

# Protectli Appliance

## Protectli Vault V1210 2 Port - Intel® N5105

October 24, 2024

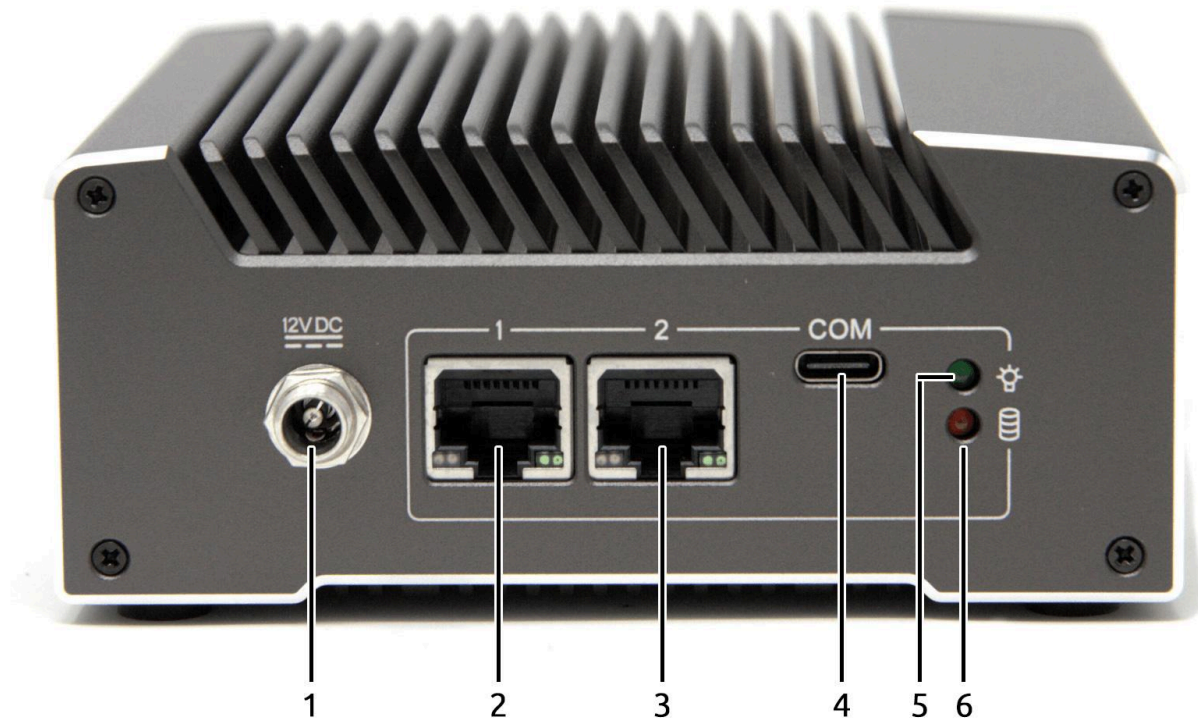
# Specifications

<b>Model</b>	V1210
<b>Description</b>	2x 2.5G Network Port Fanless Appliance
<b>Processor</b>	Intel® Celeron® N5105 (64 Bit, 2.0GHz, Turbo 2.9GHz, 4M L3 Cache)
<b>Processor Cores</b>	4
<b>Processor Threads</b>	4
<b>Intel® AES-NI</b>	Supported
<b>Virtualization</b>	Intel® Vt-x, Vt-d
<b>Network</b>	2x Intel® I226-V 2.5G Ethernet, RJ-45
<b>Video / Graphics</b>	Intel® UHD Graphics, 1x HDMI 1.4
<b>Audio</b>	Audio over HDMI
<b>Memory</b>	1x 4GB LPDDR4-2933, Soldered
<b>Storage</b>	1x M.2 2280 NVMe, 1x 32G eMMC on board
<b>Optional Storage</b>	None
<b>External I/O</b>	2x RJ-45 Ethernet 4x USB 3.2 Gen 1 Type A 1x USB Type-C COM Port 1x HDMI 1x Reset Button (Recessed) 6x WiFi/LTE Antenna Mounting Holes 1x 12V DC Power Jack, Threaded
<b>Internal I/O</b>	1x M.2 2280 M-Key PCIe 3.0 x1 (NVMe) 1x M.2 2230 E-Key PCIe 3.0 x1 for WiFi 1x M.2 3052 B-Key USB 3.2 Gen 1 (LTE) 1x CMOS Reset (3 pin)
<b>BIOS</b>	AMI® or coreboot
<b>Indicators</b>	1x LED Power Button (Blue), 1x LED Power Indicator (Green), 1x LED Disk Activity Indicator (Red)
<b>Power</b>	Input 12V DC, 1x DC Power Jack, Threaded connector
<b>Power Usage</b>	Max 24W
<b>Chassis</b>	Fanless, Aluminum, Gray
<b>Chassis Dimensions</b>	4.5 x 4.5 x 2 in, 115 x 115 x 50 mm

