PCPartner®

C474N4
JETSON NANO QUAD DISPLAY SYSTEM
External Specification Brief (Preliminary)

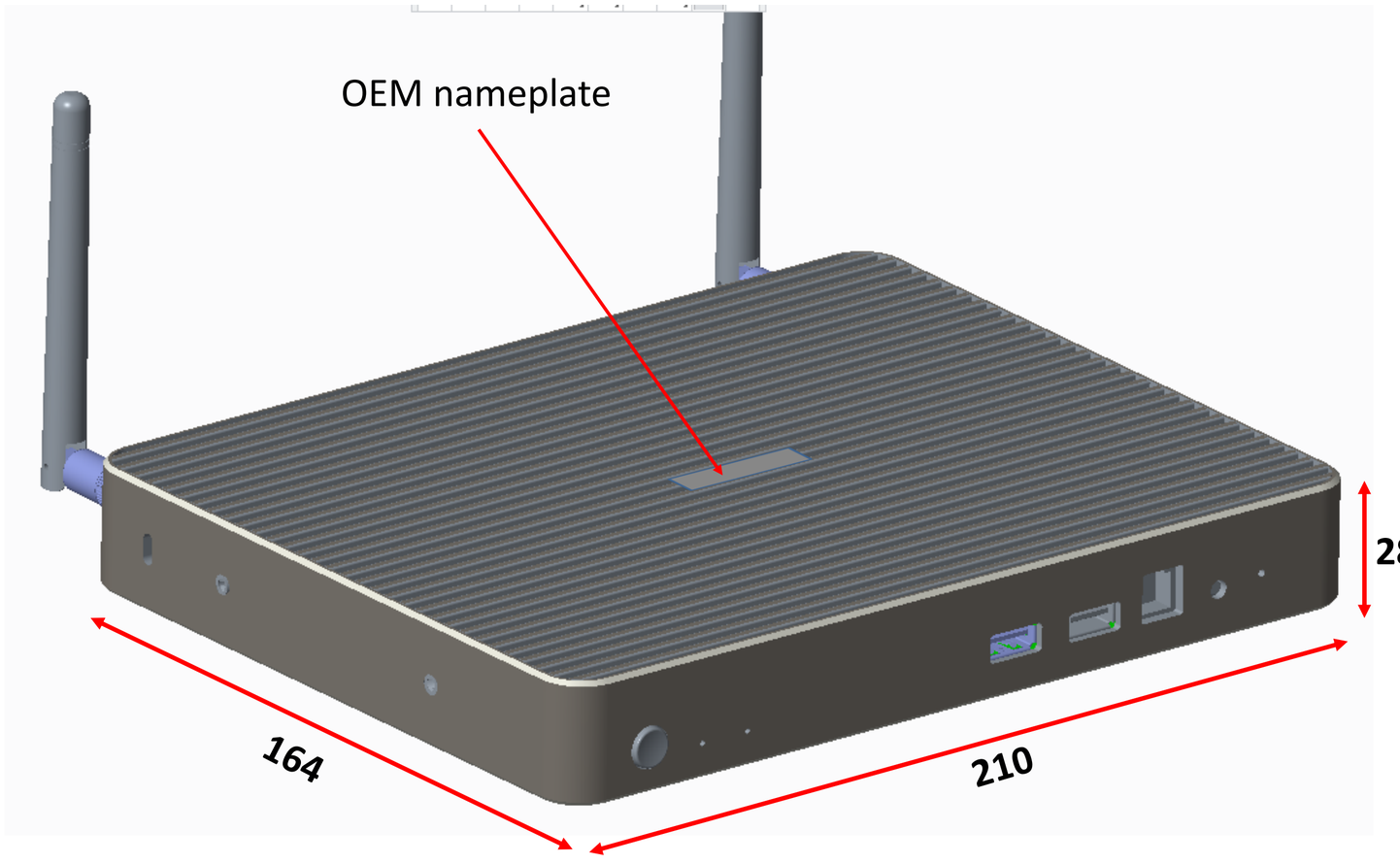
Revision 3
Created: February 09, 2023
Last updated: April 28, 2023
PM: L.M. Wong

