Dell Latitude 7290 7390 7490

Technical Guidebook

Notes, cautions, and warnings

NOTE: A NOTE indicates important information that helps you make better use of your product.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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Contents

1 Product View and Technical Specifications for Latitude 7290 5
Features of Latitude 7290 5
Front and back view 6
Technical specifications 7
Dimensions and Weight 9

2 Product View and Technical Specifications for Latitude 7390 10
Features of Latitude 7390 10
Front and back view 11
Technical Specifications 12
Dimensions and Weight 14

3 Product View and Technical Specifications for Latitude 7490 15
Features of Latitude 7490 15
Front and side view 16
Technical specifications 17
Dimensions and Weight 20

4 Marketing System Configurations 21
Supported operating systems 21
Intel processor technology 21
Memory 21
Primary storage options 22
Connectivity options 23

5 Engineering specifications 24
Storage options 24
Ports and Connectors 28
Camera specifications 29
Wireless communications 30
WLAN — Miracast Support Matrix 34
Wireless communications Mobile Broadband 34
Wired communications 36
Hardware and Software Security 37
Security Option Fingerprint Reader 37
Security Option Dell ControlVault 2.0 38
Security Option Contacted Smartcard Reader 39
Security Option Contactless Smartcard Reader 40
Integrated graphics controller 41
Display specifications for Latitude 7290 42
Display specifications for Latitude 7390 44
Display specifications for Latitude 7490 45
Monitor support 50

Battery specifications....50
Keyboard....51
Hot Key combinations....52
Touchpad....53
Power Adapters....54
Operating conditions....55

6 Getting help....56
Contacting Dell....56

1

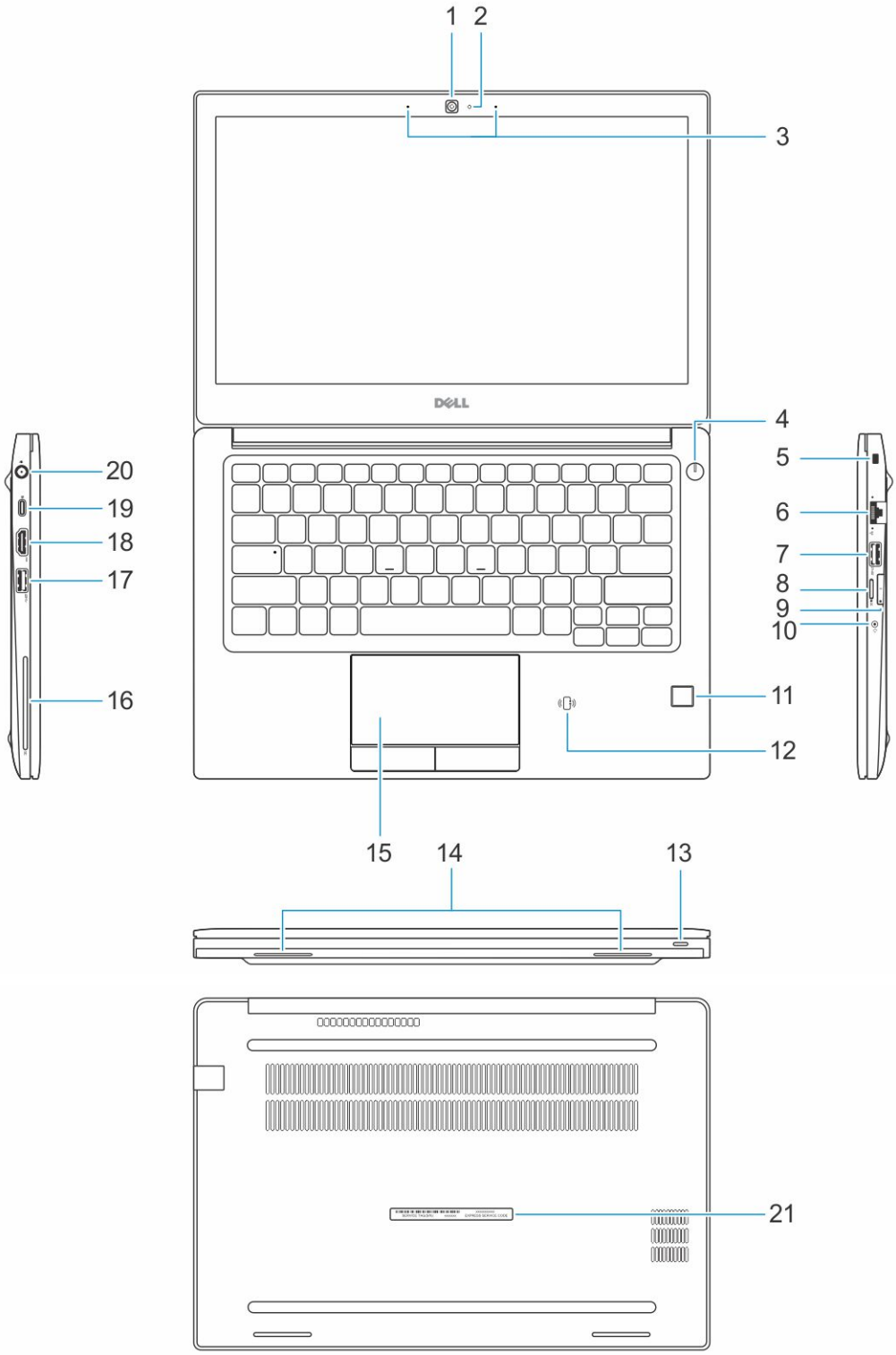
Product View and Technical Specifications for Latitude 7290