<b>Mounting Options</b>	Desktop, Optional VESA Bracket, Optional 1RU Rack Mount
<b>Weight</b>	1 lb, 0.45 kg
<b>Shipping Weight</b>	3 lbs 4 oz, 1.47 kg
<b>Operating Temperature</b>	+14° - +122° F, -10° - +50° C
<b>Operating Humidity</b>	0 – 95% relative humidity, non-condensing
<b>Approvals</b>	UL (Power Supply), FCC Part 15 Class B, CE, RoHS
<b>Country of Origin</b>	Made in China, Assembled in USA, Canada, or Germany
<b>Optional Connectivity</b>	1x WiFi, 1x LTE

# System Features

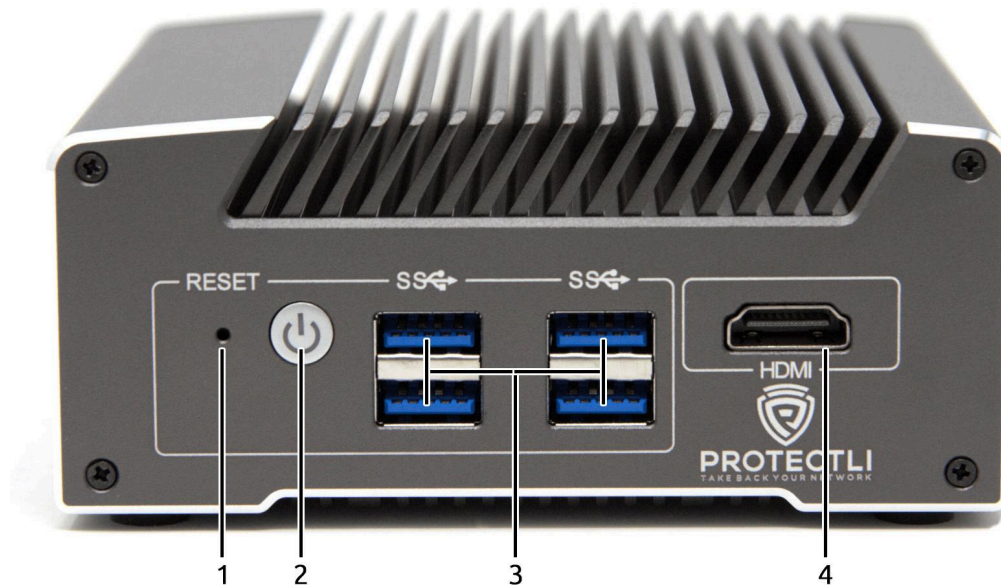
## Front Features



Item #	Object	Description
1	Power Supply Connector	12V DC threaded barrel connector for the 36W external power supply. Positive rail is the tip, negative is sleeve.  Barrel dimensions: 5.5mm x 2.5mm
2	Ethernet Port 1	100/1000/2500 Mbps Intel® i226-V ethernet port.
3	Ethernet Port 2	100/1000/2500 Mbps Intel® i226-V ethernet port.
4	Serial Console Port	RS-232 serial communications via FTDI FT232RQ UART, exposed through USB 2.0 Type-C connector. Default port settings: <ul style="list-style-type: none"> <li>• 115200 baud</li> <li>• No parity</li> </ul>

		<ul style="list-style-type: none"> <li>• 8 databits</li> <li>• 1 stopbit</li> </ul>
5	Power Indicator LED	LED emits solid green when the device is powered on.
6	HDD Activity LED	LED emits red when data activity is detected over the NVMe interface.

