Protectli Appliance

Protectli Vault Pro VP6670 2x 10G, 4x 2.5G Intel® i7-1255U

April 29, 2024

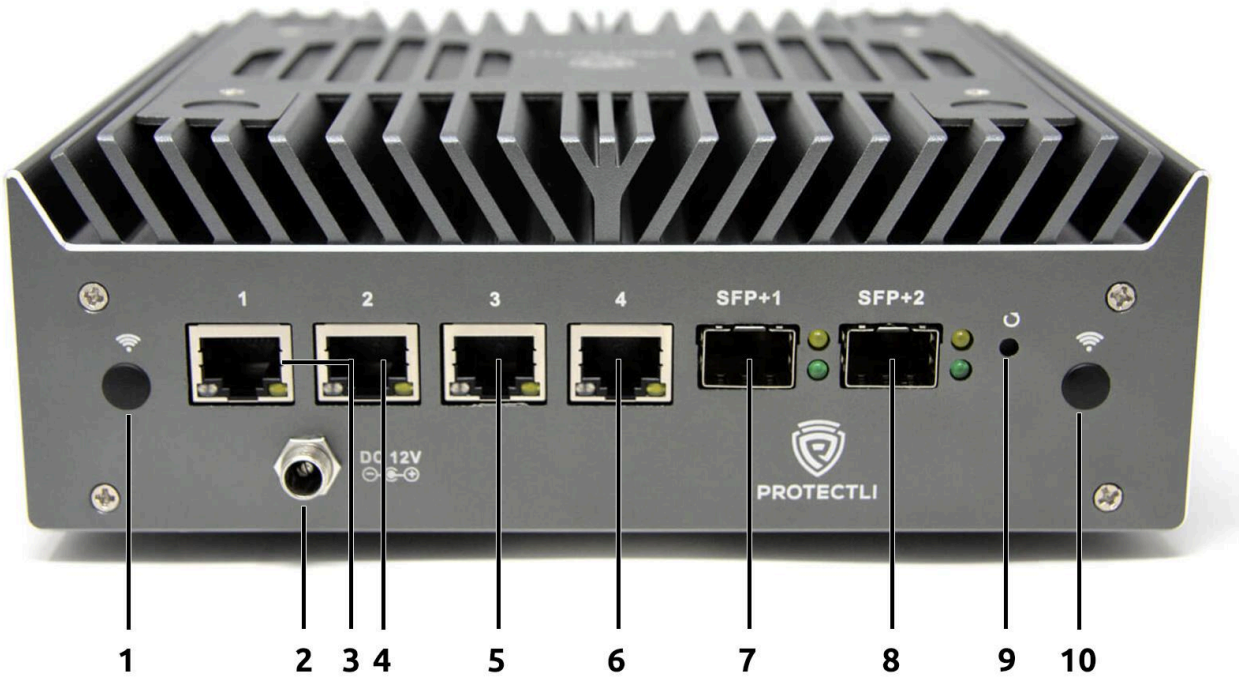
Specifications

Model	VP6670
Description	2x 10G, 4x 2.5G Network Port Appliance
Processor	Intel i7-1255U (64 bit, Max 4.7 GHz)
Processor Cores	10
Processor Threads	12
Intel AES-NI	Supported
Virtualization	Intel Vt-x, Vt-d
Network	2x Intel X710-BM2 SFP+, 4x Intel I226V Ethernet RJ-45
Video / Graphics	Intel Iris Xe Graphics, 1x HDMI 1.4, Ix DP 1.4a
Audio	Audio over HDMI
Memory	2x SO-DIMM DDR5-4800, Max 64GB
Storage	1x M.2 2280 NVMe
Optional Storage	2x Internal 2.5” SATA 3.0 SSD
External I/O	2x 10G SFP+, 4x 2.5G Ethernet, RJ-45
	1x USB 3.1 Type A, 3x USB 2.0 Type A
	1x USB 3.2 Type C, 10Gbps with Display Port
	1x RJ-45 COM, 1x USB Type C COM Port
	1x HDMI
	1x Display Port
	1x 4FF SIM Holder
	6x WiFi/LTE Antenna Mounting Holes
	1x 12V DC Power Jack, Screw in connector
Internal I/O	1x M.2 2280 M-Key PCIe 3.0 x4 (NVMe)
	2x SATA Header, 2x SATA Power
	1x M.2 2230 E-Key PCIe 3.0 x1 for WiFi
	1x M.2 3052 (LTE)
	1x USB 2.0 Header
	1x Trusted Platform Module Header (2x6 pin)
	1x CMOS Reset (2 pin)
	1x CPU Fan Header (4 pin)
	1x Front Panel Header (9 pin)

