

Part Number: 4172700XX-3

Model: ALR-1920

DATE	VERSION	SUMMARY OF CHANGES	NOTE
18 March 2011	10-3	Official release to production Bare PCB: 017270001-3; P/N 417270010-3 BIOS: U10, V1.01.00 (Flash PCT25VF040)(new) U13, V0.20 (ARGB DDC, 24C02)(new) U12, V0.20 (HDMI DDC, 24C02)(new) U20, V0.20 (Display Port DDC, 24C02)(new)	ECN# 870689226
13 December 2011	10-3 to 11-3	<p><i>Upgrade firmware</i></p> <p><i>Feature added or improvement :</i></p> <ol style="list-style-type: none"> 1. Add RS-232 command 0xc8 for Soft power on/off 2. Add 1600x600 60Hz input mode support at ARGB port. 3. Add support DDC/CI commands: (Brightness, Contrast, RGB Color, Input Source (VGA, HDMI & Displayport), Power States (On, Standby, Sleep) <ul style="list-style-type: none"> • On mode: Always on. Display No sync message and never goes off when no signal • Standby mode: Off backlight & Off panel power when no signal • Reduced power off / Sleep mode: Screen saver on = Always On; Screen saver off = Backlight off. Display "No sync" message for 10sec, then off backlight 4. Support the new custom timing (.inf) file format. 5. Add RS-232 command: 0x80 "S" for select the audio output port 6. Add RS-232 command: 0x99 for the "Auto source seek function" 7. Add RS-232 command: 0x8F for OSD Rotation 8. Add RS-232 command: 0xbb for query OSD on/off 9. Assign SW2 position 4 for user selection between General application or work with RM-DN5 (Firmware version E1.12.10a) from HDMI port (OFF= General, On = RM-DN5) under RM-DN5 mode : <ul style="list-style-type: none"> • Add "Loading..." message on screen while startup and stay until the valid signal. • Changed the default Auto Source Seek to Off • Changed the IR key from "Display" key to "OSD Next" key for menu function • Extend longer delay time approx. (4 secs) to detect signal for "No Signal" state • Only HDMI input and disabled all other "Source" selections in OSD, IR hotkeys & RS-232 for RM-DN5 mode 10. Support custom panel timing programming (*.inf) by G-Probe 11. Added 1600x1200 60Hz VGA mode support for signal coming out from DN5. 12. Improve the mode recognition for 1920x1080 60Hz to avoid the incorrect resolution displayed on OSD menu with 1920x1200 60Hz. 13. Change the timing info shown on the OSD menu be 1920x1080i 30Hz / 1920x1080i 25Hz instead of 1920x540. 14. Added 1920x1080 50Hz & 60Hz (GTF/DMT/CVT/CVT R) mode standard. 15. Set the DPMS shuts off for typical 10 seconds. 16. Improved the HDMI sync detection to prevent loss of sync occasionally. 17. Set 1920x1080 60Hz as preferred timings and disable the overscan setting in HDMI & Display port DDC. 18. Set 1920x1080 60Hz as a preferred timing on ARGB port. 19. HDMI & Display port DDC (U12 & U20) firmware will be updated to set 1600x600 60Hz as preferred timing after perform the load factory defaults when setting dip switch (SW1=1001 1010, SW2=1000) for driving the NEC NL8060BH18-02 (3D) panel. 	ECN# 870689278

