

Part Number: 4176000XX-3

Model: SP-1920 General

DATE	VERSION	SUMMARY OF CHANGES	NOTE
2 September 2016	10	Release pilot run document for production Bare PCB: 017600001-3; P/N 417600010-3 (Only 20 pcs) BIOS: U11, V1.00.00.00 (Flash GD25Q40C)(new) U23, Checksume : TBC (ARGB EDID, 24C02)(embedded in firmware) HDMI1 EDID, Checksum: TBC (internal memory) HDMI2 EDID, Checksum: TBC (internal memory) DVI EDID, Checksum: TBC (internal memory)	ECN# N/A
		The following S/N listing are the SP-1920 with CNV4 installed in wrong orientation S/N:11-17060001~0160TW S/N:11-17090001~0040TW S/N:13-17090041~0800TW	
12 June 2017	10 to 11	PCB version changed to Rev B - add D3A for alternate part decal of D3(14V zener for easy production) Use new firmware V1.03.00.00 (1) Support up to 1920x1200 resolution panel (2) Support LVDS (Single & Dual channel) interface panel (3) 10 bit controller platform (4) 3.3/5/10/12/18V panel support (5) Support Single Link DVI, VGA, 2xHDMI, 2xComposite & Component input (6) Support MStar scalar chip original OSD menu structure and features : - Black Level - Contrast - Sharpness - Hue & Saturation - Color Temperature: 5000K/6500K/7500K/9300K/User - Horizontal & Vertical position (VGA only) - Clock (VGA only) - Phase (VGA only) - Auto Picture Setup (VGA only) - Aspect/size: 4:3/Fill screen/16:9/1:1 - Brightness (Backlight) - Signal Source selection : Composite1/Composite2/Component/HDMI1/HDMI2/DVI/VGA - Auto Color Gain - OSD menu transparency - OSD menu Timeout - Factory Reset - Image orientation : Normal/H-Flip/V-Flip/H&V-Flip - Auto Source Seek : On/Off - Fail Over : On/Off - Volume - Support show Display firmware version & input signal info. (7) Support multi panels by DIP switches (8) Support RS-232 commands (9) D/A or PWM control Backlight driver support (10) Support media failover function (11) Use new LVDS connector JAE-FI-RE51S-HF (same as SVH-1920v2) and relocate the LVDS connector position in order to avoid LVDS cable connector exceeding the edge of the board. (12) OSD control connector uses Hirose DF13A-12P-1.25H (same type as SVH-1920v2)	ECN# TW870688005

		<p>(13) Firmware upgrade through USB flash device. (14) Support audio line out through SPDIF & Stereo line out (15) Support optional audio add on board P/N 416940020-3 (16) Support +12V/24VDC power input. (17) Board size : 179 x 120 (same as SP-1600)</p> <p>Bare PCB: 017600001-3(Rev B); P/N 417600011-3 BIOS: U11, V1.03.00.00 (Flash GD25Q40C)(new) U23 ARGB EDID, Checksume : EA, 99(24C02)(embedded in firmware) HDMI1 EDID, Checksum: B1, 0C (internal memory, embedded in firmware) HDMI2 EDID, Checksum: B1, 0C (internal memory) (embedded in firmware) DVI EDID, Checksum: B1,1B (internal memory) (embedded in firmware)</p>	
<p>9 October 2017</p>	<p>11 to 12</p>	<p>Use new firmware revision V1.05.00.00 on U3 implemented the features below :</p> <p>(1) Add OSD menu language selection (English / French / Spanish)</p> <p>(2) Support Gamma selection (1.8/2.0/2.2/2.4/2.6) - Default 2.2.</p> <p>(3) Support custom panel timings function.</p> <p>(4) Support "Resolution default by EDID" for different resolution panel at VGA, DVI, HDMI1 and HDMI2 ports. 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>(5) Add new RS-232 command for Fail Over On/Off : Fail-Over ON : 0x99 0x59 0x31 0x31 Fail-Over OFF : 0x99 0x59 0x31 0x30</p> <p>(6) Add 'Auto Power On/Off' function on OSD menu (under Utilities > Setup page) and RS-232 command (0x9F).</p> <p>(7) Support 'menu/power' key for 5 button switch mount control operation.</p> <p>(8) Add Hotkey 1 and Hotkey 2 function on OSD menu and RS-232 command to define the hotkey functions (Volume / Black level / Contrast / Input Source / Aspect/Size / Saturation / Image Orientation / Brightness / Auto Picture Setup / OFF).</p> <p>(9) Add Video standard selection function for Composite video input to select PAL / NTSC / SECAM / NTSC 4.43 / PAL M / PAL N / PAL60</p> <p>(10) Move Failover On/Off function to another OSD menu location under OSD menu > Utilities > Setup page.</p> <p>(11) Add Failover recovery function.</p> <p>Known bug fixed : (12) Fixed lost audio icon on OSD menu. (13) Fixed the wrong size icon displayed on screen after pressing the 'Mute' key on IR remote when opening the OSD menu. (14) Fixed wrong input source displayed (HDMI) on screen when pressing the 'VGA' key on IR remote after power cycle the controller. (15) Fixed the image orientation always shows 'H-Flip' mode wrongly after preformed the load factory defaults. (16) Fixed to display 'Mute' and 'Volume level' icon displayed on screen in the same time with audio output when changing the volume level on the OSD menu.</p> <p>Bare PCB: 017600001-3(Rev B); P/N 417600012-3 BIOS: U3, V1.05.00.00 (Flash GD25Q64CSIGR)(new, filename: SP1920_V1.05.00.00_06Oct2017.zip) U23 ARGB EDID, Checksume : A2, 99(24C02)(embedded in firmware) HDMI1 EDID, Checksum: B1, 0C (internal memory, embedded in firmware) HDMI2 EDID, Checksum: B1, 0C (internal memory) (embedded in firmware) DVI EDID, Checksum: B1,1B (internal memory) (embedded in firmware)</p>	<p>ECN# TW870688014</p>

