto correct if issue occurs. Make sure Auto Color Balance works And check analog RGB signals, color bar.		Pass	
Line	Use Geometry Pattern, check for line patterns within the viewing area making sure all lines are displayed properly. If analog RGB signals, use Auto adjust to calibrate the display viewing area.		Pass	
Text	Check Text patterns, make sure text are focused and clear to read. If analogRGB signals, use Auto Adjust to calibrate the display. One dot: Use one dot on/off test pattern, check for flickers, shaking, and discolor. If analog RGB signals, use Auto Adjust to calibrate the display.		Pass	
Picture	Use pattern Gen or PC to display color pictures. Check for discoloration, over saturated lines, and dots.		Pass	
Video	Use DVD player or PC to play videos, check to see if the video has flickers, shaking, synchronized, or frame delay issues.		Pass	
Resolution	**Test Software**	**Pattern**	**Result**	**Note**
640x480 60Hz	TOSHIBA/DMW	Grayscale	Pass	
		Color Bar	Pass	
		Line	Pass	
		Text	Pass	
		Picture	Pass	
		Video	Pass	
800x600 60Hz	TOSHIBA/DMW	Grayscale	Pass	
		Color Bar	Pass	
		Line	Pass	
		Text	Pass	
		Picture	Pass	
		Video	Pass	
1024x768 60Hz	TOSHIBA/DMW	Grayscale	Pass	
		Color Bar	Pass	
		Line	Pass	
		Text	Pass	
		Picture	Pass	
		Video	Pass	
1280x1024 60Hz	TOSHIBA/DMW	Grayscale	Pass	
		Color Bar	Pass	
		Line	Pass	
		Text	Pass	
		Picture	Pass	
		Video	Pass	

PHOTO OF TEST	
SMPTE133 Test Pattern	Grayscale Test Pattern
	
Line Test Pattern	Text Test Pattern
	
Colorbar Test Pattern	
	

Product Validation Report

Product Name	**: MAV1732A**
Model Name	**: VLD17906**
Product Stage	**: MP**
Product No.	**: 1A2A15280200800**
Revision	**: A**

Prepared By : Joe Lin **Date : 2025/12/19**

Approved By : RongChi **Date : 2025/12/19**

Index & Content			
Part	**Test Item**	**Descriptions**	**Result**
S/W	Source Test	Test and verify input source and output source are working properly and according to spec.	**PASS**
S/W	Compatibility Test	To ensure compatibility between different OS and graphic card and must meet engineering and product spec.	**PASS**

Product Front View



Product Rear View



Available Connections



Source Test

Test Engineer	Joe Lin	Date	2025/12/16	Stage	Result
				MP	PASS

Test Propose

Test and verify input source and output source are working properly and according to spec.

Evaluation Environment

Temperature	24±2ºC
Relative humidity	50%±10%(RH)

Evaluation Equipment

Processor	Intel ® Core™ i5-4440 CPU@ 3.10	WIN7 32BIT I3 3220	
Graphics Card	K2000D - 411.95	K2000 - 385.90	
Graphics Card	VG 871B	Chroma VIDEO PATTERN GENERATOR Model 2403	
O.S	VG 871B	Chroma VIDEO PATTERN GENERATOR Model 2403	

Evaluation Unit Level

LCD	AUO G170ETN01.0
Power Adapter	12V5.0A,FSP060-DHAN3,FSP
F/W Version	VLD179_240930R0V01
Main Board	3PD567F011A /MAIN BD (MSD92LCBW1,MAV,#A)
Touch Panel	N/A
Touch Controller	N/A
Support Input Signal	HDMI/DVI-A/DP
Serial Number	RD220802001

Test Standard

DQE Source Test Specification

Criteria

1. All supported signal must display properly
2. When there's no signal, No Sync is displayed
3. When Off Mode is turn on, make sure monitor will go to sleep
4. Make sure when switching signal or plug/unplug signal LCD display properly
5. Follow Engineering Spec/Product Spec

Firmware Version History Release Note

Model Name	5A2A17280200800 / VLD17906
Location	3PD567F011A / U301 / MAIN BD (MSD92LCBW1,MAV,#A)
Part	2AAD567R138 / MAIN BD ASSY (VLD19906PCAP,#A)

Document No. / Rev. : QRC-L-016 / Rev. A

Status	Own	Frimware Vesion Description	Mark	Description of Changes
PP	Anderson	VLD179_211230R0V01		PP Version.
PP	Anderson	VLD179_221212R0V01		1. Modify base on version "VLD179_211230R0V01" 2. Modify Dimming table to meet 0.5% duty of minmum.
PP	Anderson	VLD179_231002R0V01		1. Modify base on version "VLD179_221212R0V01" 2. Improve speed of dial brightness when bright bar off. 3. Set default setting of bright bar to off.
PP	Anderson	VLD179_240131R0V01		1. Modify base on version "VLD179_231002R0V01" 2. Add support for 720 x 480 @60 Hz by using VGA (D-sub).
PP	Anderson	VLD179_240905R0V01		1. Modify base on version "VLD179_231002R0V01" 2. Add Timing support of 640x350@60Hz for VGA Input.
PP	Anderson	VLD179_240930R0V01		1. Modify base on version "VLD179_240905R0V01" 2. Add Timing support of 1600x1200@60Hz. 3. Add Timing support of 1600x1200@75Hz for DVI-A.