BIOS	AMI or coreboot
Indicators	1x LED Power Button (Blue), 1x LED Power Indicator (Green), 1x LED Disk Activity Indicator (Red), 1x LED Disk Activity Indicator (Yellow)
Power	Input 12V DC, 1x DC Power Jack, Screw in connector
Power Usage	Idle: 12W, Max: 100W
Chassis	Aluminum, Gray
Chassis Dimensions	7.5 x 7 x 3 in, 191 x 178 x 76 mm
Mounting Options	Desktop, VESA Bracket, Optional 1RU Rack Mount
Weight	5 lbs, 2.3 Kg
Shipping Weight	5 lbs 13 oz, 2.6 Kg
Operating Temperature	+14° - +122° F, -10° - +50° C
Operating Humidity	0 – 95% relative humidity, non-condensing
Approvals	UL (Power Supply), FCC Part 15 Class B, CE, RoHS
Country of Origin	Made in China, Assembled in USA, CA, or EU
Optional WiFi	1x M.2 2230 E-Key PCIe 802.11ac/a/b/g/n (PCIe)
Optional LTE Cellular	1x M.2 3052 B-Key USB 3.1 (LTE), with 4FF SIM holder
Optional TPM	1x Trusted Platform Module, TPM 2.0

System Features

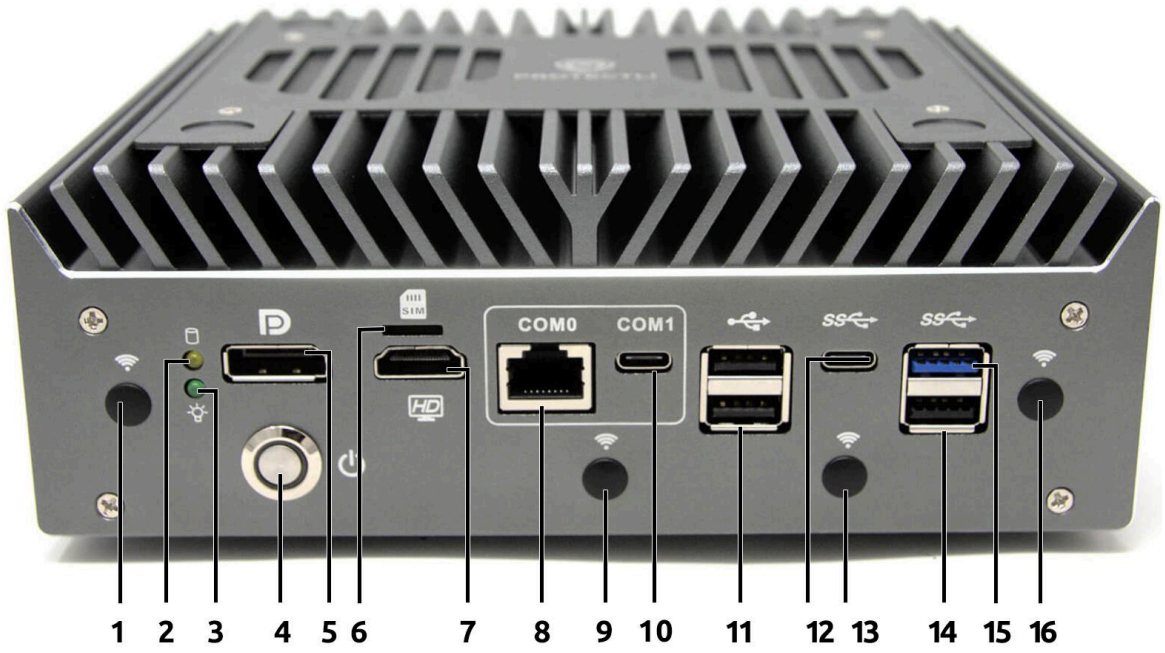
Front Features



Item #	Object	Description
1, 10	Antenna Ports	Two antenna ports for adding radio antennas (WiFi, LTE, etc.). The ports are covered by plugs while not in use.
2	Power Supply Connector	12V DC screw barrel connector for the 120W external power supply. Positive rail is the tip, negative is sleeve.
3	Ethernet Port 1	The first 10/100/1000/2500 Mbps Intel® i226 ethernet port.
4	Ethernet Port 2	The second 10/100/1000/2500 Mbps Intel® i226 ethernet port.
5	Ethernet Port 3	The third 10/100/1000/2500 Mbps Intel® i226 ethernet port.

6	Ethernet Port 4	The fourth 10/100/1000/2500 Mbps Intel® i226 ethernet port.
7	SFP+ Port 1	The first 10 Gbps SFP+ port.
8	SFP+ Port 2	The second 10 Gbps SFP+ port.
9	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.

