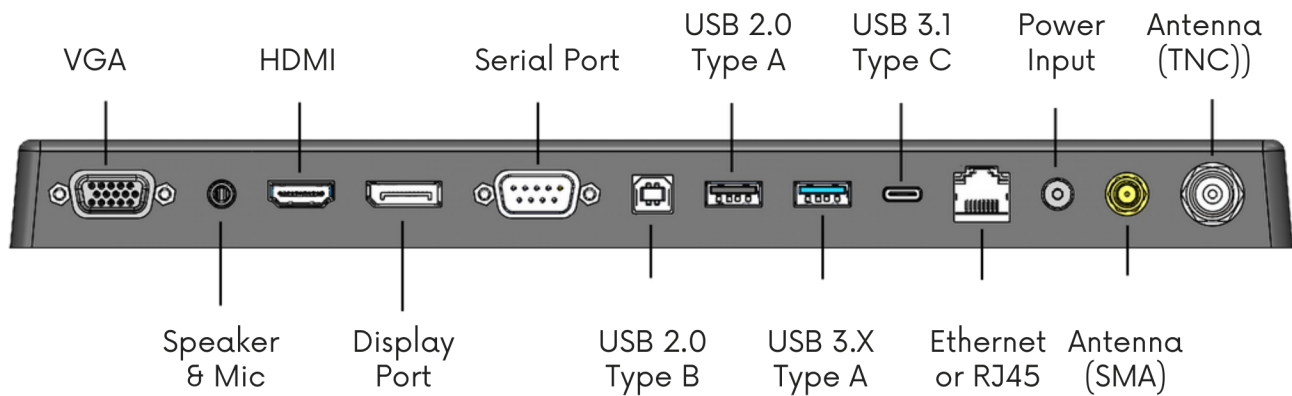


DELL SPEEDS & FEEDS



THE INS & OUTS OF DOCKING STATIONS



VGA	Video Graphics Array(VGA) port: analog signal for video
Speaker & Mic	Audio ports: analog signal for audio: green=audio out; pink=microphone in
HDMI	High Definition Multimedia Interface: digital signal for audio & video
Display Port	Digital signal for audio & video
Serial Port	RS232 port, analog signal to connect peripherals
USB 2.0 Type B	Digital signal, transmission rate of 480 Mbps; B type rectangle connector
USB 2.0 Type A	Digital signal, transmission rate of 480 Mbps; A type rectangle connector
USB 3.X Type A	Digital signal, transmission rate of 5 Gbps; A type of rectangle connector
USB 3.1 Type C	Digital signal, transmission rate of 5 Gbps; C type of rectangle connector
Ethernet	RJ45 port: analog & digital signals, transmission rate of 100 Mbps to Gbps
Power Input	Barrel connector: transfer 10-12v electrical current
Antenna (SWA)	Coaxial RF 1/4" female connector with external threads: mobile & Wifi
Antenna (TNC)	Coaxial RF 7/16" female connector with external threads: mobile & Wifi

Havis Docking Station

LATITUDE RUGGED NOTEBOOKS

5430, 7330, 5420, 5424, & 7424

DS-DELL-420 Series



Latitude Laptop Solution

- Low profile, lightweight and flexible design
- Port replication with integrated strain relieving
- Triple pass-thru antenna connections (Optional)
- External power supply (Optional)
- Bundles available for convenient solutions

PART NUMBER	ETHERNET	USB 2.0	USB 3.0	HDMI	VGA	SERIAL	SPEAKER/ MIC	POWER INPUT	PASS-THRU ANT	ANT TYPE	EXT POWER
DS-DELL-421	1	1 Front	3 Rear	1	1	2	1 Each	19.5 V*			
DS-DELL-421-3	1	1 Front	3 Rear	1	1	2	1 Each	19.5 V*	Triple	TNC	
DS-DELL-422	1	1 Front	3 Rear	1	1	2	1 Each	19.5 V			LPS-137
DS-DELL-422-3	1	1 Front	3 Rear	1	1	2	1 Each	19.5 V	Triple	TNC	LPS-137
DS-DELL-423											
DS-DELL-423-3									Triple	TNC	
DS-DELL-425	1	1 Front	3 Rear				1 Each	19.5 V*			
DS-DELL-425-3	1	1 Front	3 Rear				1 Each	19.5 V*	Triple	TNC	
DS-DELL-426	1	1 Front	3 Rear				1 Each	19.5 V			LPS-137
DS-DELL-426-3	1	1 Front	3 Rear				1 Each	19.5 V	Triple	TNC	LPS-137