Input Source		Result	Note
Test Item	Description		
HDMI	1. Input digital signal to HDMI input and Check/switch source to HDMI input.	Pass	
	2. Check HDMI displays correctly and LED should show static green color and show HDMI message box.	Pass	
	3. Unplug HDMI input, make sure the display shows "No signal" and wait for monitor to go into Power Saving Mode. Check LED should show static orange color.	Pass	
	4. Input analog signal to HDMI input, make sure the image display correctly.	Pass	
	5. Execute AC off/on, make sure HDMI image display correctly, OSD Source Information shows HDMI input.(Confirm all signal screens exist)	Pass	
	6. Connect the all support signal at the same time, perform AC DC on/off, and check if the picture is in HDMI.	Pass	
	7.Switch to another input source signal (all source) and confirm that the signal source can be converted correctly.	Pass	
	8. After removing the HDMI, confirm whether to enter other sources.	Pass	
	9. Remove other signal sources in sequence to confirm that the Auto Source function is correct.	Pass	
	10. Repeat step 1 to 9 for 10 times.	Pass	
DVI-A	1. Input digital signal to DVI input and check/switch source to DVI input.	Pass	
	2. Check DVI displays correctly and LED should show static green color and show DVI message box.	Pass	
	3. Unplug DVI input, make sure the display shows "No signal" and wait for monitor to go into Power Saving Mode. Check LED should show static orange color.	Pass	
	4. Input DP signal, make sure the image display correctly.	Pass	
	5. Execute AC off/on, make sure DVI image display correctly, OSD Source Information shows DVI input.(Confirm all signal screens exist)	Pass	
	6. Connect the all support signal at the same time, perform AC DC on/off, and check if the picture is in DVI.	Pass	
	7.Switch to another input source signal (all source) and confirm that the signal source can be converted correctly.	Pass	
	8. After removing the DVI, confirm whether to enter other sources.	Pass	
	9. Remove other signal sources in sequence to confirm that the Auto Source function is correct.	Pass	
	10. Repeat step 1 to 9 for 10 times.	Pass	
Displayport	1. Input digital signal to DP input and check/switch source to DP input.	Pass	
	2. Check DP displays correctly and LED should show static green color and show DP message box.	Pass	
	3. Unplug DP input, make sure the display shows "No signal" and wait for monitor to go into Power Saving Mode. Check LED should show static orange color.	Pass	
	4. DP signal input, make sure the image display correctly.	Pass	
	5. Execute AC off/on, make sure DP image display correctly, OSD Source Information shows DP input. (Confirm all signal screens exist)	Pass	
	6. Connect the all support signal at the same time, perform AC DC on/off, and check if the picture is in DP.	Pass	
	7.Switch to another input source signal (all source) and confirm that the signal source can be converted correctly.	Pass	
	8. After removing the DP, confirm whether to enter other sources.	Pass	
	9. Remove other signal sources in sequence to confirm that the Auto Source function is correct.	Pass	
	10. Repeat step 1 to 9 for 10 times.	Pass	

Compatibility Test

Test Engineer	Joe Lin	Date	2025/12/19	Stage	Result
				MP	PASS

Test Propose

To ensure compatibility between different OS and graphic card and must meet engineering and product spec.

Evaluation Environment

Temperature	24±2°C
Relative humidity	50%±10%(RH)

Evaluation Equipment

Processor	Intel ® Core™ i5-4440 CPU@3.10GHz	WIN 10 64BIT CPU E5400	WIN10 64BIT I5 6400
Graphics Card	NVIDIA Quadro K2000D-Driver392.00	K2000 - 388.16	W5000 - 18.Q4
Test Equipment	VIDEO TEST GENERATOR VG 871		

Evaluation Unit Level

LCD	AUO G170ETN01.0
Power Adapter	12V5.0A,FSP060-DHAN3,FSP
F/W Version	VLD179_240930R0V01
DC Converter Board	2AADLW6R03E
Main Board	3PD567F011A / MAIN BD (MSD92LCBW1,MAV,#A)
Touch Panel	N/A
Touch Controller	N/A
Support Input Signal	HDMI/DVI-A/DP
Serial Number	RD220802001

Criteria

1. PC boot up, make sure monitor display normally. screen can't have any abnormality.
2. After monitor coming off suspend or screen saver, it must display normally.
3. Perform tests using graphic card and make sure no blank, blinking or other abnormal displays.
4. Follow Engineering Spec/Product Spec