	<p><i>Add panel support :</i></p> <p>20. Add NEC NL8060BH18-02 SVGA panel support (SW1=1001 1010, SW2=1000) and set the factory default for H & V OSD position = 0 for this panel record.</p> <p>21. Add Samsung LTI430LA01 (1920x480) panel support (SW1=1001 1110, SW2=0000)</p> <p>22. Add Samsung LTI400HA01 (1920x1080) panel support (SW1=0100 0000, SW2=0101)</p> <p>23. Add Samsung LTI400HA01 (1920x1200) panel support (SW1=0100 0000, SW2=0001)</p> <p>24. Add Samsung LTI430LA01 (1920x480) panel support (SW1=1001 1110, SW2=0000)</p> <p>25. Move the supported AU Optronics M220EW01 (1680x1050) panel timing record from "WXGA" to "Others" column. The new SW1 & SW2 setting be : SW1=0001 1110, SW2=0101) (0 = OFF, 1 = ON)</p> <p><i>Bug fixed :</i></p> <p>26. Bug fixed: The board will wake up for seeking source occasionally after soft power down using IR.</p> <p>27. Bug fixed: Audio mute on/off status is inconsistent display on OSD menu when power cycling.</p> <p>28. Bug fixed: Fix the LED inconsistent with RS-232 command - 0xe1 (Backlight on/off).</p> <p>29. Bug fixed: Fix the wrong increment and decrement action for RS-232 command "0x86" (Image H position) & "0x91" (OSD V position)</p> <p>30. Bug fixed: Fix the RS-232 command "0xb4", "0xb5", "0xb6" & "0xe0" will reset to zero occasionally when fast and continuous on sending the commands.</p> <p>31. Fixed DDC/CI bug : Input source (0x60) & power mode (0xD6) status mark is not consistent when refreshing the PC program status.</p> <p>32. Fixed lost the Gamma setting occasionally for all ports (ARGB, HDMI, Displayport)</p> <p>33. Fixed the controller will wake up after setting soft power off by unplug and plug back the input source occasionally.</p> <p>34. Fixed RS-232 command "0x81" (Brightness) will auto reset to 0 when entering "+" RS-232 button key function (0x2D).</p> <p>35. Fine tuned the input timing in mode table for matching the M3-300 640x480/720P VGA output.</p> <p>36. Bug fixed : No SPDIF audio output for the signal source from HDMI / Display Port by updating the HDMI & Display Port DDC.</p> <p>37. Bug fixed on the wrong OSD timing info displayed for 1920x540 displayed on the OSD menu by changing to display 1920x1080i 30Hz & 1920x1080i 25Hz instead.</p> <p>38. Fixed the "Auto Pic Setup" process if the input resolution is larger than the panel resolution when power cycling the controller.</p> <p>Bare PCB: 017270001-3; P/N 417270011-3</p> <p>BIOS: U10, V1.08.00 (Flash PCT25VF040)(new) U13, V0.30 (ARGB DDC, 24C02)(new) U12, V0.30 (HDMI DDC, 24C02)(new) U20, V0.30 (Display Port DDC, 24C02)(new)</p>	
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<p>27 April 2012</p>	<p>11-3 to 12-3</p>	<p><i>Upgrade firmware</i></p> <p><i>Feature added or improvement :</i></p> <ol style="list-style-type: none"> 1. Add PWM backlight brightness adjustment support on OSD menu. And add RS-232 command to support PWM backlight (0xe5, 0xe6 & 0xe7) 2. Add support Smart ISP programming for firmware upgrade. The user can use digital port (HDMI or DisplayPort) to do firmware upgrade rather than RS- 232 through CN8 3. Add to show EDID checksum on OSD menu after loading factory default 4. Improve the response time when adjusting color temperature by DDC/CI 5. Bug fix on loosing the settings of Display port after power cycle. 6. Bug fix for reporting incorrect RS- 232 commands from Phase (0x85), Sharpness (0x8A) <p>Bare PCB: 017270001-3; P/N 417270012-3</p> <p>BIOS: U10, V1.10.00 (Flash PCT25VF040)(change) U13, V0.30 (ARGB DDC, 24C02)(no change) U12, V0.30 (HDMI DDC, 24C02)(no change) U20, V0.30 (Display Port DDC, 24C02)(change)</p>	<p>ECN# 870689299</p>
<p>2 May 2013</p>	<p>12-3 to 13-3</p>	<p><i>Upgrade firmware</i></p> <ol style="list-style-type: none"> 1. Add panel support <ul style="list-style-type: none"> - TM070JDHP01_1280x800 panel(SW1=1101 1110 SW2=1000, 3.3V LVDS) - LG_LP156WF4_1920x1080 panel(SW1=1100 0000 SW2=0000, 3.3V LVDS) - Samsung LTI216XM01 (960x960) panel(SW1=0101 1110, SW2=1000, 12V LVDS) - AUO G173HW01V0 1920x1080 panel(SW1=0010 0000, SW2=0100) 2. Add 960x960@60Hz input mode support on HDMI & Display port. <ul style="list-style-type: none"> - It requires to perform the load factory default when setting the Samsung LTI216XM01 panel timings on board. Checksum 1st 128byte = 0x1C; 2nd 128byte = 0xEA 3. Improve EMC performance by enabling spread spectrum 4. Support press “menu” key on OSD switch mount & “Display” key on IR will display the OSD menu when no valid signal state. 5. Add more OSD menu timeout periods selection, e.g. from 5 seconds to 60 seconds in a step of 5. (0 is always on) 6. Reduce or prevent the pop noise issue in during the power up stage. 7. Set keep all backlight settings in the OSD menu (i.e Backlight invert, backlight control, backlight frequency & B/L) remain unchanged after loading the factory default. 8. Bug fix for IR Enabled/Disabled setting when cycling power on/off. <p>Bare PCB: 017270002-3; P/N 417270020-3</p> <p>BIOS: U10, V1.16.00 (Flash PCT25VF040)(change) U13, V0.30 (ARGB DDC, 24C02)(no change) U12, V0.30 (HDMI DDC, 24C02)(no change) U20, V0.30 (Display Port DDC, 24C02)(no change)</p>	<p>ECN# 870689370</p>