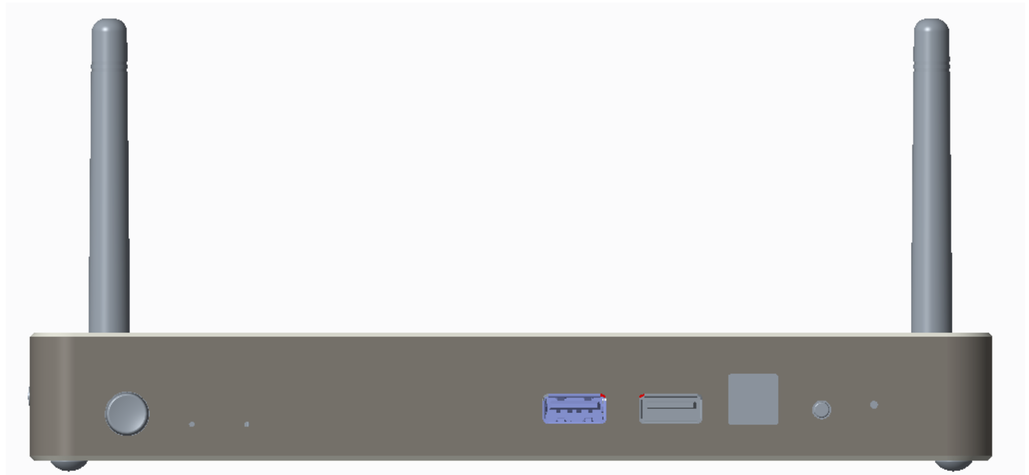
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Document Update

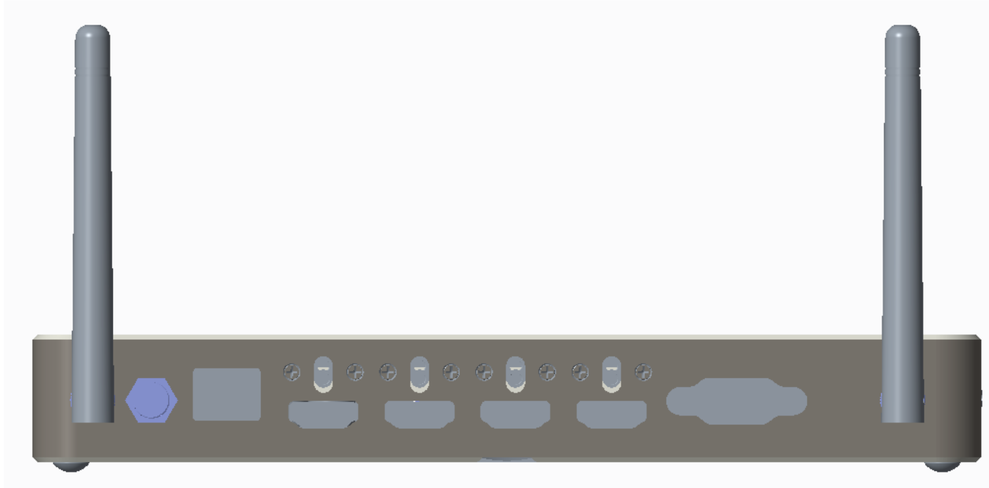
- Revision 4: Updated onboard eMMC capacity to 128GB
- Revision 3: Added sample photo
- Revision 2: Deleted 4K support. Updated single & dual display spec. Updated block diagram. Specified OEM nameplate
- Revision 1: Initial draft.