This chapter consists of the product view features along with technical specifications. The product view feature calls out the different ports, connectors and components available in the system.

Features of Latitude 7290

The features topics call out the different views of the system along with the ports and components available in each view for .

Front and back view



1	Camera (optional)	2	Camera status light (optional)
3	Microphones	4	Power button
5	Security cable slot	6	Network port

7	USB 3.1 Gen 1 port with PowerShare	8	microSD card slot
9	micro-SIM card slot (optional)	10	Headset port
11	Fingerprint reader (optional)	12	NFC sensor (optional)
13	Status light	14	Speakers
15	Touchpad	16	Smartcard reader (optional)
17	USB 3.1 Gen 1 port	18	HDMI port
19	DisplayPort over USB Type-C(optional Thunderbolt 3)	20	Power connector port
21	Service Tag label		

Technical specifications

This topic lists out the technical specifications for your computer.

Table 1. Specifications

Type	Feature
Model Number	Latitude 7290
Processor family	8th Generation Intel Core up to i7 processors 7th Generation Intel Core up to i5 processors
Operating System	• Microsoft Windows 10 Home • Microsoft Windows 10 Pro 64 bit • Ubuntu
Memory	• DDR4 2400 SDRAM operates at 2133 with Intel 7th Gen • DDR4 2400 SDRAM operates at 2400 with Intel 8th Gen • One DIMM slot up to 16 GB
Chipset	Intel Kaby Lake -U/R—Integrated in the processor
Graphics	• Intel HD Graphics 620 (7th Gen Intel Core • Intel UHD Graphics 620 (8th Gen Intel Core)
Display	• 12.5 inch HD (1366 x 768) Anti-Glare, HD CAM/Mic, WLAN capable, Mag Alloy back, Non Touch • 12.5 inch HD (1366 x 768) Anti-Glare, HD CAM/Mic, WLAN/WWAN, Mag Alloy back, Non Touch • 12.5 inch HD (1366 x 768) Anti-Glare, Mic only, WLAN capable, Mag Alloy back, Non Touch
Storage options	Primary Storage: • 128 GB M.2 2280 SATA SSD • 256 GB M.2 2280 SATA SSD • 512 GB M.2 2280 SATA SSD • 512 GB M.2 2280 SATA SED SSD • 128 GB M.2 2230 PCIe SSD • 256 GB M.2 2280 PCIe SSD • 512 GB M.2 2280 PCIe SSD • 1 TB M.2 2280 PCIe SSD