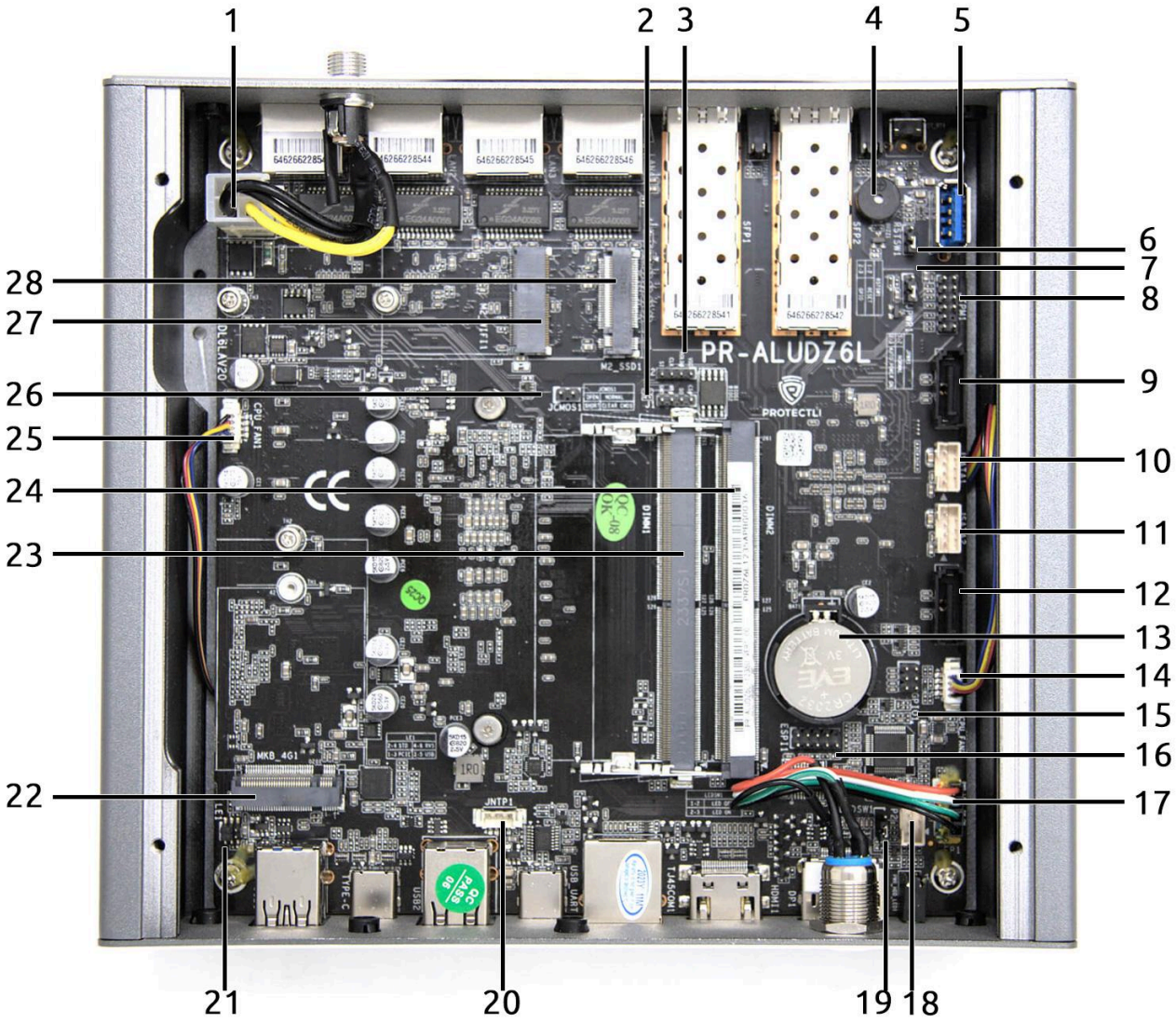
Rear Features



Item #	Object	Description
1, 9, 13, 16	Antenna Ports	Four antenna ports for adding radio antennas (WiFi, LTE, etc.). The ports are covered by plugs while not in use.
2	HDD Activity LED	This amber LED will light up when data activity is detected on an NVMe interface.
3	Power Indicator LED	This LED will stay solid green when the device is powered

		on.
4	Power Button	Pressing the power Button will power the unit on and illuminate with a blue LED. *In OSes configured to handle ACPI signals, pressing the power button initiates a shutdown.* *Pressing and holding the Power Button for 5 seconds will force the unit to power off.*
5	DisplayPort Connector	Video output via DisplayPort.
6	SIM Slot	Nano SIM slot for providing a SIM card to an optional internal cellular modem.
7	HDMI Connector	Video and audio output via HDMI.
8	Serial Console Port	RS232 serial communications via RJ-45. Default port settings: ● 115200 baud ● No parity ● 8 databits ● 1 stopbit
10	Serial Console Port	RS232 serial communications via FTDI FT230XS UART, exposed through USB 3.0 Type C connector. Default port settings: ● 115200 baud ● No parity ● 8 databits ● 1 stopbit
11	Two USB2 Connectors	USB 2.0 Type-A connectors.
12	USB-C Connector	USB 3.2 Type-C connector, 10Gbps with DisplayPort
14	USB2 Connector	USB 2.0 Type-A connector.
15	USB3 Connector	USB 3.1 Type-A connector.

Motherboard Top View



Item #	Object	Label	Description
1	DC IN	DC_IN1	2x2 Molex for +12VDC power.
2	BIOS Programming Headers	J1	One half of BIOS chip jumpers for external programming. 1. VOD 2. HOLD# 3. CLK 4. SI