## Rear Features



Item #	Object	Description
1	Reset Button (Recessed)	A momentary switch exposed via GPIO. This is not an ACPI reset button, but a general purpose button that may be programmed in the guest OS.
2	Power Button	<p>Pressing the Power Button will power the unit on and illuminate with a blue LED.</p> <p><i>In OSes configured to handle ACPI signals, pressing the power button initiates a shutdown.</i></p> <p><i>Pressing and holding the Power Button for 5 seconds will force the unit to power off.</i></p>

3	Four USB Connectors	USB 3.2 Gen 1 Type-A connectors.
4	HDMI Connector	Video and audio output via HDMI.

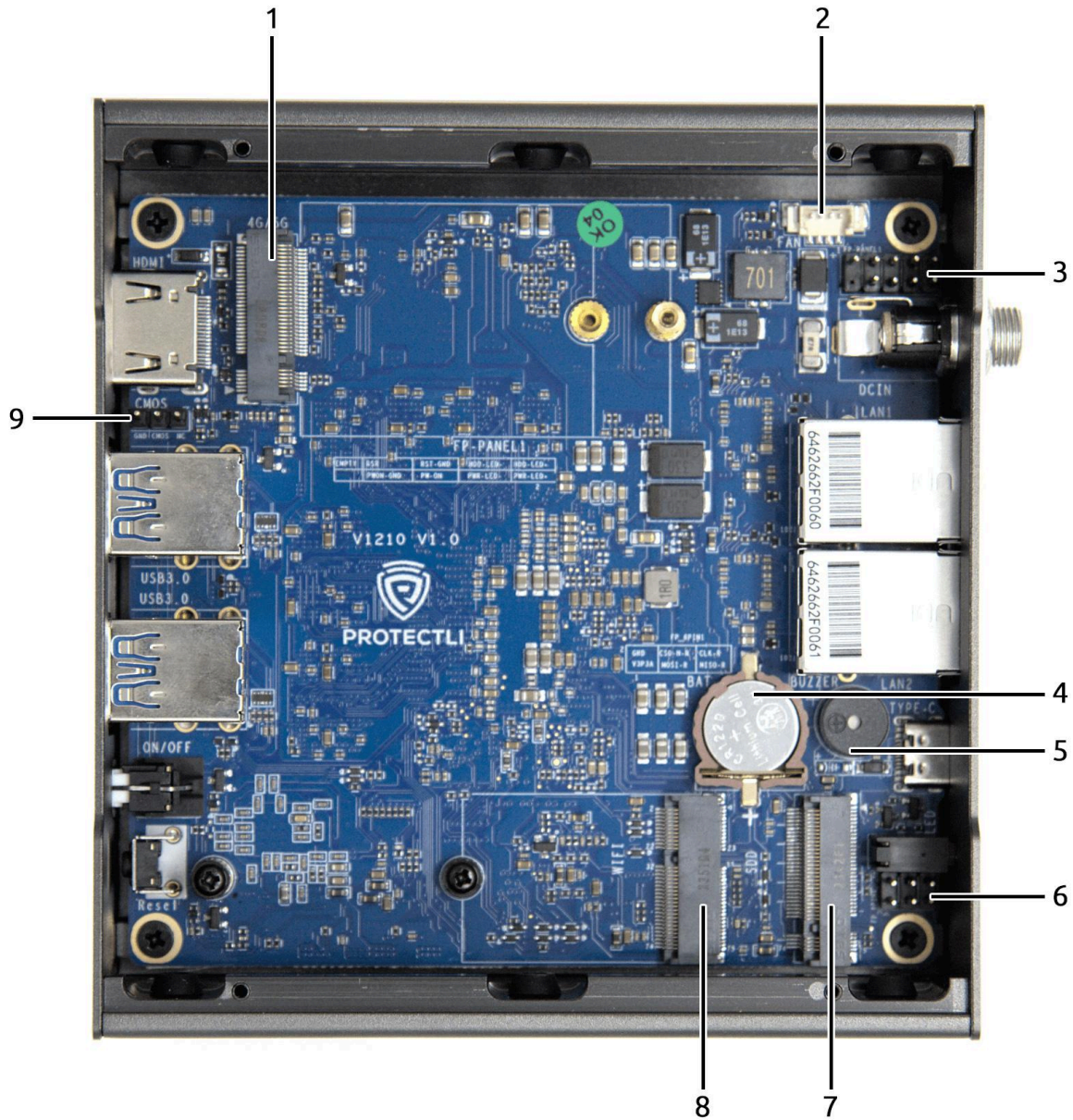
## Side Features



Item #	Object	Description
1	Antenna Ports	Three antenna ports for adding radio antennas (WiFi, LTE, etc.). The ports are covered by plugs while not in use.
2	Antenna Ports	<i>(Unpictured on the reverse side.)</i> Three antenna ports for adding radio antennas (WiFi, LTE, etc.). The ports are covered by plugs while not in use.



## Motherboard Top View



Item #	Object	Label	Description
1	LTE Expansion Slot	4G/5G	M.2 3052 B-Key connector for USB 3.2 Gen 1 functionality. Designed for Protectli LTE modules, but is not limited in its capabilities.

2	CPU Fan Header	FAN	Four-pin Molex PicoBlade compatible (12V, 1.25mm pitch) header for optional fan.						
3	Front Panel Header	FP_PANEL1	Internal header for adding external device controls and indicators featured through the front panel, such as power button, reset button, activity LEDs, etc.						
4	CMOS Battery	BAT	Slot holds a CR1220 3V battery.						
5	Buzzer	BUZZER	PC speaker.						