<p>26 April 2013</p>	<p>1x-3 to 20-3</p>	<p><i>Using new PCB 017270002-3</i></p> <ul style="list-style-type: none"> - support disable speaker out(CN1) while stereo jack(J1) being plugged. <p><i>Upgrade firmware</i></p> <ol style="list-style-type: none"> 1. Add panel support <ul style="list-style-type: none"> - TM070JDHP01_1280x800 panel(SW1=1101 1110 SW2=1000, 3.3V LVDS) - LG_LP156WF4_1920x1080 panel(SW1=1100 0000 SW2=0000, 3.3V LVDS) - Samsung LTI216XM01 (960x960) panel(SW1=0101 1110, SW2=1000, 12V LVDS) - AUO G173HW01V0 1920x1080 panel(SW1=0010 0000, SW2=0100) 2. Add 960x960@60Hz input mode support on HDMI & Display port. <ul style="list-style-type: none"> - It requires to perform the load factory default when setting the Samsung LTI216XM01 panel timings on board. Checksum 1st 128byte = 0x1C; 2nd 128byte = 0xEA 3. Improve EMC performance by enabling spread spectrum 4. Support press “menu” key on OSD switch mount & “Display” key on IR will display the OSD menu when no valid signal state. 5. Add more OSD menu timeout periods selection, e.g. from 5 seconds to 60 seconds in a step of 5. (0 is always on) 6. Reduce or prevent the pop noise issue in during the power up stage. 7. Set keep all backlight settings in the OSD menu (i.e Backlight invert, backlight control, backlight frequency & B/L) remain unchanged after loading the factory default. 8. Bug fix for IR Enabled/Disabled setting when cycling power on/off. <p>Bare PCB: 017270002-3; P/N 417270020-3 BIOS: U10, V1.16.00 (Flash PCT25VF040)(change) U13, V0.30 (ARGB DDC, 24C02)(no change) U12, V0.30 (HDMI DDC, 24C02)(no change) U20, V0.30 (Display Port DDC, 24C02)(no change)</p>	<p>ECN# 870689368</p>
<p>6 September 2013</p>	<p>20-3 to 21-3</p>	<p><i>Upgrade firmware</i></p> <ul style="list-style-type: none"> - Add support CVT (Coordinated video timings) modes (840x480, 1280x800, 1366x768, 1440x900). The CVT timings selection can be selected through OSD menu. - Fixed lost color settings after power cycle at ARGB port. <p>Bare PCB: 017270002-3; P/N 417270021-3 BIOS: U10, V1.19.00 (Flash PCT25VF040)(changed) U13, V0.40 (ARGB DDC, 24C02)(changed) U12, V0.30 (HDMI DDC, 24C02)(no change) U20, V0.30 (Display Port DDC, 24C02)(no change)</p>	<p>ECN# 870689393</p>
<p>15 July 2014</p>	<p>21-3 to 22-3</p>	<p><i>Hardware change</i></p> <ul style="list-style-type: none"> - Change R141 from 47ohm to 4.7Kohm to increase the PWM dimming current drawn when running on the two LG panels (LD550DUN-TGB1 & LD470EUP-SEA1). <p>Bare PCB: 017270002-3; P/N 417270022-3 BIOS: U10, V1.19.00 (Flash PCT25VF040)(no change) U13, V0.40 (ARGB DDC, 24C02)(no change) U12, V0.30 (HDMI DDC, 24C02)(no change) U20, V0.30 (Display Port DDC, 24C02)(no change)</p>	<p>ECN# 870689443</p>