	• 256 GB M.2 2280 PCIe SED SSD • 512 GB M.2 2280 PCIe SED SSD
Security	TPM 2.0 FIPS 140-2 Certified, TCG Certified (February 2018) Optional Hardware Authentication Bundle 1: FIPS 201 Contacted Smart Card with Control Vault 2.0 Advanced Authentication with FIPS 140-2 Level 3 Certification Optional Hardware Authentication Bundle 2: Touch Fingerprint Reader, FIPS 201 Contacted Smart Card, Contactless Smart Card, NFC, Control Vault 2.0 Advanced Authentication with FIPS 140-2 Level 3 Certification
Docking options	• Dell Dock WD15 (optional) • Dell Thunderbolt Dock TB16 (optional)
Multimedia	• Integrated High-Quality Speakers • Headset and mic combo jack • Noise reducing array microphones • Optional HD or No webcam
Optical Drive Options	External Options Only
Battery options	• 42 Whr Prismatic, ExpressCharge Capable • 60 Whr Polymer, ExpressCharge Capable • 60 Whr Long Life Cycle Polymer
Power adapter	• E5 65 W • E5 65 W rug. Type for India only • E5 90 W • E4 65 W HF (BFR/PVC Free)
Connectivity	• Qualcomm QCA61x4A 2x2 AC + BT 4.1 (non vPro) • Qualcomm QCA6174A XR 2x2 AC + BT4.1 (non vPro) • Intel Dual-Band Wireless-AC 8265 2x2 + BT 4.2 (vPro) • Qualcomm Snapdragon™ X7 LTE-A (DW5811e) for AT&T, Verizon & Sprint, US. (DAO) • Qualcomm Snapdragon™ X7 LTE-A (DW5811e) (EMEA/APJ/ROW) • Qualcomm Snapdragon™ X7 HSPA+ (DW5811e) (China/Indonesia/India) • Qualcomm Snapdragon™ X7 LTE-A (DW5816e) (Japan, ANZ, India, South Korea, Taiwan)
Ports, Slots, and Chassis	• HDMI 1.4(1) • Universal Jack • MultiMedia card reader (SD 4.0) • uSIM (external) • 2 x USB 3.1 Gen1 (one with PowerShare) • Display Port over USB Type-C(optional Thunderbolt 3 (1) • RJ45 • Optional Smartcard reader • Noble lock-Full size • DC-in
Regulatory and Environmental Compliance	• Energy Star 6.1 (restrict Ubuntu)-tied to specific bases

	• EPEAT registered • BFR/PVC Free Configuration Option
Palmrest	• No Smart card or Fingerprint Reader with Display port over Type C (Available with Single Pointing backlit or non-backlit keyboards) • Smart card only with Display port over Type C (Available with Single Pointing backlit or non-backlit keyboards) • No Smart card or Fingerprint Reader with Thunderbolt (Available with Single Pointing backlit or non-backlit keyboards) • Smart card only with Thunderbolt (Available with Single Pointing backlit or non-backlit keyboards) • Full Security with Display port over Type C (Available with Single Pointing backlit or non-backlit keyboards) • Full Security with Thunderbolt (Available with Single Pointing backlit or non-backlit keyboards)
Internal Keyboards	• 12.5 inches Single Pointing, non backlit • 12.5 inches Single Pointing, backlit

Dimensions and Weight

This topic lists out the dimensions of the system in detail.