<p>11 December 2017</p>	<p>12 to 13</p>	<p>Use new firmware revision V1.06.00.00 on U3</p> <ol style="list-style-type: none"> (1) Fix the swapping problem for the left and right key RS-232 command. (2) Fix wrong naming for 'Backlight Control' function displayed on OSD menu as it should be 'Control' (not 'OSD Timeout') under OSD menu location > Utilities > Backlight Setup page. (3) Fix the clock, phase and position settings cannot be saved after performing the hotkey auto picture setup function. <p>Bare PCB: 017600001-3(Rev B); P/N 417600013-3 BIOS: U3, V1.06.00.00 (Flash GD25Q64CSIGR)(new, filename: SP-1920_V1.06.00.00_U3_20171207.zip) U23 ARGB EDID, Checksum : A2, 99(24C02)(no change) HDMI1 EDID, Checksum: B1, 0C (internal memory)(no change) HDMI2 EDID, Checksum: B1, 0C (internal memory)(no change) DVI EDID, Checksum: B1,1B (internal memory) (no change) Remark all EDID information are embedded in firmware</p>	<p>ECN# TW870688018</p>
<p>2 December 2019</p>	<p>13 to 14</p>	<p>Use new firmware revision V1.14.00.00 on U3</p> <ol style="list-style-type: none"> 1) Add panel support : <ul style="list-style-type: none"> - SHARP LQ104V1LG81 (640x480) panel (based on customer test result) SW4 (position 1-8) : OFF OFF ON OFF OFF ON ON OFF - KOE TX26D206VM0BAA (1920x720) panel SW3 (Position 1-8) : ON OFF ON ON ON ON ON OFF - KOE TX38D25VM0CAA (1280x242) panel. SW3 (Position 1-8) : ON OFF ON ON ON ON OFF OFF 2) Add Failover message 'content loading' displayed on screen before starting to play the USB content. 3) Removed the "Play" icon displayed on screen when playing USB content. 4) Added 2 secs more detection time for Failover jump back to HDMI source. 5) Added disable video lock function on dip switch setting SW3 position 8 = ON. 6) Fixed no input source image displayed again on screen after triggering to display the OSD menu image on screen when playing the USB content. 7) Fixed Menu Key holding problem occasionally. 8) Fixed wrongly display the load default message on screen when press and hold the select down button at Composite 1 and Composite 2 ports. <p>Bare PCB: 017600001-3(Rev B); P/N 417600014-3 BIOS: U3, V1.14.00.00 (Flash GD25Q64CSIGR)(SP-1920_V1.14..00.00_20191202.zip) U23 ARGB EDID, Checksum : A2, 99(24C02)(no change) HDMI1 EDID, Checksum: B1, 0C (internal memory)(no change) HDMI2 EDID, Checksum: B1, 0C (internal memory)(no change) DVI EDID, Checksum: B1,1B (internal memory) (no change) Remark all EDID information are embedded in firmware</p>	<p>ECN# TW870688060</p>

