

Part Number: **4175201xx-3**

Model: **HE-1920v2**

DATE	VERSION	SUMMARY OF CHANGES	NOTE
		<b>Conformal Coating Required</b>	
6 November 2015	10	<p>Pilot run (Only 15pcs)</p> <p><b>Bare PCB: 017452001-3; P/N 417520110-3</b>            BIOS: U4, V1.17.00.01 (Flash MX25L3206E)(new)            U29, V2.20.40 (EPM30128ATC100) (new)</p>	ECN# N/A
1 December 2015	20	<p>Production release HE-1920v2            Using new PCB            - fixed the rework need to be done on previous version</p> <p><b>Bare PCB: 017520002-3; P/N 417520120-3</b>            BIOS: U4, V1.17.00.00 (Flash MX25L3206E)(new)            U29, V2.30.40 (EPM30128ATC100) (new)</p>	ECN# 870689541
14 January 2016	20 to 21	<p>Change total 12 pcs resistors (R204, R206-208, R219-220 &amp; R410-415) from 3K3/1% to 30K/1% to fix the shade problem found at both sides of dialogue box during the movement under dark background or under a darkground with white square located at center at VGA 1 and VGA 2 inputs.</p> <p><b>Bare PCB: 017520002-3; P/N 417520121-3</b>            BIOS: U4, V1.17.00.00 (Flash MX25L3206E)(no change)            U29, V2.30.40 (EPM30128ATC100) (no change)</p>	ECN# 870689547
17 March 2016	21 to 22	<p>To fix connection problem on CN1            - Add 4pcs 0Ω resistor at R163-166</p> <p>Use new firmware V1.18.00.00  <u>Feature added :</u>            (1) Added Standard Gamma Selection (0.6 ~ 2.6) support on OSD menu and RS-232 command.</p> <p><u>Bug fixed :</u>            (2) Bug fixed : Fix Image jitters for scrolling text when running composite video and rotate image mode,            (3) Bug fixed : Resized Image sizing under composite video mode            (4) Tune the display image to center position when running normal scaling mode with HD-1000/-2000 by inputting the 720p60 SDI mode.            (5) Fix distortion image occasionally when switching between different input resolution (e.g 1920x1200 60Hz &lt; &gt; 1600x1200 60Hz) at DVI port when running in "Aspect/Size" sets 1:1 and 1920x1200 resolution panel.            (6) Fix to wrong message displayed ("DDC Program Error") when running into DDC Programming mode. But the DDC file content is downloaded on board correctly.            (7) Fix the "Auto Picture Setup" function setting at VGA 2 (e.g image position) will not be memorized problem after power cycle the controller.            (8) Fix the distortion image occasionally when switching between different input resolution (e.g 1920x1080 60Hz &lt; &gt; 1280x720 60Hz) &amp; different source inputs and different aspect size. It will resume to normal after power cycle.            (9) Fix distortion image occasionally after setting soft power on and off using IR remote control unit.            (10) Fix no OSD menu item selection is allowed when entering the 2nd times to "Custom sizing" OSD menu page (Picture &gt; Aspect/Size) after power on the controller under HD/SD SDI 1 / 2 input source.</p> <p><b>Bare PCB: 017520002-3; P/N 417520122-3</b>            BIOS: U4, V1.18.00.00 (Flash MX25L3206E)(changed)            U29, V2.30.40 (EPM30128ATC100) (no change)</p>	ECN# 870689560
31 May 2016	22 to 23	<p>To further improve the shade problem found at both side of dialogue box during the movement at VGA 1 and VGA 2 inputs.            - change C94-99(total 6pcs) capacitors from 0.1uF to 0.01uF</p> <p><b>Bare PCB: 017520002-3; P/N 417520123-3</b>            BIOS: U4, V1.18.00.00 (Flash MX25L3206E)(no change)            U29, V2.30.40 (EPM30128ATC100) (no change)</p>	ECN# 870689578