Table 2. Dimensions and weight for Latitude 7290

Dimensions	**Inches**	**Millimeter**
Width	12.00	304.80
Depth	8.19	207.95
Height Front to Back, Non-Touch)	0.65 (front and back)	16.53 (front) 16.54 (back)
Starting weight	**Pounds**	**Kilograms**
	2.63	1.19

2

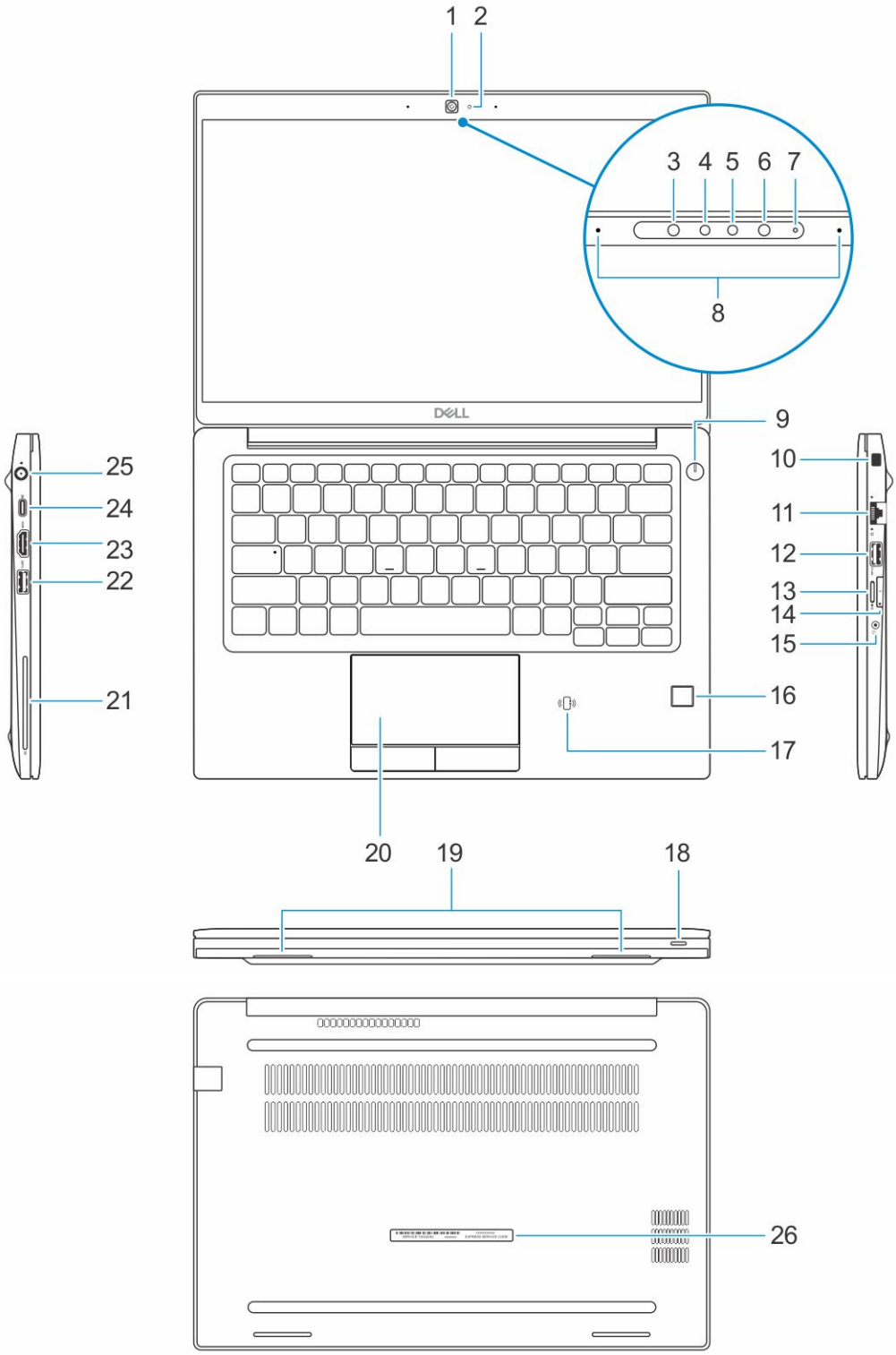
Product View and Technical Specifications for Latitude 7390

This chapter consists of the product view features along with technical specifications. The product view feature calls out the different ports, connectors and components available in the computer.