<p>10 March 2020</p>	<p>1x to 20</p>	<p>Release new version using new bare PCB 017600002-5 Rev B.</p> <ul style="list-style-type: none"> - Change light sensor connector CN9(3pin) to CN6(2pin) and related circuitry. - Add on-board temperature sensor, TMP75AID(U24) and related circuitry. <p>PCB changes details as below</p> <ul style="list-style-type: none"> - Remove CN9 - Add CN6 DF13/2pin - R47 changed from 2M to 0ohm - Remove C16 0.1u/0402 - Add C152 and DC48 0.1u/0402 - Add R64(1%), R82(5%), R279(5%) and R288(5%) 10K/0402 - Add R274 and R278 100/0402 - Remove R81 - Add temperature sensor, TMP75AID(U24) - added V1(potentiometer), solder 20K(0603) resistor between pin1 and pin2 as in DT-1920-HDMI. - Rename CN10 to CN13 - R223 and R224 (0 ohm resistors) change package from 1206 to 1210 - Add AVL component, TMI3113D, for U9 <p>Bare PCB: 017600002-3(Rev B); P/N 417600020-3 BIOS: U3, V1.14.00.00 (Flash GD25Q64CSIGR)(SP-1920_V1.14..00.00_20191202.zip) U23 ARGB EDID, Checksum : A2, 99(24C02)(no change) HDMI1 EDID, Checksum: B1, 0C (internal memory)(no change) HDMI2 EDID, Checksum: B1, 0C (internal memory)(no change) DVI EDID, Checksum: B1,1B (internal memory) (no change) Remark all EDID information are embedded in firmware</p>	<p>ECN# TW870688075</p>
<p>5 May 2020</p>	<p>20 to 20 (P/N remain unchanged)</p>	<p>Correct BOM</p> <ul style="list-style-type: none"> - R66 changed from 100Kohm to 100ohm.. <p>Bare PCB: 017600002-3(Rev B); P/N 417600020-3 BIOS: U3, V1.14.00.00 (Flash GD25Q64CSIGR)(SP-1920_V1.14..00.00_20191202.zip) U23 ARGB EDID, Checksum : A2, 99(24C02)(no change) HDMI1 EDID, Checksum: B1, 0C (internal memory)(no change) HDMI2 EDID, Checksum: B1, 0C (internal memory)(no change) DVI EDID, Checksum: B1,1B (internal memory) (no change) Remark all EDID information are embedded in firmware</p>	<p>ECN# TW870688084</p>

<p>21 August 2020</p>	<p>20 to 21</p>	<p>Use firmware V1.16.00 on U3 : 1) Support 2 pins light sensor function via CN6 connector 2) Support on board temperature sensor function. 3) Add 'Default power on/off' function on the OSD menu. 4) Bug fixed : a) Fix no function on '-' and 'SEL DN' key when setting to 'Input source' hotkey function under HDMI mode and Auto source seek to OFF states. b) fix to display wrong info menu after pressing the 'Mute' key on the IR remote control when displaying the Audio menu on the OSD menu on screen. c) Fix to display wrong text menu after pressing the 'Mute' key on the IR remote control when displaying the Picture function on the OSD menu on screen.</p> <p>Bare PCB: 017600002-3(Rev C); P/N 417600021-3 BIOS: U3, V1.16.00.00 (Flash GD25Q64CSIGR) U23 ARGB EDID, Checksum : A2, 99(24C02)(no change) HDMI1 EDID, Checksum: B1, 0C (internal memory)(no change) HDMI2 EDID, Checksum: B1, 0C (internal memory)(no change) DVI EDID, Checksum: B1,1B (internal memory) (no change) Remark all EDID information are embedded in firmware</p>	<p>ECN# TW870688093</p>
<p>1 December 2020</p>	<p>21 to 22</p>	<p>Use firmware V1.18.00.00 on U3 : 1) : Add 'Default power on/off' function on the OSD menu under Utilities > Setup page. 2) : Fixed the board cannot be woken up by sending 'MENU' RS-232 command (0xF7) from standby mode. 3) : Fixed known minor bugs : a) Cannot save new active port under autoscan when the source was absent at startup. b) Cannot restore the backlight brightness and finally set to level 100 after factory reset. c) Bug fixed for light sensor B/L level to OFF level command. 4) : Fixed OSD menu flashing image problem at startup when turned off the controller power and wait for ~2mins before turning back on the controller. 5) : Fixed HDMI2 custom EDID could not be written. 6) : Fixed no response on RS-232 command - Graphic horizontal resolution enquiry (0xB7) in VGA mode.</p> <p>Bare PCB: 017600002-3(Rev C); P/N 417600022-3 BIOS: U3, V1.18.00.00 (Flash GD25Q64CSIGR)(changed) U23 ARGB EDID, Checksum : A2, 99(24C02)(no change) HDMI1 EDID, Checksum: B1, 0C (internal memory)(no change) HDMI2 EDID, Checksum: B1, 0C (internal memory)(no change) DVI EDID, Checksum: B1,1B (internal memory) (no change) Remark all EDID information are embedded in firmware</p>	<p>ECN# TW870688106</p>

<p>Prepared by: DV-HK</p>	<p>Date: 1 December 2020</p>
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