1. SYSTEM OUTLOOK





Front panel



Back panel

- Dimension unit: mm

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1. SYSTEM OUTLOOK



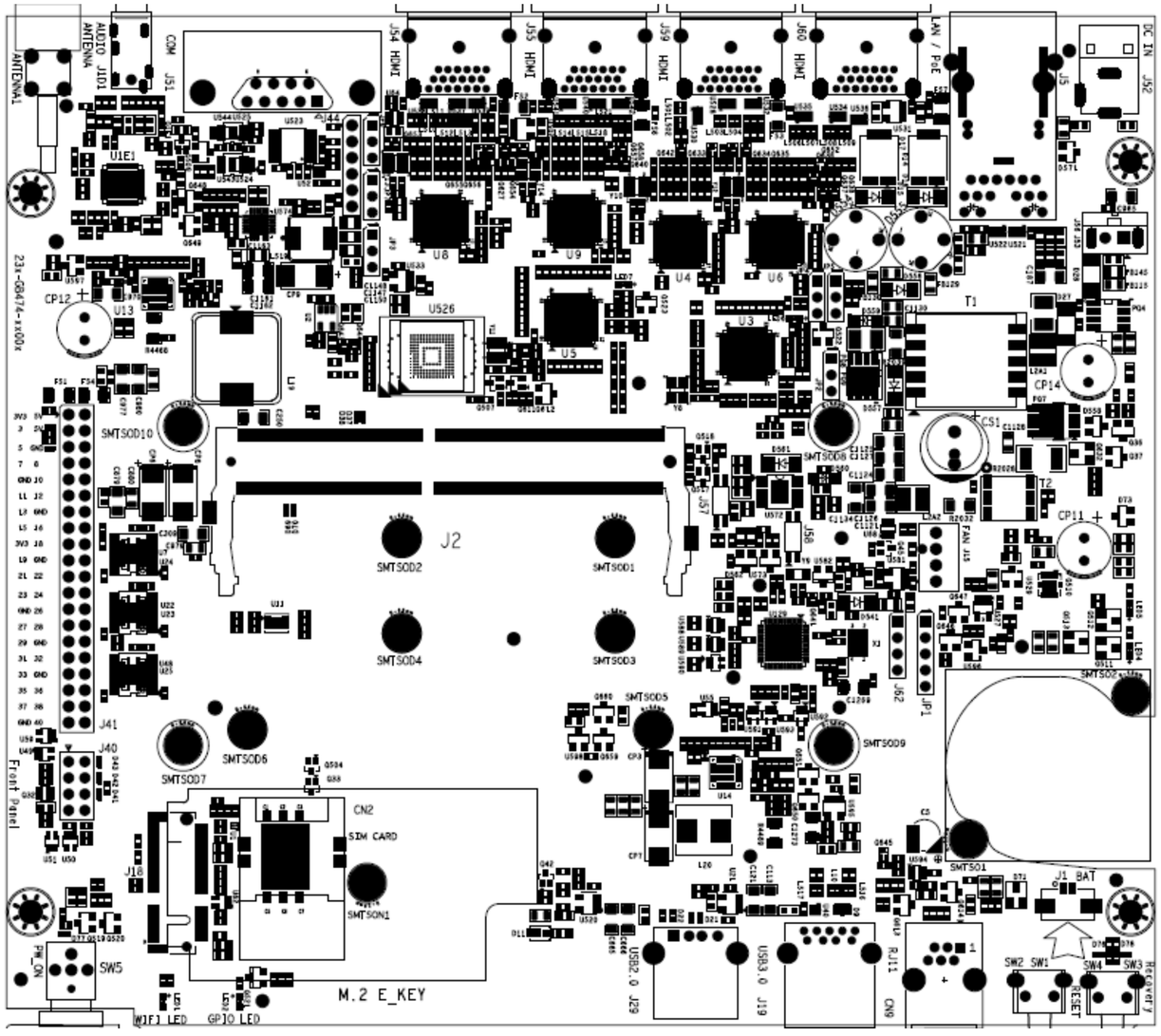




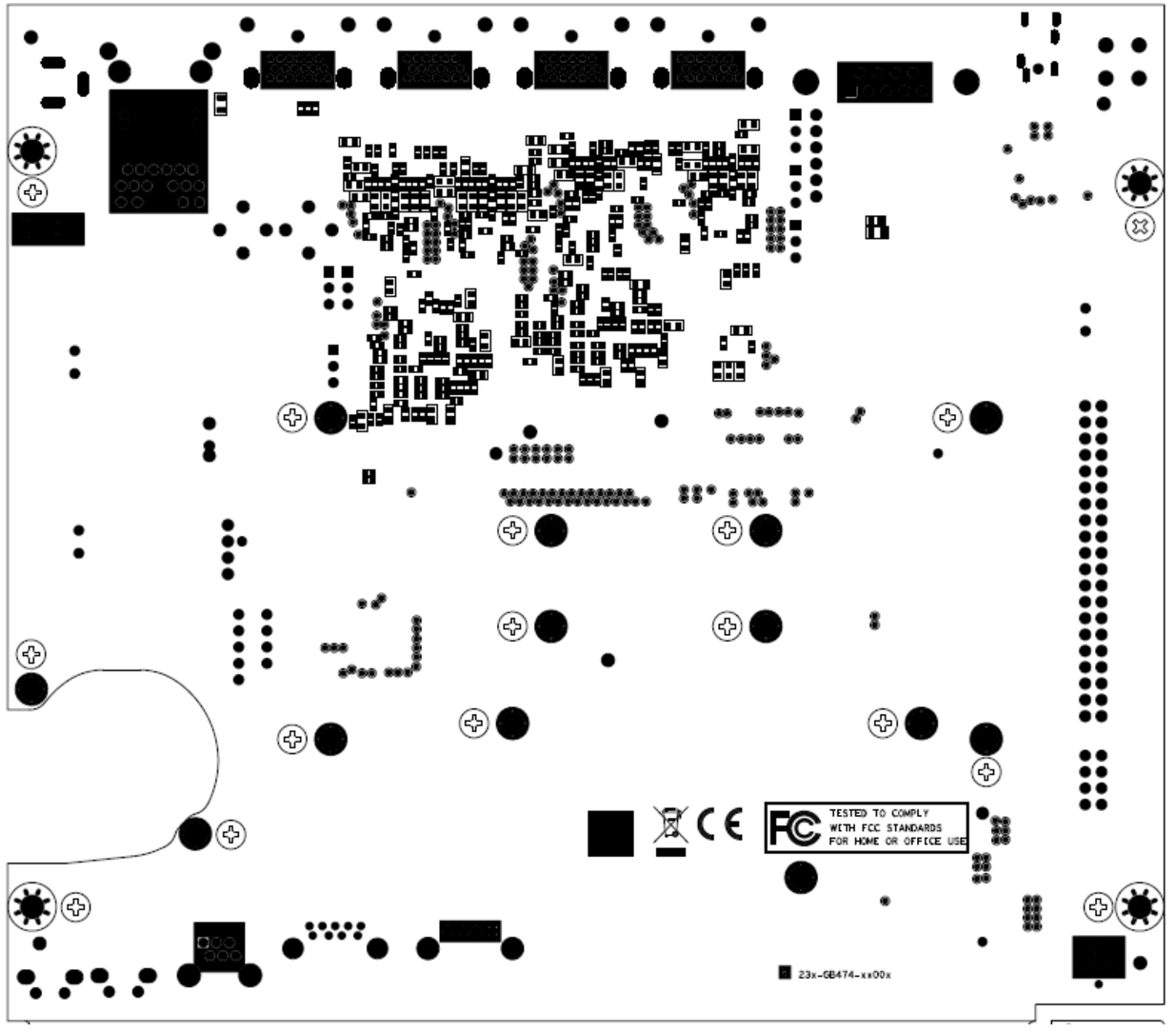




2. PCB LAYOUT

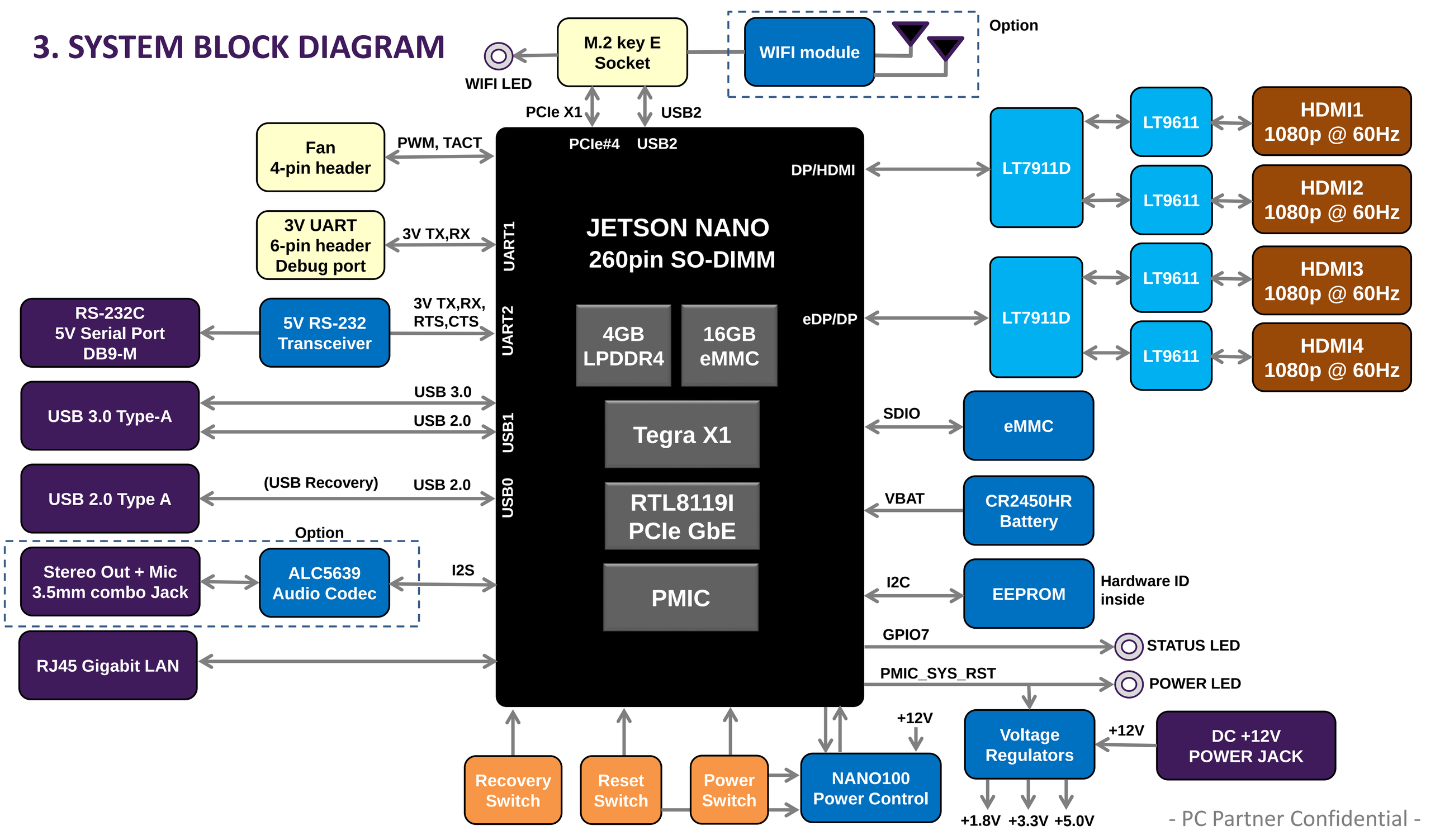