Firmware Version History Release Note

Model Name	5A2A17280200800 / VLD17906
Location	3PD567F011A / U301 / MAIN BD (MSD92LCBW1,MAV,#A)
Part	2AAD567R138 / MAIN BD ASSY (VLD19906PCAP,#A)

Document No. / Rev. : QRC-L-016 / Rev. A

Status	Own	Frimware Vesion Description	Mark	Description of Changes
PP	Anderson	VLD179_211230R0V01		PP Version.
PP	Anderson	VLD179_221212R0V01		1. Modify base on version "VLD179_211230R0V01" 2. Modify Dimming table to meet 0.5% duty of minmum.
PP	Anderson	VLD179_231002R0V01		1. Modify base on version "VLD179_221212R0V01" 2. Improve speed of dial brightness when bright bar off. 3. Set default setting of bright bar to off.
PP	Anderson	VLD179_240131R0V01		1. Modify base on version "VLD179_231002R0V01" 2. Add support for 720 x 480 @60 Hz by using VGA (D-sub).
PP	Anderson	VLD179_240905R0V01		1. Modify base on version "VLD179_231002R0V01" 2. Add Timing support of 640x350@60Hz for VGA Input.
PP	Anderson	VLD179_240930R0V01		1. Modify base on version "VLD179_240905R0V01" 2. Add Timing support of 1600x1200@60Hz. 3. Add Timing support of 1600x1200@75Hz for DVI-A.

Compatible Test									
Source Type	Desktop								
PC Name	CPU E5400			I5 3570			I5 6400		
O.S.	WIN 10 64BIT			WIN10 64BIT			WIN10 64BIT		
Graphic Card	K2000 - 388.16			K2000D - 418.81			W5000 - 18.Q4		
Source Connector	DVI	HDMI	DP	DVI-A	HDMI	DP	DVI-A	HDMI	DP
Monitor Connector	DVI	HDMI	DP	VGA	HDMI	DP	VGA	HDMI	DP

Compatible Function Test				
Test Item	Compatibility Test Description		Result	Note
Plug and Play Function Test	Normal Boot-Up		Pass	
	Normal Shutdown		Pass	
	Normal Reboot		Pass	
	Power Saving		Pass	
	Hot plug DUT AC cable while the monitor is DC on 5 times		Pass	
	Hot plug DUT AC cable while the monitor is DC off 5 times		Pass	
OSD Function Test	Brightness		Pass	
	Color Mode		Pass	
	Startup Status Message		Pass	
	Display timing information		Pass	
Power Management Test	Sleep while the monitor is DC off		Pass	
	Sleep while the monitor is AC off		Pass	
	Repeat sleep power management 5 times		Pass	
	Startup Status		Pass	
Input Switch Test	Auto Source on/off Check		Pass	
	Switch Inputs With Active Source (5 times)		Pass	
	Switch Inputs With Inactive Source (5 times)		Pass	
EDID/DDC Test	HDMI	DVA07CD	Pass	
	DVI	DVA07CC	Pass	
	DP	DVA07CE	Pass	
	Monitor name	Olorin VLD159	Pass	

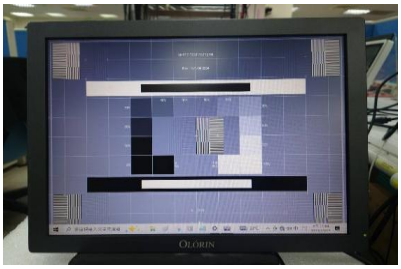
Resolution Test					
Display Timing	**Description**	**Result**	**Monitor Source**	**Result**	**Note**
1024x768 75Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**N/A**	
			HDMI	**N/A**	
			DP	**N/A**	
1024x768 70Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**N/A**	
			HDMI	**N/A**	
			DP	**N/A**	
1024x768 60Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**Pass**	
			HDMI	**Pass**	
			DP	**Pass**	
800x 600 70Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**N/A**	
			HDMI	**N/A**	
			DP	**N/A**	
800x 600 72Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**N/A**	
			HDMI	**N/A**	
			DP	**N/A**	
800x 600 60Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**Pass**	
			HDMI	**Pass**	
			DP	**Pass**	
720x400 56Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**N/A**	
			HDMI	**N/A**	
			DP	**N/A**	
640x 480 75Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**N/A**	
			HDMI	**N/A**	
			DP	**N/A**	
640x 480 72Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**N/A**	
			HDMI	**N/A**	
			DP	**N/A**	
640x 480 60Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**Pass**	
			HDMI	**Pass**	
			DP	**Pass**	
1280x 1024 75Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**N/A**	
			HDMI	**N/A**	
			DP	**N/A**	
1280x 1024 60Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	**Pass**	VGA	**Pass**	
			DVI	**Pass**	
			HDMI	**Pass**	
			DP	**Pass**	