Features of Latitude 7390

The views display only the standard components shipped with the computer along with some optional components.

Front and back view



1	Camera	2	Camera status light
3	Infrared (IR) emitter (optional)	4	Infrared (IR) camera (optional)
5	Camera (optional)	6	Infrared (IR) emitter (optional)

7	Camera status light (optional)	8	Microphones
9	Power button	10	Noble Security Lock Slot
11	Network port	12	USB 3.1 Gen 1 port with PowerShare
13	microSD card slot	14	micro-SIM card slot (optional)
15	Headset port	16	Fingerprint reader (optional)
17	NFC sensor (optional)	18	Battery charge status light
19	Speakers	20	Touchpad
21	Smartcard reader (optional)	22	USB 3.1 Gen 1 port
23	HDMI port	24	DisplayPort over USB Type-C (optional Thunderbolt 3)
25	Power connector port	26	Service Tag label

Technical Specifications

Table 3. Specifications

Type	Feature
Model Number	Latitude 7390
Processor family	• 7th Generation Intel Core up to i5 processors • 8th Generation Intel Core up to i7 processors
Operating System	• Microsoft Windows 10 Pro 64 bit • Microsoft Windows 10 Home 64 bit • Ubuntu
Memory	• DDR4 2400 SDRAM operates at 2133 with Intel 7th Gen • DDR4 2400 SDRAM operates at 2400 with Intel 8th Gen • One DIMM slot up to 16 GB
Chipset	Intel KabyLake U & R (integrated with processor)
Graphics	• Intel HD Graphics 620 (7th Gen Intel Core • Intel UHD Graphics 620 (8th Gen Intel Core)
Display	• 13.3 inch FHD (1920 x 1080) Anti-Glare, HD CAM/Mic, WLAN capable, Mag Alloy back, Non Touch • 13.3 inch FHD (1920 x 1080) Anti-Glare, HD CAM/Mic, WLAN/WWAN, Mag Alloy back, Non Touch • 13.3 inch FHD (1920 x 1080) Anti-Glare, IR CAM/Mic, WLAN capable, Narrow Border Mag Alloy back, Non Touch • 13.3 inch FHD (1920 x 1080) Anti-Glare, HD CAM/Mic, WLAN/WWAN, Mag Alloy, On-cell Touch • 13.3 inch FHD (1920 x 1080) Anti-Glare, HD CAM/Mic, WLAN capable, Narrow Border Carbon Fiber back, On-cell Touch • 13.3 inch FHD (1920 x 1080) Anti-Glare, IR CAM/Mic, WLAN capable, Narrow Border Carbon Fiber back, On-cell Touch
Storage options	Primary Storage: • 128 GB M.2 2280 SATA SSD • 256 GB M.2 2280 SATA SSD