Top side
Top view



Bottom side
Bottom view

3. SYSTEM BLOCK DIAGRAM

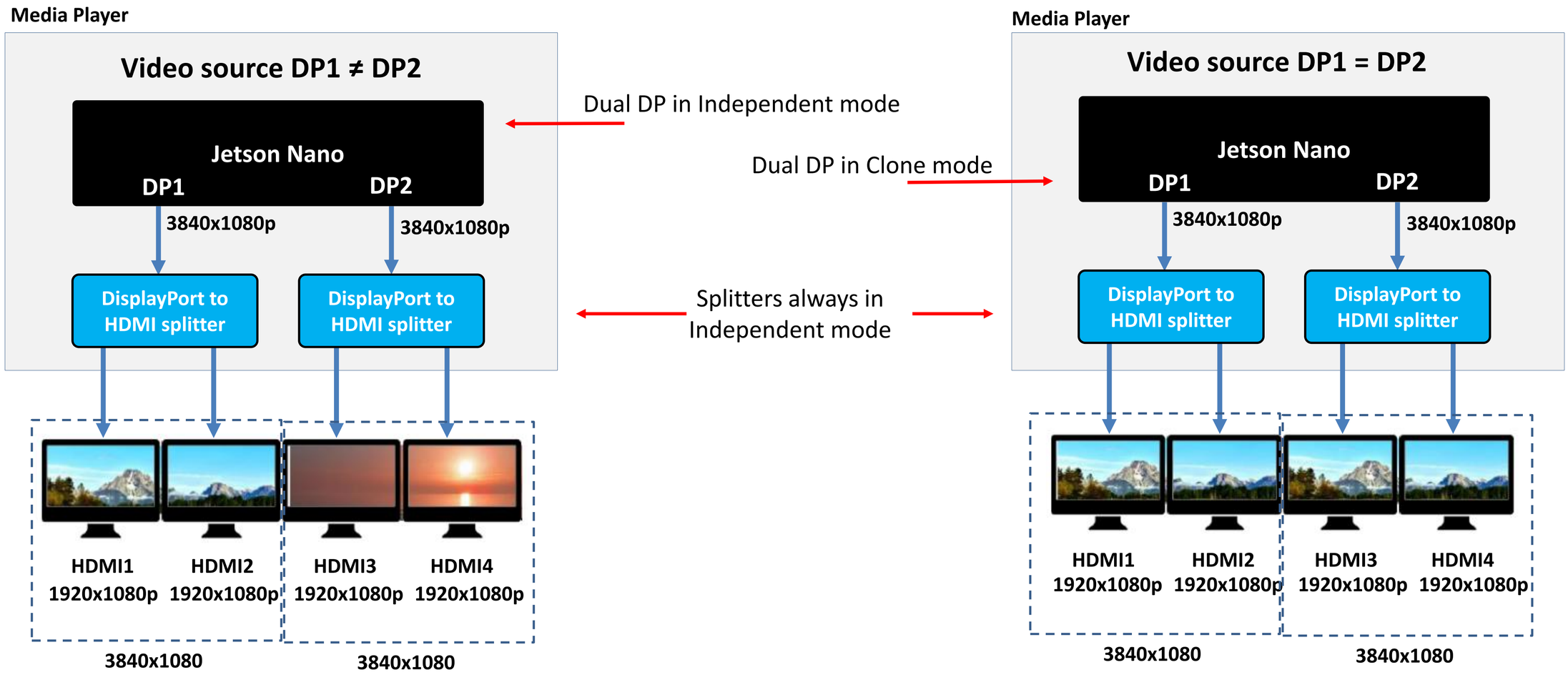


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