6	eSPI Header	FP_6PIN1	eSPI header for BIOS programming. Pin numbering is as follows, oriented to the above motherboard image: <table border="1" data-bbox="743 716 1414 837"> <tr> <td>Pin 2 - GND</td> <td>Pin 4 - CSO-N-R</td> <td>Pin 6 - CLK-R</td> </tr> <tr> <td>Pin 1 - V3P3A</td> <td>Pin 3 - MOSI-R</td> <td>Pin 5 - MISO-R</td> </tr> </table>	Pin 2 - GND	Pin 4 - CSO-N-R	Pin 6 - CLK-R	Pin 1 - V3P3A	Pin 3 - MOSI-R	Pin 5 - MISO-R
Pin 2 - GND	Pin 4 - CSO-N-R	Pin 6 - CLK-R							
Pin 1 - V3P3A	Pin 3 - MOSI-R	Pin 5 - MISO-R							
7	M.2 NVMe Connector	SDD <sup>1</sup>	Connector uses PCIe 3.0 x1 protocol over an M.2 M-Key socket. It is designed for an NVMe storage device, but is otherwise a functional PCIe port.						
8	WiFi Expansion Slot	WIFI	Connector uses PCIe 3.0 x1 protocol over an M.2 E-Key socket. Designed for Protectli WiFi modules, but is not limited in its capabilities.						
9	NVRAM Reset Jumper	CMOS	3 pin (2.54mm pitch) NVRAM reset pins. Shorting the jumper pins GND and CMOS while the CMOS battery is connected will reset the BIOS NVRAM.  Pin number is as follows, oriented to the above image of the motherboard: <table border="1" data-bbox="743 1325 1414 1383"> <tr> <td>Pin 1 - GND</td> <td>Pin 2 - CMOS</td> <td>Pin 3 - NC</td> </tr> </table>	Pin 1 - GND	Pin 2 - CMOS	Pin 3 - NC			
Pin 1 - GND	Pin 2 - CMOS	Pin 3 - NC							

<sup>1</sup> The silkscreen on the motherboard reads "SDD" but should instead read "SSD".



## Measurement View



# Document History

2024-10-24

- Clarified wording across "Motherboard Top View" section
- Corrected USB versions from "USB 3.2 Gen 2" to "USB 3.2 Gen 1"

2024-08-01

- Changed "PC Speaker" to "PC speaker"
- Changed "RS232" to "RS-232"
- Updated linked spec sheet with ® and ™ as necessary for Intel and AMI

2024-06-28

- Clarified PCI and USB specifications such as speed, protocol, etc.

2024-05-09

- Initial document