Support Timing Test					
Pattern Generator	Astro VG 859C		Astro VG 871B	Chroma 2403	
Test procedure				Result	Note
1. Validated according to the resolution standards provided by Engineer Spec.				Pass	
2. Verify the input source signal for each resolution and confirm the same frequency (approximation).				Pass	
3. Verify Scaling for each resolution and input source.				Pass	
4. Make sure that the screen does not appear blank or flash when switching between different Timing.				Pass	

Resolution	V Frequency (Hz)	H Frequency (kHz)	Source	Result	Note
720x400	70Hz	31.5 kHz	VGA	Pass	
			DVI	Pass	
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support
640x480	60 Hz	31.5 kHz	VGA	Pass	
			DVI	Pass	
			HDMI	Pass	
			DP	Pass	
640x480	72 Hz	37.9 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support
640x480	75 Hz	37.5 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support
800x600	56 Hz	35.1 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support
800x600	60 Hz	37.8 kHz	VGA	Pass	
			DVI	Pass	
			HDMI	Pass	
			DP	Pass	
800x600	72 Hz	48.1 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support

Resolution	V Frequency (Hz)	H Frequency (kHz)	Source	Result	
800x600	75 Hz	46.9 kHz	VGA	**Pass**	
			DVI	**N/A**	Diisplay timing no support
			HDMI	**N/A**	Diisplay timing no support
			DP	**N/A**	Diisplay timing no support
1024x768	60 Hz	48.3 kHz	VGA	**Pass**	
			DVI	**Pass**	
			HDMI	**Pass**	
			DP	**Pass**	
1024x768	70 Hz	56.4 kHz	VGA	**Pass**	
			DVI	**N/A**	Diisplay timing no support
			HDMI	**N/A**	Diisplay timing no support
			DP	**N/A**	Diisplay timing no support
1024x768	75 Hz	60 kHz	VGA	**Pass**	
			DVI	**N/A**	Diisplay timing no support
			HDMI	**N/A**	Diisplay timing no support
			DP	**N/A**	Diisplay timing no support
1280x1024	60 Hz	67.5 kHz	VGA	**Pass**	
			DVI	**Pass**	
			HDMI	**Pass**	
			DP	**Pass**	
1280x1024	75 Hz	63.9 kHz	VGA	**Pass**	
			DVI	**N/A**	Diisplay timing no support
			HDMI	**N/A**	Diisplay timing no support
			DP	**N/A**	Diisplay timing no support

Image Quality Test				
Test procedure			**Result**	**Note**
1. Open Test software and select different patterns for testing.			Pass	
2. Check whether the various Patterns screens are normal, and there should be no distortion or breakage.			Pass	
3. Verify against different resolutions.			Pass	
4. Tap the monitor to confirm if the screen will flash			Pass	
Pattern Test Description			**Result**	**Note**
Grayscale	Switch display to different gamma setting using 64/128/256 grayscales, check for over saturate lines, dots, color uniformity and smooth transition, check 64/128/256 grayscales for over saturated color,line, dots, make sure they are smooth.		Pass	
Color Bar	Use color bar pattern, check for over saturate lines, dot using Auto Color Balance to auto correct if issue occurs. Make sure Auto Color Balance works And check analog RGB signals, color bar.		Pass	
Line	Use Geometry Pattern, check for line patterns within the viewing area making sure all lines are displayed properly. If analog RGB signals, use Auto adjust to calibrate the display viewing area.		Pass	
Text	Check Text patterns, make sure text are focused and clear to read. If analogRGB signals, use Auto Adjust to calibrate the display. One dot: Use one dot on/off test pattern, check for flickers, shaking, and discolor. If analog RGB signals, use Auto Adjust to calibrate the display.		Pass	
Picture	Use pattern Gen or PC to display color pictures. Check for discoloration, over saturated lines, and dots.		Pass	
Video	Use DVD player or PC to play videos, check to see if the video has flickers, shaking, synchronized, or frame delay issues.		Pass	
Resolution	**Test Software**	**Pattern**	**Result**	**Note**
640x480 60Hz	TOSHIBA/DMW	Grayscale	Pass	
		Color Bar	Pass	
		Line	Pass	
		Text	Pass	
		Picture	Pass	
		Video	Pass	
800x600 60Hz	TOSHIBA/DMW	Grayscale	Pass	
		Color Bar	Pass	
		Line	Pass	
		Text	Pass	
		Picture	Pass	
		Video	Pass	
1024x768 60Hz	TOSHIBA/DMW	Grayscale	Pass	
		Color Bar	Pass	
		Line	Pass	
		Text	Pass	
		Picture	Pass	
		Video	Pass	
1280x1024 60Hz	TOSHIBA/DMW	Grayscale	Pass	
		Color Bar	Pass	
		Line	Pass	
		Text	Pass	
		Picture	Pass	
		Video	Pass	