4. JETSON NANO DISPLAY OUTPUT PORT CONFIGURATION

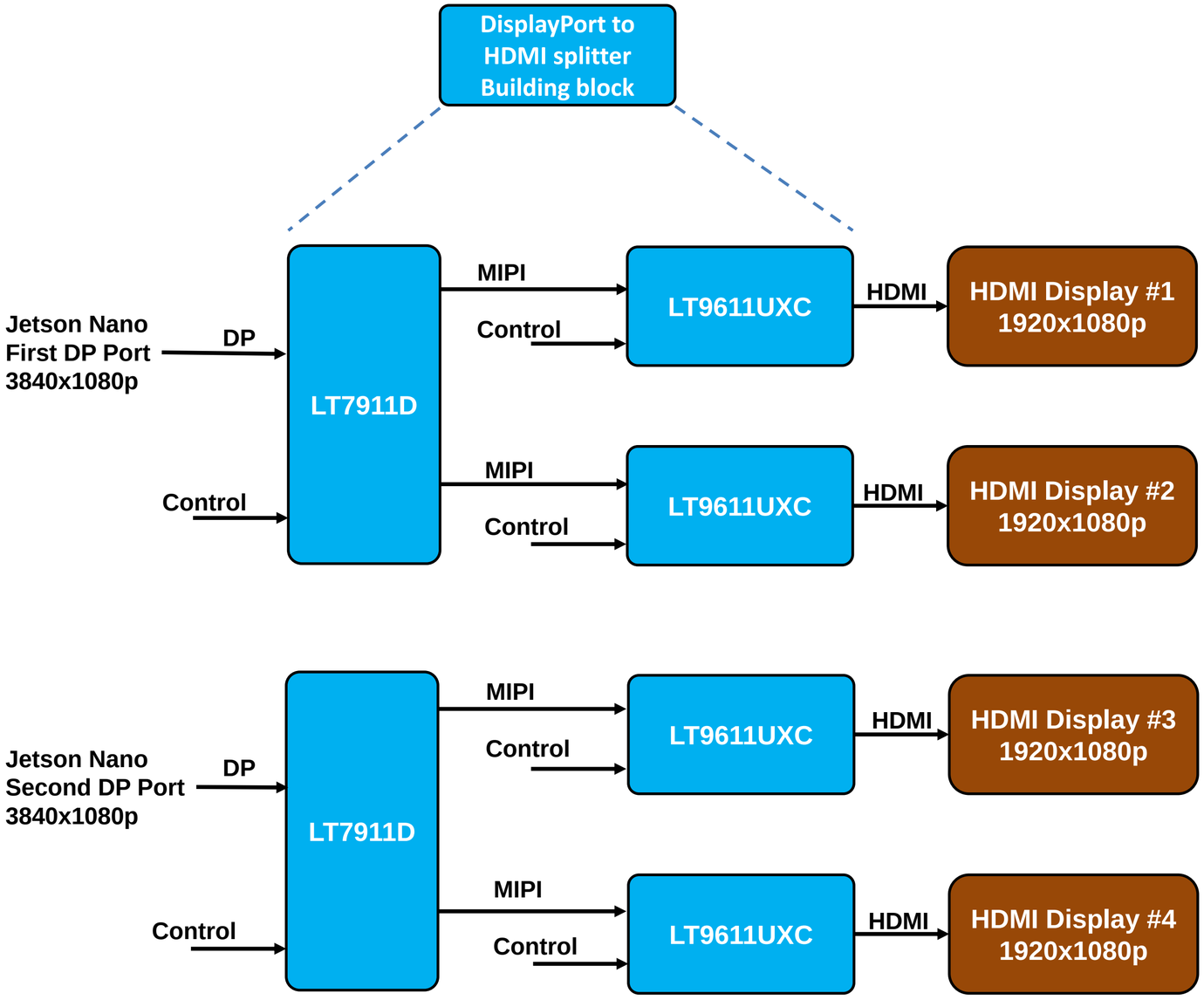
Support Independent mode (Span mode)