27 April 2017	23 to 24	<p>Change firmware on U4 to V1.26.00.00 - change details please refer to 417520131-3 <b>Bare PCB: 017520002-3; P/N 417520124-3</b> BIOS: U4, V1.26.00.00 (Flash MX25L3206E)(changed) U29, V2.30.40 (EPM30128ATC100) (no change)</p>	ECN# 870689644
6 June 2016	2x to 30	<p>Hardware change reference to 417520123-3. Change to use VGA mux AD8187 on U31 and it's associated circuitry due to end of life of the existing VGA mux AD8186 used. Details as below - U31 changed to AD8187 - Change R206, R207, R220, R411, R412 &amp; R414 to 60.4KΩ - Change R204, R208, R219, R410, R413 &amp; R415 to 27KΩ - Change R194-196 to 150ohm - Install R434 with 60.4KΩ - Install R433 with 27KΩ - Install R435-437 with 150Ω Change U29 to V2.31.40 to distinguish AD8187 and AD8186 <b>Bare PCB: 017520002-3; P/N 417520130-3</b> BIOS: U4, V1.18.00.00 (Flash MX25L3206E)(no change) U29, V2.31.40 (EPM30128ATC100) (changed)</p>	ECN# 870689582

<p>27 April 2017</p>	<p>30 to 31</p>	<p>Release new firmware V1.26.00.00 on U4</p> <p><u>Features added :</u></p> <p>(1) Support monochrome mode for Red, Green, Blue on OSD menu and RS-232 command control.</p> <p>(2) Support the firmware upgrade via Digital input ports (HDMI/DVI).</p> <p>(3) Support user EDID upgrade via RS-232 command.</p> <p>(4) Add "Image Orientation" on Hotkey 1 &amp; Hotkey 2 for user to select on OSD menu and RS-232 command.</p> <p>Once it selects the image orientation on hotkey 1 or hotkey 2, it will cycle through the 4 image orientation modes (Normal/Horizontal Flip/Vertical Flip/Rotate) by pressing each time of hotkey button (SEL UP/SEL DN or + / - buttons).</p> <p>* Not support rotate mode when running with PIP mode or Component input.</p> <p>(5) Support "Resolution default by EDID" for different resolution panel.</p> <p>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.</p> <p><u>New panel supported :</u></p> <p>(6) Add Samsung ASI545FB01-0 (1920x1080) OLED panel timing (SW3 position 1-8 : OFF-ON-ON-ON-OFF-OFF-OFF-ON, SW4 position 1-6 : OFF-OFF-ON-OFF-OFF-OFF). This panel timing is turned off the Spread Spectrum and do not transmit the H-Sync &amp; V-Sync signal to the panel.</p> <p>(7) Support Hitachi TX48D02VM0BAA / JDI TX48D02VM0BAA (1680x1050) panel (Dip switch setting : SW3 position 1-8 : OFF-OFF-ON-ON-ON-ON-OFF-OFF, SW4 position 1-6 : OFF-OFF-ON-ON-OFF-OFF)</p> <p>(8) Support Sharp LQ121S1LG81 (800x600) panel. SW3 (pos 1-8) : ON-ON-OFF-OFF-ON-OFF-ON-OFF, SW4 (pos 1-6) : OFF-ON-ON-OFF-OFF-OFF</p> <p><u>Problems fixed :</u></p> <p>(9) Fix image jitter for scrolling text in vertical flip mode under Composite &amp; SDI input.</p> <p>(10) Fix sizing issue on SDI mode under 480i &amp; 576i mode.</p> <p>(11) Fixed zoom function bug :</p> <ul style="list-style-type: none"> <li>- Not zooming to Center - If Zoom in the Picture one step, the Picture gets Zoomed, but also shifted to left, so there is a black strip on the right side of the Screen. Even with H-Pan = -100 there still a black strip (cannot get scrolled enough)</li> <li>- Max zoom show 1/3 of picture distorted - If Zoom is at max, the Picture shows distortion in the top ~1/3 of the Screen, which are persistent (stay as long this zoom level is selected).</li> </ul> <p><b>Bare PCB: 017520002-3; P/N 417520131-3</b></p> <p>BIOS: U4, V1.26.00.00 (Flash MX25L3206E)(changed) U29, V2.31.40 (EPM30128ATC100) (no change)</p>	<p>ECN# 870689644</p>