* Requires an external Dell authorized DC power supply

SPECIFICATIONS

Height: 10.33-in (26.23 cm)
 Width: 12.39-in (31.48 cm)
 Depth: 2.73-in (6.93 cm)
 Weight: 4.75lbs (2.15 kg)
 Mounting: Bracket fits most motion devices

CERTIFICATIONS & TESTING

CE Certified; RoHS Compliant
 Vibration Testing: MIL-STD 810H 514
 Impact Test: SAE J1455 30mph Crash Testing
 Cycle Test: Latch Handle & Docking Connectors Mechanism 30,000 cycles
 Environmental Testing: Hot/Cold operational (-20C to 60C) & storage (-40C to 85C)

Havis Docking Station LATITUDE RUGGED 12" TABLETS 7212, 7220 DS-DELL-600 Series



Latitude Tablet Solution

- Low profile, lightweight and flexible design
- Port replication with integrated strain relieving
- PC-ABS & Steel material construction
- Dual Pass-Thru Antenna Connections (Optional)
- External Power Supply (Optional)
- Bundles available for convenient solutions

PART NUMBER	ETHERNET	USB 2.0	USB 3.0	HDMI	VGA	SERIAL	POWERED SERIAL	DISPLAY PORT	SPEAKER/MIC	POWER INPUT	PASS-THRU ANT	ANT TYPE	EXT POWER	INT POWER
DS-DELL-601	1	1 Front	2 Rear		1	2		1	1 Each	19.5 V*				
DS-DELL-601-2	1	1 Front	2 Rear		1	2		1	1 Each	19.5 V*	Dual	TNC		
DS-DELL-602	1	1 Front	2 Rear		1	2		1	1 Each	19.5 V			LPS-138	
DS-DELL-602-2	1	1 Front	2 Rear		1	2		1	1 Each	19.5 V	Dual	TNC	LPS-138	
DS-DELL-603														
DS-DELL-603-2											Dual	TNC		
DS-DELL-604	1	1 Front	2 Rear		1	2		1	1 Each	10-17 V				Yes
DS-DELL-607	1	1 Front	2 Rear			2			1 Each	19.5 V*				
DS-DELL-607-2	1	1 Front	2 Rear			2			1 Each	19.5 V*	Dual	TNC		
DS-DELL-608	1	1 Front	2 Rear			2			1 Each	19.5 V			LPS-138	
DS-DELL-608-2	1	1 Front	2 Rear			2			1 Each	19.5 V	Dual	TNC	LPS-138	

* Requires an external Dell authorized DC power supply

SPECIFICATIONS

Height: 11.5-in (29.2 cm)
Width: 11.3-in (28.7 cm)
Depth: 3.5-in (8.9 cm)
Weight: 4.9 lbs (2.2 kg)
Mounting: Bracket fits VESA 75 & most motion devices

CERTIFICATIONS & TESTING

CE Certified; RoHS Compliant
Vibration Testing: MIL-STD 810G 514.5
Impact Test: Crash Simulation per SAE J1455
Cycle Test: Latch Tested 30,000 cycles
Environmental Testing: Hot/Cold Operation & Storage

Havis Docking Station LATITUDE EXTREME RUGGED 12" TABLETS 7230 DS-DELL-900 Series



Latitude Extreme Tablet Solution

- Low profile, lightweight and flexible design
- Advanced or Standard port replication (Optional)
- Quad Pass-Thru Antenna Connections (Optional)
- Internal Power Supply
- Compatible with Dell 7230 tablet accessories including hard & soft handles, magnetic mount, rotating hand strap & shoulder strap