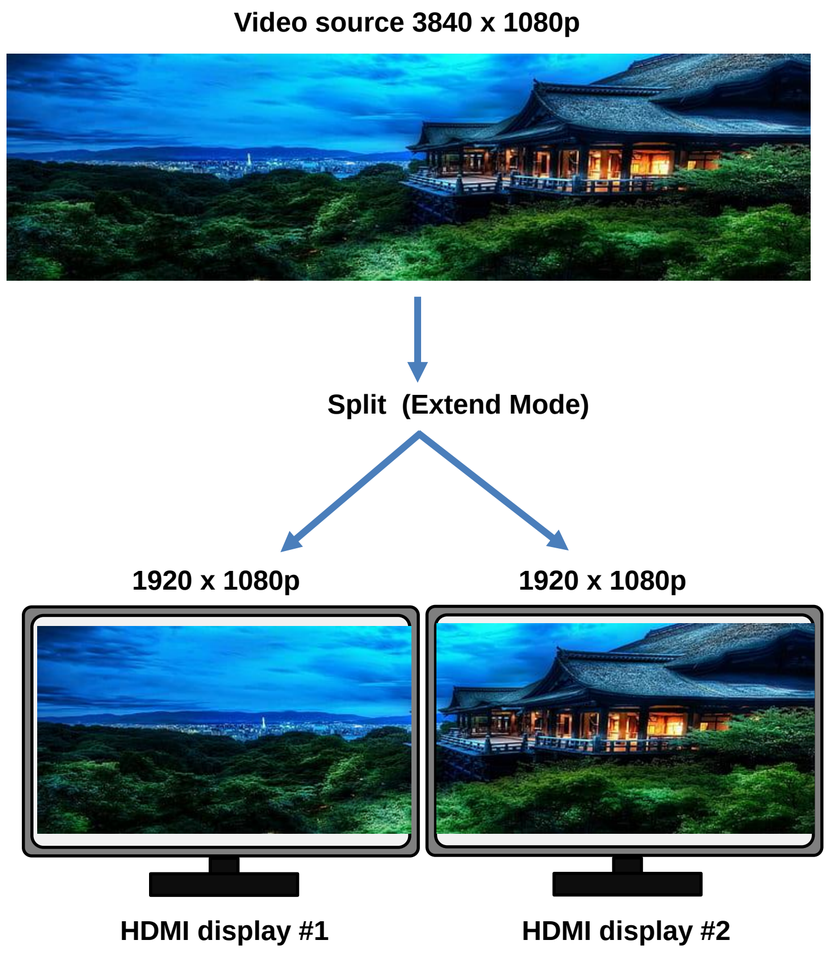
Support Clone mode



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5. DISPLAY PORT TO HDMI SPLITTER SUBSYSTEM





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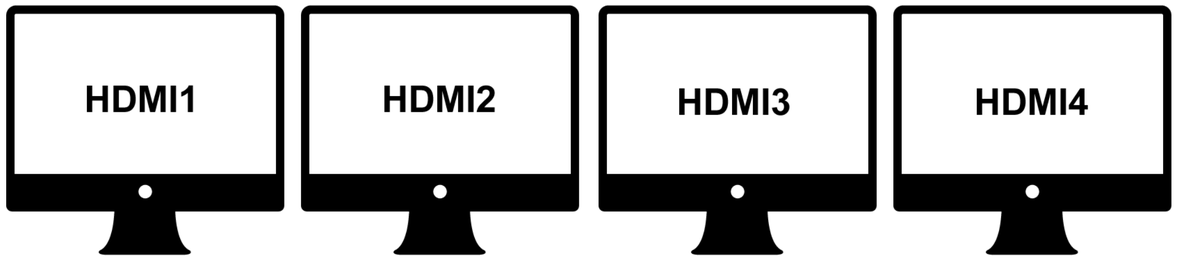
6. TECHNICAL SPECIFICATION

- Based on NVIDIA Jetson Nano module
- Onboard 128GB eMMC (in addition to 16GB on Jetson Nano module)
- 4 x HDMI display output:
  - Group A (HDMI1 + HDMI2) from Jetson Nano DP/HDMI port: Extended (Span mode) at 3840 x 1080p @60Hz
  - Group B (HDMI3 + HDMI4) from Jetson Nano eDP/DP port: Extended (Span mode) at 3840 x 1080p @60Hz
  - Group A + Group B : Support clone mode (mirror mode), and independent display mode by Jetson Nano
  - 2-screen only (HDMI1 + HDMI3) each at 1920 x 1080p @60Hz in clone mode and independent mode. Supported by separate splitter firmware
  - 1-screen only (HDMI1) at 1920 x 1080p @60Hz. Supported by separate splitter firmware
  - Support EDID emulation, provide uninterrupted video output regardless of display plug & unplug
  - Does NOT support digital audio on HDMI
- 1 x USB 3.0 Type-A host port. 1 x USB 2.0 Type-A host port. Support Jetson Nano Force Recovery Mode
- 1 x UART serial port (TX, RX, RTS, CTS signals at 5V RS232 level)
- 1 x RJ45 Gigabit Ethernet
- 1 x RJ11 remote power switch port
- [OPTION] IEEE 802.11ax/ac/a/b/g/n WIFI based on Intel Wi-Fi 6E AX210 M.2 module
- [OPTION] 3.5mm stereo line-out & mono microphone combo jack
- Switches: Power push button, Reset tact switch, Jetson Force Recovery tact switch
- Real-time clock battery: CR2450HR 3V 550mAh coin battery
- Power Input: 12VDC jack with locking screw. Max power consumption approx 23.5W incl USB full loading. Bundle 60W universal AC adapter
- Passive cooling case with mounting holes on both sides and Kensington lock hole. Dimension: 210.0mm (W) x 164.0mm (D) x 28.0mm (H)
- Operating temperature range: -20°C – +65°C. Humidity 5 – 95% non-condensing
- FCC, CE, UL certified (pending). RoHS compliant
- Software: PC Partner Jetson Linux (L4T) patch, Splitter firmware update tool