PHOTO OF TEST	
SMPTE133 Test Pattern	Grayscale Test Pattern
	
Line Test Pattern	Text Test Pattern
	
Colorbar Test Pattern	
	

Product Validation Report

Product Name	**: MAV1932A**
Model Name	**: VLD19906**
Product Stage	**: PP**
Product No.	**: 5A2A19280700800**
Revision	**: A**

Prepared By : Joe Lin **Date : 2025/12/30**

Approved By : RongChi **Date : 2025/12/30**

Index & Content			
Part	**Test Item**	**Descriptions**	**Result**
S/W	Source Test	Test and verify input source and output source are working properly and according to spec.	**PASS**
S/W	Compatibility Test	To ensure compatibility between different OS and graphic card and must meet engineering and product spec.	**PASS**

Product Front View



Product Rear View



Available Connections



Source Test

Test Engineer	Joe Lin	Date	2025/12/30	Stage	Result
				PP	PASS

Test Propose

Test and verify input source and output source are working properly and according to spec.

Evaluation Environment

Temperature	24±2ºC
Relative humidity	50%±10%(RH)

Evaluation Equipment

Processor	Intel ® Core™ i5-4440 CPU@ 3.10	WIN7 32BIT I3 3220	
Graphics Card	K2000D - 411.95	K2000 - 385.90	
Graphics Card	VG 871B	Chroma VIDEO PATTERN GENERATOR Model 2403	
O.S	VG 871B	Chroma VIDEO PATTERN GENERATOR Model 2403	

Evaluation Unit Level

LCD	AUO G190ETN01.0
Power Adapter	12V5.0A,FSP060-DHAN3,FSP
F/W Version	VLD199_241218R0V01
Main Board	3PD567F011A /MAIN BD (MSD92LCBW1,MAV,#A)
Touch Panel	N/A
Touch Controller	N/A
Support Input Signal	HDMI/DVI-A/DP
Serial Number	OLX3315001

Test Standard

DQE Source Test Specification

Criteria

1. All supported signal must display properly
2. When there's no signal, No Sync is displayed
3. When Off Mode is turn on, make sure monitor will go to sleep
4. Make sure when switching signal or plug/unplug signal LCD display properly
5. Follow Engineering Spec/Product Spec

Firmware Version History Release Note

Model Name	5A2A19280700800 / VLD19906
Location	3PD567F011A / U301 / MAIN BD (MSD92LCBW1,MAV,#A)
Part	2AAD567R138 / MAIN BD ASSY (VLD19906PCAP,#A)

Document No. / Rev. : QRC-L-016 / Rev. A

Status	Own	Frimware Vesion Description	Mark	Description of Changes
PP	Anderson	VLD199_210927R0V01		PP Version.
PP	Anderson	VLD199_221212R0V01		1. Modify base on version "VLD199_210927R0V01" 2. Modify Dimming table to meet 0.5% duty of minmum.
PP	Anderson	VLD199_230816R0V01		1. Modify base on version "VLD199_221212R0V01" 2. Add Support Timing of 1920x1080@60Hz.
PP	Anderson	VLD199_230907R0V01		1. Modify base on version "VLD199_230816R0V01" 2. Improve speed of dial brightness when bright bar off.
PP	Anderson	VLD199_230914R0V01		1. Modify base on version "VLD199_230907R0V01" 2. Set default setting of bright bar to off.
PP	Anderson	VLD199_240131R0V01		1. Modify base on version "VLD199_230914R0V01" 2. Add support 720 x 480 @60 Hz by using VGA (D-sub).
PP	Anderson	VLD199_240905R0V01		1. Modify base on version "VLD199_240131R0V01" 2. Add Timing support of 640x350@60Hz for VGA Input.
PP	Anderson	VLD199_240930R0V01		1. Modify base on version "VLD199_240905R0V01" 2. Add Timing support of 1600x1200@60Hz. 3. Add Timing support of 1600x1200@75Hz for DVI-A.
PP	Anderson	VLD199_241218R0V01		1. Modify base on version "VLD199_240930R0V01" 2. Adjust the tolerance of the Vertical frequency of the signal from 1.5 Hz to 2.5 Hz.