	• 512 GB M.2 2280 SATA SSD • 512 GB M.2 2280 SATA SED SSD • 128 GB M.2 2230 PCIe SSD • 256 GB M.2 2280 PCIe SSD • 512 GB M.2 2280 PCIe SSD • 1 TB M.2 2280 PCIe SSD • 256 GB M.2 2280 PCIe SED SSD • 512 GB M.2 2280 PCIe SED SSD
Multimedia	• High Quality Speakers • Headset/mic combo jack • Noise reducing array microphones • Optional HD or IR Cam or No webcam
Battery options	• 42 Whr Prismatic, ExpressCharge Capable • 60 Whr Polymer, ExpressCharge Capable • 60 Whr Long Life Cycle Polymer
Power adapter	• E5 65 W • E5 65 W rug. Type for India only • E5 90 W • E4 65 W HF (BFR/PVC Free)
Connectivity	10/100/1000 Gigabit Ethernet **Wireless LAN Options:** • No WLAN option • Qualcomm QCA61x4A 2x2 AC + Bluetooth 4.1 (non vPro) • Qualcomm QCA6174A XR 2x2 AC + Bluetooth 4.1 (non vPro) • Intel Dual-Band Wireless-AC 8265 2x2 + Bluetooth 4.2 (non vPro) **Optional Mobile Broadband Options:** • Qualcomm Snapdragon X7 LTE-A (DW5811e) for AT&T, Verizon & Sprint. (US) • Qualcomm Snapdragon X7 LTE-A (DW5811e) (EMEA/APJ/ROW) • Qualcomm Snapdragon X7 HSPA + (DW5811e) (China/Indonesia/ India) • Qualcomm Snapdragon X7 LTE-A (DW5816e) (Japan/ANZ/India/South Korea/Taiwan)
Ports, Slots and Chassis	• HDMI 1.4(1) • Universal Jack • MultiMedia card reader (SD 4.0) • microSim card slot (external) • 2 x USB 3.1 Gen 1 (one with PowerShare) • Display Port over USB Type-C(optional Thunderbolt 3 (1) • RJ 45 • Optional Smartcard reader • Noble lock-Full size • DC-in
Regulatory and Environmental Compliance	• ENERGY STAR 6.1 (includes Windows and Ubuntu OS)

	• EPEAT Registered. For specific country participation and rating, please visit www.epeat.net • BFR/PVC Free Configuration Option
Input device	**Keyboard:** • Single Pointing, non backlit. Tied to specific bases • Single Pointing, backlit. Tied to specific bases **Palmrests:** • No Smartcard or Fingerprint Reader with Displayport over Type C (Available with Single Pointing backlit or non-backlit keyboards) • Smartcard only with Displayport over Type C (Available with Single Pointing backlit or non-backlit keyboards) • No Smartcard or Fingerprint Reader with Thunderbolt (Available with Single Pointing backlit or non-backlit keyboards) • Smartcard only with Thunderbolt (Available with Single Pointing backlit or non-backlit keyboards) • Full Security with Displayport over Type C (Available with Single Pointing backlit or non-backlit keyboards) • Full Security with Thunderbolt (Available with Single Pointing backlit or non-backlit keyboards)
Docking option	• Dell Dock WD15 (optional) • Dell Thunderbolt Dock TB16 (optional)
Security	TPM 2.0 FIPS 140-2 Certified,TCG Certified (February 2018) Optional Hardware Authentication Bundle 1: FIPS 201 Contacted Smart Card with Control Vault 2.0 Advanced Authentication with FIPS 140-2 Level 3 Certification Optional Hardware Authentication Bundle 2: Touch Fingerprint Reader, FIPS 201 Contacted Smart Card, Contactless Smart Card, NFC, Control Vault 2.0 Advanced Authentication with FIPS 140-2 Level 3 Certification

Dimensions and Weight

This topic lists out the dimensions of the computer in detail.

Table 4. Dimensions and weight for Latitude 7390

Dimensions	**Inches**	**Millimeter**
Width	12.00	304.80
Depth	8.19	207.95
Height (Front to Back, Non-Touch)	0.64 0.66	16.33 16.86
Starting weight	**Pounds**	**Kilograms**
	2.59	1.17

NOTE: System weight and shipping weight is based on a typical configuration and may vary based on the actual configuration.