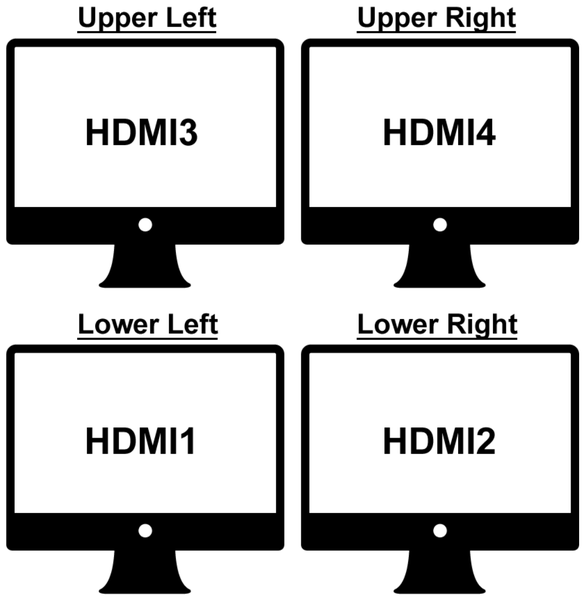
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7. SUPPORTED DISPLAY RESOLUTION & PHYSICAL SETUP

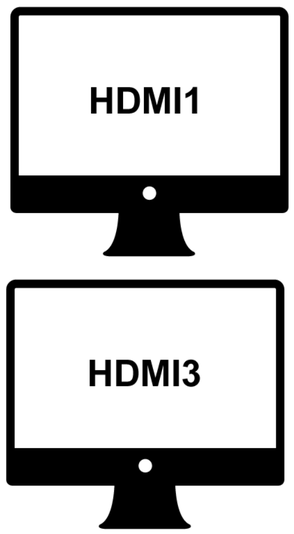
Quad Display: 1 x 4 FHD



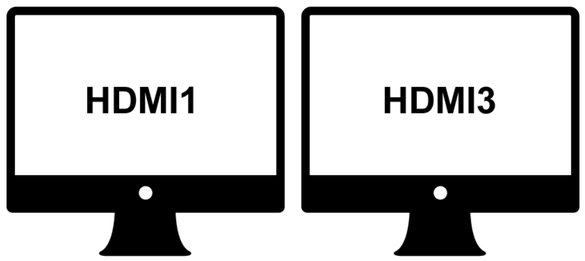
Quad Display: 2 x 2 FHD



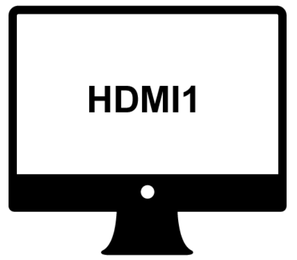
Dual Display: 2 x 1 FHD (#)



Dual Display: 1 x 2 FHD (#)



Single Display: FHD (#)



Note (#): Required different splitter firmware, field programmable in Linux environment

8. ORDERING INFORMATION

SKU	BOM	Description
EMB-C474N4-A1	250-1B474-000EB	EMBEDDED JETSON NANO SYSTEM, 4GB LPDDR4, EMMC 16GB + 128GB, HDMIx4, AX210 WIFI, CR2450HR BATT, US/EU PLUGS, OEM BOX Device identification: ▪HWID: 250-1B474-000EB ▪Jetson firmware version: *t.b.d.* ▪Video splitter firmware version: *t.b.d.*

Accessories / Optional Part List

P/N	Description	Qty per unit
251-15001-0200F	INTEL WI-FI 6E AX210 (GIG+), 2230, 2X2 AX R2 (6GHZ)+BT, NO VPRO, AX210NGW	1
247-00111-0000F	WIESON TRIBAND ANTENNA 2.4G/5G/6G ARY121-0093-003-00 2.4-7.125GHZ 146MM LENGTH	2
247-00076-0000F	RF CONNECTER WIRE 80MM FOR 2.4G/5GHZ ANTENNA FOR NGFF	2
251-09101-1700F	FSP FSP060-DHAN3/9NA06080B9 12V/5A (60W) SWITCHING POWER SUPPLY	1
246-00627-0000F	K5A031H5120BB-L EU POWER CORD C13 PLUG, L=1200MM, 3PINS	1
246-00628-0000F	K01031B1120BB-L US POWER CORD C13 PLUG, L=1200MM, 3PINS	1

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