Input Source		Result	Note
Test Item	Description		
HDMI	1. Input digital signal to HDMI input and Check/switch source to HDMI input.	Pass	
	2. Check HDMI displays correctly and LED should show static green color and show HDMI message box.	Pass	
	3. Unplug HDMI input, make sure the display shows "No signal" and wait for monitor to go into Power Saving Mode. Check LED should show static orange color.	Pass	
	4. Input analog signal to HDMI input, make sure the image display correctly.	Pass	
	5. Execute AC off/on, make sure HDMI image display correctly, OSD Source Information shows HDMI input.(Confirm all signal screens exist)	Pass	
	6. Connect the all support signal at the same time, perform AC DC on/off, and check if the picture is in HDMI.	Pass	
	7.Switch to another input source signal (all source) and confirm that the signal source can be converted correctly.	Pass	
	8. After removing the HDMI, confirm whether to enter other sources.	Pass	
	9. Remove other signal sources in sequence to confirm that the Auto Source function is correct.	Pass	
	10. Repeat step 1 to 9 for 10 times.	Pass	
DVI-A	1. Input digital signal to DVI input and check/switch source to DVI input.	Pass	
	2. Check DVI displays correctly and LED should show static green color and show DVI message box.	Pass	
	3. Unplug DVI input, make sure the display shows "No signal" and wait for monitor to go into Power Saving Mode. Check LED should show static orange color.	Pass	
	4. Input DP signal, make sure the image display correctly.	Pass	
	5. Execute AC off/on, make sure DVI image display correctly, OSD Source Information shows DVI input.(Confirm all signal screens exist)	Pass	
	6. Connect the all support signal at the same time, perform AC DC on/off, and check if the picture is in DVI.	Pass	
	7.Switch to another input source signal (all source) and confirm that the signal source can be converted correctly.	Pass	
	8. After removing the DVI, confirm whether to enter other sources.	Pass	
	9. Remove other signal sources in sequence to confirm that the Auto Source function is correct.	Pass	
	10. Repeat step 1 to 9 for 10 times.	Pass	
Displayport	1. Input digital signal to DP input and check/switch source to DP input.	Pass	
	2. Check DP displays correctly and LED should show static green color and show DP message box.	Pass	
	3. Unplug DP input, make sure the display shows "No signal" and wait for monitor to go into Power Saving Mode. Check LED should show static orange color.	Pass	
	4. DP signal input, make sure the image display correctly.	Pass	
	5. Execute AC off/on, make sure DP image display correctly, OSD Source Information shows DP input. (Confirm all signal screens exist)	Pass	
	6. Connect the all support signal at the same time, perform AC DC on/off, and check if the picture is in DP.	Pass	
	7.Switch to another input source signal (all source) and confirm that the signal source can be converted correctly.	Pass	
	8. After removing the DP, confirm whether to enter other sources.	Pass	
	9. Remove other signal sources in sequence to confirm that the Auto Source function is correct.	Pass	
	10. Repeat step 1 to 9 for 10 times.	Pass	

Compatibility Test

Test Engineer	Joe Lin	Date	2025/12/29	Stage	Result
				PP	PASS

Test Propose

To ensure compatibility between different OS and graphic card and must meet engineering and product spec.

Evaluation Environment

Temperature	24±2°C
Relative humidity	50%±10%(RH)

Evaluation Equipment

Processor	Intel ® Core™ i5-4440 CPU@3.10GHz	WIN 10 64BIT CPU E5400	WIN10 64BIT I5 6400
Graphics Card	NVIDIA Quadro K2000D-Driver392.00	K2000 - 388.16	W5000 - 18.Q4
Test Equipment	VIDEO TEST GENERATOR VG 871		

Evaluation Unit Level

LCD	AUO G190ETN01.0
Power Adapter	12V5.0A,FSP060-DHAN3,FSP
F/W Version	VLD199_241218R0V01
DC Converter Board	2AADLW6R03E
Main Board	3PD567F011A / MAIN BD (MSD92LCBW1,MAV,#A)
Touch Panel	N/A
Touch Controller	N/A
Support Input Signal	HDMI/DVI-A/DP
Serial Number	OLX3315001

Criteria

1. PC boot up, make sure monitor display normally. screen can't have any abnormality.
2. After monitor coming off suspend or screen saver, it must display normally.
3. Perform tests using graphic card and make sure no blank, blinking or other abnormal displays.
4. Follow Engineering Spec/Product Spec

Firmware Version History Release Note

Model Name	5A2A19280700800 / VLD19906
Location	3PD567F011A / U301 / MAIN BD (MSD92LCBW1,MAV,#A)
Part	2AAD567R138 / MAIN BD ASSY (VLD19906PCAP,#A)