31 August 2015	22-3 to 23-3	<p>Release new firmware for ALR-1920</p> <ol style="list-style-type: none"> Add panel support : NEC NL10276BC24-21F (1024x768) SW1=1110 0010, SW2=1000, (0=Off; 1 =On) Add support to create/edit and download the EDID file on ALR-1920 at HDMI & DisplayPort Set the "Backlight" hotkey function on "SEL UP" (SW7) / "SEL DN" (SW6) button on the OSD switch mount. Set no OSD menu display when adjustment the "Backlight" hotkey function on "SEL UP" (SW7) / "SEL DN" (SW6) button on the OSD switch mount. <p>Bare PCB: 017270002-3; P/N 417270023-3 BIOS: U10, V1.25.00 (Flash PCT25VF040)(changed) U13, V0.40 (ARGB DDC, 24C02)(no change) U12, V0.30 (HDMI DDC, 24C02)(no change) U20, V0.30 (Display Port DDC, 24C02)(no change)</p>	ECN# 870689524
1 June 2016	23-3 to 24-3	<p>Release new firmware for ALR-1920</p> <ol style="list-style-type: none"> Fixed the accuracy of backlight level in PWM and D/A mode. (It was found that the backlight level is not linear to the percentage of the level and different ranges for different PWM frequency or in D/A mode, also the system backlight level control function was replaced by own method) Add a RS-232 Backlight Status Query command - 0xe1 "S" or 0xe1 "s". <p>Bare PCB: 017270002-3; P/N 417270024-3 BIOS: U10, V1.28.00 (Flash PCT25VF040)(changed) U13, V0.40 (ARGB DDC, 24C02)(no change) U12, V0.30 (HDMI DDC, 24C02)(no change) U20, V0.30 (Display Port DDC, 24C02)(no change)</p>	ECN# 870689579
12 July 2016	24-3 to 24-3 (remain unchange)	<p>Running change to use black color VGA connector (Update BOM Only)</p> <p>Ref: PVA:160712C001</p> <p>Bare PCB: 017270002-3; P/N 417270024-3 BIOS: U10, V1.28.00 (Flash PCT25VF040)(no change) U13, V0.40 (ARGB DDC, 24C02)(no change) U12, V0.30 (HDMI DDC, 24C02)(no change) U20, V0.30 (Display Port DDC, 24C02)(no change)</p>	ECN# N/A
21 April 2017	24-3 to 25-3	<p>Release new firmware V1.30.00 on U10</p> <ol style="list-style-type: none"> Support "Resolution default by EDID" for different resolution panel. The controller will set the preferred timing based off the dip switch setting selection, but also be able to go higher to 1920x1200. For example, if the panel is a 1024x768 and the dip switch setting are set for 1024x768. The preferred EDID resolution should be 1024x768. It should also have the capability to set the max resolution to 1920x1200. Remark: This function supports on HDMI and Display port only Bug fixed on overflow the RS-232 command <p>Bare PCB: 017270002-3; P/N 417270025-3 BIOS: U10, V1.30.00 (Flash PCT25VF040)(changed) U13, V0.40 (ARGB DDC, 24C02)(no change) U12, V0.40 (HDMI DDC, 24C02) (changed, 1920x1200, CS= 45,48) U20, V0.40 (Display Port DDC, 24C02) (changed, 1920x1200, CS= 45,48)</p>	ECN# 870689641

Prepared by: DV-HK

Date: 21 April 2017