3	BIOS Programming Headers	J2	One half of BIOS chip jumpers for external programming. 1. CS# 2. SO 3. WP# 4. GND
4	Buzzer	BUZZ1	PC Speaker.
5	USB3	USB3	Internal USB 3.0 Type-A connector.
6	Reset Button Function Jumper	RSTSW1	Jumper setting determines the functionality of the Reset Button (Front Features, #9) as well as the associated pins on FP1 (Motherboard Top View, #17). ● Tied Pins 1-2: ACPI Reset ● Tied Pins 2-3: GPIO (Default)
7	Power Restore Jumper	JPWR1	Jumper setting determines system state after power is restored after experiencing power loss. ● Tied Pins 1-2: Remain powered off ● Tied Pins 2-3: Automatic power on (Default)
8	TPM	JTPM1	Trusted Platform Module header for a TPM2.0 hardware device.
9	SATA Data Connector	SATA1	SATA III data connector. Recommended for additional storage, such as a 2.5” SATA SSD.
10	SATA Power Connector	JSATA1	SATA power connector for additional storage.
11	SATA Data Connector	JSATA2	SATA III data connector. Recommended for additional storage, such as a 2.5” SATA SSD.
12	SATA Power Connector	SATA2	SATA power connector for additional storage.
13	CMOS Battery	BAT1	3V CR2032.
14	CPU Fan Header	CPU_FAN2	Four-pin PicoBlade-compatible header for included PWM CPU fan located on chassis.
15	GPIO	GPIO1	General Purpose I/O header.
16	ESPI	ESPI1	eSPI header for BIOS chip flashing.
17	Front Panel Header	FP1	Internal header for adding external device controls and indicators featured through the front panel, such as power button, reset button, activity LEDs, etc.

18	Front Panel Header Power	FP2	SATA-style power connector for auxiliary usage.
19	LED Control Jumper	LEDSW1	Jumper setting determines the operation of chassis LEDs, such as Power Indicator LED (Back Features, #3) ● Tied Pins 1-2: LEDs Off ● Tied Pins 2-3: LEDs On (Default)
20	External Time Header	JNTP1	Header for use with an external time device, such as a GPS receiver. Serial data is processed by the TPS65994AD Dual Port USB Type-C® and USB PD Controller by way of a slave I^2C interface. 1. Serial data 2. Serial clock 3. +5 VDC 4. GND
21	Lane Configuration	LE1	Jumper setting determines the operation mode of MKB_4G1 (#22). Two jumpers are included and will dictate the mode. One jumper is used to configure the operation mode: ● Jumped Pins 1-3: PCIe Mode ● Jumped Pins 3-5: USB 3.0 Mode One jumper is used to configure voltage settings defined for vendor- reserved use cases. Such examples include specific m.2 modules that require voltages to be present on certain pins to modify the operation mode of the m.2 module itself. ● Jumped Pins 2-4: No voltage at pins 20 and 22. ● Jumped Pins 4-6: 1.83V at pin 20 and 3.3V at pin 22. Factory default setting is to jump pins 1-3 and 2-4, placing the MKB_4G1 (#22) m.2 port in a standard PCIe Mode.
22	Wireless Expansion Slot	MKB_4G1	Connector uses the designated protocol based on the LE1 Jumper (#21) via an m.2 3052 B-Key. Designed for Protectli WiFI and LTE modems, but is not limited in its capabilities.
23	Memory Slot	DIMM1	DDR5 SODIMM.
24	Memory Slot	DIMM2	DDR5 SODIMM.
25	CPU Fan Header	CPU_FAN1	Four-pin PicoBlade-compatible header for included PWM

			CPU fan located on chassis.
26	NVRAM Reset Jumper	JCMOS1	Shorting this jumper while the CMOS battery is connected will reset the BIOS NVRAM.
25	BIOS Programming Headers	J1	One half of BIOS chip jumpers for external programming. 5. VOD 6. HOLD# 7. CLK 8. SI
26	BIOS Programming Headers	J2	One half of BIOS chip jumpers for external programming. 5. CS# 6. SO 7. WP# 8. GND
27	Wireless Expansion Slot	M2_WIFI1	Connector uses PCIe 3.0 x1 protocol over an M.2 Key E socket. Designed for Protectli WiFI modules, but is not limited in its capabilities.
28	M.2 NVMe Connector	M2_SSD1	Connector uses PCIe 3.0 x4 protocol over an M.2 M-Key socket. It is designed for an NVMe storage device, but is otherwise a functional PCIe port.

Measurement View

Document History

2024-04-29

- Initial document