Document No. / Rev. : QRC-L-016 / Rev. A

Status	Own	Frimware Vesion Description	Mark	Description of Changes
PP	Anderson	VLD199_210927R0V01		PP Version.
PP	Anderson	VLD199_221212R0V01		1. Modify base on version "VLD199_210927R0V01" 2. Modify Dimming table to meet 0.5% duty of minmum.
PP	Anderson	VLD199_230816R0V01		1. Modify base on version "VLD199_221212R0V01" 2. Add Support Timing of 1920x1080@60Hz.
PP	Anderson	VLD199_230907R0V01		1. Modify base on version "VLD199_230816R0V01" 2. Improve speed of dial brightness when bright bar off.
PP	Anderson	VLD199_230914R0V01		1. Modify base on version "VLD199_230907R0V01" 2. Set default setting of bright bar to off.
PP	Anderson	VLD199_240131R0V01		1. Modify base on version "VLD199_230914R0V01" 2. Add support 720 x 480 @60 Hz by using VGA (D-sub).
PP	Anderson	VLD199_240905R0V01		1. Modify base on version "VLD199_240131R0V01" 2. Add Timing support of 640x350@60Hz for VGA Input.
PP	Anderson	VLD199_240930R0V01		1. Modify base on version "VLD199_240905R0V01" 2. Add Timing support of 1600x1200@60Hz. 3. Add Timing support of 1600x1200@75Hz for DVI-A.
PP	Anderson	VLD199_241218R0V01		1. Modify base on version "VLD199_240930R0V01" 2. Adjust the tolerance of the Vertical frequency of the signal from 1.5 Hz to 2.5 Hz.

Compatible Test									
Source Type	Desktop								
PC Name	CPU E5400			I5 3570			I5 6400		
O.S.	WIN 10 64BIT			WIN10 64BIT			WIN10 64BIT		
Graphic Card	K2000 - 388.16			K2000D - 418.81			W5000 - 18.Q4		
Source Connector	DVI	HDMI	DP	DVI-A	HDMI	DP	DVI-A	HDMI	DP
Monitor Connector	DVI	HDMI	DP	VGA	HDMI	DP	VGA	HDMI	DP

Compatible Function Test				
Test Item	Compatibility Test Description		Result	Note
Plug and Play Function Test	Normal Boot-Up		Pass	
	Normal Shutdown		Pass	
	Normal Reboot		Pass	
	Power Saving		Pass	
	Hot plug DUT AC cable while the monitor is DC on 5 times		Pass	
	Hot plug DUT AC cable while the monitor is DC off 5 times		Pass	
OSD Function Test	Brightness		Pass	
	Color Mode		Pass	
	Startup Status Message		Pass	
	Display timing information		Pass	
Power Management Test	Sleep while the monitor is DC off		Pass	
	Sleep while the monitor is AC off		Pass	
	Repeat sleep power management 5 times		Pass	
	Startup Status		Pass	
Input Switch Test	Auto Source on/off Check		Pass	
	Switch Inputs With Active Source (5 times)		Pass	
	Switch Inputs With Inactive Source (5 times)		Pass	
EDID/DDC Test	HDMI	DVA07CD	Pass	
	DVI	DVA07CC	Pass	
	DP	DVA07CE	Pass	
	Monitor name	Olorin VLD159	Pass	

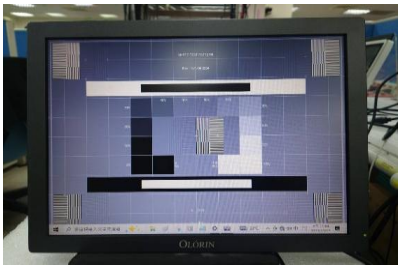
Resolution Test					
Display Timing	Description	Result	Monitor Source	Result	Note
1024x768 75Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	Pass	VGA	Pass	
			DVI	N/A	
			HDMI	N/A	
			DP	N/A	
1024x768 70Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	Pass	VGA	Pass	
			DVI	N/A	
			HDMI	N/A	
			DP	N/A	
1024x768 60Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	Pass	VGA	Pass	
			DVI	Pass	
			HDMI	Pass	
			DP	Pass	
800x 600 70Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	Pass	VGA	Pass	
			DVI	N/A	
			HDMI	N/A	
			DP	N/A	
800x 600 72Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	Pass	VGA	Pass	
			DVI	N/A	
			HDMI	N/A	
			DP	N/A	
800x 600 60Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	Pass	VGA	Pass	
			DVI	Pass	
			HDMI	Pass	
			DP	Pass	
720x400 56Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	Pass	VGA	Pass	
			DVI	N/A	
			HDMI	N/A	
			DP	N/A	
640x 480 75Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	Pass	VGA	Pass	
			DVI	N/A	
			HDMI	N/A	
			DP	N/A	
640x 480 72Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	Pass	VGA	Pass	
			DVI	N/A	
			HDMI	N/A	
			DP	N/A	
640x 480 60Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	Pass	VGA	Pass	
			DVI	Pass	
			HDMI	Pass	
			DP	Pass	
1280x 1024 75Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	Pass	VGA	Pass	
			DVI	N/A	
			HDMI	N/A	
			DP	N/A	
1280x 1024 60Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	Pass	VGA	Pass	
			DVI	Pass	
			HDMI	Pass	
			DP	Pass	
1600x 1200 75Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	Pass	VGA	Pass	
			DVI	N/A	
			HDMI	N/A	
			DP	N/A	
1600x 1200 75Hz	1. The screen must be able to display the specified resolution without any abnormality or distortion of the picture. 2. Confirm that all input signal sources can output this resolution.	Pass	VGA	Pass	
			DVI	Pass	
			HDMI	Pass	
			DP	Pass	