PART NUMBER	ETHERNET	USB-C	USB 3.0	HDMI	POWERED SERIAL	POWER INPUT	PASS-THRU ANT	ANT TYPE	EXT POWER	INT POWER
DS-DELL-901	1	1 Rear	2 Rear 1 Side		1 @ 5V	9-36V				NON-ISO
DS-DELL-901-4	1	1 Rear	2 Rear 1 Side		1 @ 5V	9-36V	Quad	SMA		NON-ISO
DS-DELL-902	1	1 Rear	2 Rear 1 Side	1	1 @ 5V	9-36V				NON-ISO
DS-DELL-902-4	1	1 Rear	2 Rear 1 Side	1	1 @ 5V	9-36V	Quad	SMA		NON-ISO
DS-DELL-903										
DS-DELL-903-4							Quad	SMA		

SPECIFICATIONS

Height: 10.2-in (25.9 cm)
Width: 10-in (25.4 cm)
Depth: 3.5-in (8.9 cm)
Weight: 2.75 lbs (1.25 kg)

CERTIFICATIONS & TESTING

CE Certified; RoHS Compliant
Vibration Testing: MIL-STD 810H 514.5
Impact Test: Crash Simulation per SAE J1455
Cycle Test: Latch Tested 30,000 cycles
Environmental Testing: Hot/Cold Operation & Storage



WHICH I/O DO I NEED FOR MY DOCKING STATIONS?

Port	Connector	Type	Audio	Video	Periph	Network	Camera	Power	Cell	GPS	WiFi
VGA	VGA	A/V		X							
Speaker & Mic	3.5 mm	A/V	X								
HDMI	HDMI	A/V	X	X							
Display Port	DisplayPort	A/V	X	X							
Serial	DB9	Data			X						
USB 2.0	Type B	Data			X						
USB 2.0	Type A	Data			X						
USB 3.X	Type A	Data			X						
USB 3.1	Type C	Data/Power			X			X			
Ethernet	RJ45	Network				X	X				
Power	Varies	Power						X			
Antenna SMA	SMA	Signal							X	X	X
Antenna TNC	TNC	Signal							X	X	X

WHAT IS PASS THROUGH ANTENNA? WHICH ONE DO I NEED?

"Pass through antenna" offers connectivity through the docking station instead of external devices. Pass through antennas are used to connect devices via cellular data, WiFi, SMC connector for radio, or GPS.

WHAT IS THE DIFFERENCE BETWEEN USB 2.0, 3.0 AND 3.1? WHAT IS CONNECTOR TYPE?

USB 3.1 is capable of 10Gbps, 3USB 3.0 5Gbps and USB 2.0 480 Mbps. The connector type refers to the shape. Connector A is rectangular, B type is square and C type is micro with bi-directional power.

WHAT IS THE DIFFERENCE BETWEEN SERIAL AND POWERED SERIAL PORTS?

Serial ports use a 9 pin connector to connect to peripherals like Bar Code Readers where data transfer is low. Powered serial ports assign 1 of the 9 pins to power the peripheral device.

WHAT IS THE DIFFERENCE BETWEEN VGA AND HDMI?

VGA connection offers display but requires a separate audio port for a full audio/video experience. HDMI integrates audio with a high definition video signal, thus fewer connections.

DO I NEED ETHERNET IN A MOBILE APPLICATION? IS ETHERNET STILL A VIABLE I/O?

Ethernet ports enable in-vehicle networking with other computers and external vehicle networking when paired with a mobile modem. Peripherals like video camera systems use Ethernet to transmit data.

WHAT IS THE DIFFERENCE BETWEEN A DOCKING STATION AND A CRADLE?

Docking stations offer port replication for a majority of the input/output connections on the device. A cradle does not offer electronics for connectivity, nor port replication.

WHAT IS THE DIFFERENCE BETWEEN BASIC AND ADVANCED PORT REPLICATION OPTIONS?

"Advanced" port replication will offer the fullest set of input/output for a given platform. "Basic" versions offer a reduced set for less demanding applications.



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Havis is the leader in providing end-to-end rugged mobility solutions for demanding environments. We partner with leading automotive and technology companies to design innovative products that maximize productivity, safety, and quality.

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