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8 August 2017	3x to 40	<p>Release new version using new PCB 017520004-5</p> <ul style="list-style-type: none"> <li>- Change to use the DC-DC converter (EUP3226JIR1) on U15 and U19 with associated component to replace the end of life part (EUP3420JIR1).</li> <li>- Add 10V panel power selection jumper on JA3. ( Must use 24V input)</li> <li>- Change to use JST B3B-XH-A compatible type connector on LED1.</li> </ul> <p>Firmware no change same as 417520131-3</p> <p><b>Bare PCB: 017520004-5; P/N 417520140-3</b>          BIOS: U4, V1.26.00.00 (Flash MX25L3206E)(no change)          U29, V2.31.40 (EPM30128ATC100) (no change)</p>	ECN# 870689660
16 October 2017	40 to 41	<p>Release new firmware V1.27.00.00 on U4 implemented the features below:</p> <ol style="list-style-type: none"> <li>(1) Change the gamma interpretation be : 1.8/1.9/2.0/2.1/2.2/2.3/2.4/2.5/2.6 (2.2 is the default value), instead of 0.6/0.7/0.8/0/9/1.0/1.1/1.2/1.3/1.4.</li> <li>(2) Enables auto detection of graphic card HDMI output RGB quantization range setting in either Limited range or Full range. This helps to improve the luminance performance.</li> <li>(3) Support Sharp LQ121S1LG81 (800x600) panel.              SW3 (position 1-8) : ON-ON-OFF-OFF-ON-OFF-ON-OFF,              SW4 (pos 1-6) : OFF-ON-ON-OFF-OFF-OFF</li> </ol> <p><b>Bare PCB: 017520004-5(Rev B); P/N 417520141-3</b>          BIOS: U4, V1.27.00.00 (Flash MX25L3206E)(changed)          U29, V2.31.40 (EPM3128ATI100) (no change)</p>	ECN# 870689673
29 March 2018	41 to 42	<p>Running change new version to use 017520004-5 (Rev C) PCB</p> <ul style="list-style-type: none"> <li>- Use new bare PCB (P/N 017520004-5 Rev C) with minor change to short pin 84 and pin 85 on CPLD on U29 to reserve the use of new CPLD (Atmel ATF1508ASV-15AU100-T)</li> <li>- Update the CPLD code to V2.51.40 on U29 using the same CPLD (Altera EPM3128ATI100-10) as in previous version (P/N 417520141-3)</li> </ul> <p><b>Bare PCB: 017520004-5 (Rev C); P/N 417520142-3</b>          BIOS: U4, V1.27.00.00 (Flash MX25L3206E)(no changed)          U29, V2.51.40 (EPM3128ATI100) (changed)          It is not necessary upgrade the CPLD(U29) code if Rev B PCB is used.</p>	ECN# 870689690
13 February 2019	42 to 43	<p>Release new firmware V1.29.00.00 on U4</p> <ul style="list-style-type: none"> <li>- Fine tune the TMDS output frequency of HDMI transmitter Sil9134 to fix some marginal failure IC on NTSC/PAL mode.</li> <li>- Bug fixed : Not allow to set SDI 1 on SDI 2 under PIP mode.</li> </ul> <p><b>Bare PCB: 017520004-5 (Rev C); P/N 417520143-3</b>          BIOS: U4, V1.29.00.00 (Flash MX25L3206E)(changed)          U29, V2.51.40 (EPM3128ATI100) (no change)          It is not necessary upgrade the CPLD(U29) code if Rev B PCB is used.</p>	ECN# 870689726
15 February 2019	4x to 50	<p>Production release new version for using new CPLD IC on U29</p> <ul style="list-style-type: none"> <li>- Change to use new Atmel CPLD ATF1508ASV-15AU100-T on U29 to replace EOL Altera EPM3128ATI100-10</li> </ul> <p>Release new firmware V1.29.00.00 on U4</p> <ul style="list-style-type: none"> <li>- Fine tune the TMDS output frequency of HDMI transmitter Sil9134 to fix some marginal failure IC on NTSC/PAL mode.</li> <li>- Bug fixed : Not allow to set SDI 1 on SDI 2 under PIP mode.</li> </ul> <p>Update the CPLD code to V3.40.40 on U29 for using new Atmel CPLD ATF1508ASV-15AU100-T</p> <p><b>Bare PCB: 017520004-5 (Rev C); P/N 417520150-3</b>          BIOS: U4, V1.29.00.00 (Flash MX25L3206E)(changed)          U29, V3.40.40 (ATF1508ASV-15AU100-T) (new)</p>	ECN# 870689727

<b>Prepared by: DV-HK</b>	<b>Date: 15 Feb 2019</b>
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