Support Timing Test					
Pattern Generator	Astro VG 859C		Astro VG 871B	Chroma 2403	
Test procedure				Result	Note
1. Validated according to the resolution standards provided by Engineer Spec.				Pass	
2. Verify the input source signal for each resolution and confirm the same frequency (approximation).				Pass	
3. Verify Scaling for each resolution and input source.				Pass	
4. Make sure that the screen does not appear blank or flash when switching between different Timing.				Pass	

Resolution	V Frequency (Hz)	H Frequency (kHz)	Source	Result	Note
720x400	70Hz	31.5 kHz	VGA	Pass	
			DVI	Pass	
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support
640x480	60 Hz	31.5 kHz	VGA	Pass	
			DVI	Pass	
			HDMI	Pass	
			DP	Pass	
640x480	72 Hz	37.9 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support
640x480	75 Hz	37.5 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support
800x600	56 Hz	35.1 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support
800x600	60 Hz	37.8 kHz	VGA	Pass	
			DVI	Pass	
			HDMI	Pass	
			DP	Pass	
800x600	72 Hz	48.1 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support

Resolution	V Frequency (Hz)	H Frequency (kHz)	Source	Result	
800x600	75 Hz	46.9 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support
1024x768	60 Hz	48.3 kHz	VGA	Pass	
			DVI	Pass	
			HDMI	Pass	
			DP	Pass	
1024x768	70 Hz	56.4 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support
1024x768	75 Hz	60 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support
1280x1024	60 Hz	67.5 kHz	VGA	Pass	
			DVI	Pass	
			HDMI	Pass	
			DP	Pass	
1280x1024	75 Hz	63.9 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support
1600x1200	60 Hz	67.5 kHz	VGA	Pass	
			DVI	Pass	
			HDMI	Pass	
			DP	Pass	
1600x1200	75 Hz	63.9 kHz	VGA	Pass	
			DVI	N/A	Diisplay timing no support
			HDMI	N/A	Diisplay timing no support
			DP	N/A	Diisplay timing no support

Image Quality Test				
Test procedure			**Result**	**Note**
1. Open Test software and select different patterns for testing.			Pass	
2. Check whether the various Patterns screens are normal, and there should be no distortion or breakage.			Pass	
3. Verify against different resolutions.			Pass	
4. Tap the monitor to confirm if the screen will flash			Pass	
Pattern Test Description			**Result**	**Note**
Grayscale	Switch display to different gamma setting using 64/128/256 grayscales, check for over saturate lines, dots, color uniformity and smooth transition, check 64/128/256 grayscales for over saturated color,line, dots, make sure they are smooth.		Pass	
Color Bar	Use color bar pattern, check for over saturate lines, dot using Auto Color Balance to auto correct if issue occurs. Make sure Auto Color Balance works And check analog RGB signals, color bar.		Pass	
Line	Use Geometry Pattern, check for line patterns within the viewing area making sure all lines are displayed properly. If analog RGB signals, use Auto adjust to calibrate the display viewing area.		Pass	
Text	Check Text patterns, make sure text are focused and clear to read. If analogRGB signals, use Auto Adjust to calibrate the display. One dot: Use one dot on/off test pattern, check for flickers, shaking, and discolor. If analog RGB signals, use Auto Adjust to calibrate the display.		Pass	
Picture	Use pattern Gen or PC to display color pictures. Check for discoloration, over saturated lines, and dots.		Pass	
Video	Use DVD player or PC to play videos, check to see if the video has flickers, shaking, synchronized, or frame delay issues.		Pass	
Resolution	**Test Software**	**Pattern**	**Result**	**Note**
640x480 60Hz	TOSHIBA/DMW	Grayscale	Pass	
		Color Bar	Pass	
		Line	Pass	
		Text	Pass	
		Picture	Pass	
		Video	Pass	
800x600 60Hz	TOSHIBA/DMW	Grayscale	Pass	
		Color Bar	Pass	
		Line	Pass	
		Text	Pass	
		Picture	Pass	
		Video	Pass	
1024x768 60Hz	TOSHIBA/DMW	Grayscale	Pass	
		Color Bar	Pass	
		Line	Pass	
		Text	Pass	
		Picture	Pass	
		Video	Pass	
1280x1024 60Hz	TOSHIBA/DMW	Grayscale	Pass	
		Color Bar	Pass	
		Line	Pass	
		Text	Pass	
		Picture	Pass	
		Video	Pass	
1600x1200 60Hz	TOSHIBA/DMW	Grayscale	Pass	
		Color Bar	Pass	
		Line	Pass	
		Text	Pass	
		Picture	Pass	
		Video	Pass	

PHOTO OF TEST	
SMPTE133 Test Pattern	Grayscale Test Pattern
	
Line Test Pattern	Text Test Pattern
	
Colorbar Test Pattern	
	