3

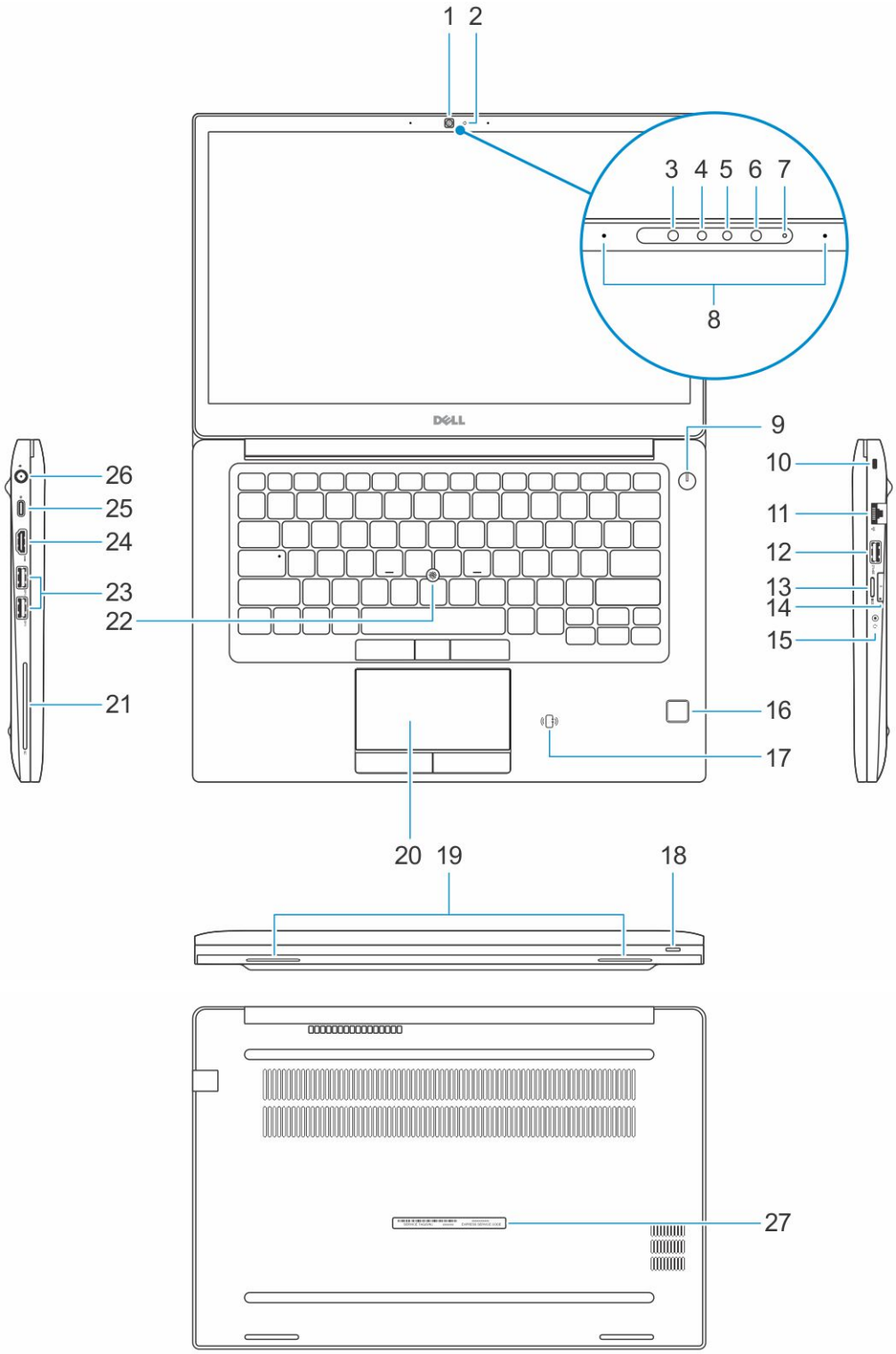
Product View and Technical Specifications for Latitude 7490

This chapter consists of the product view features along with technical specifications. The product view feature calls out the different ports, connectors and components available in the system.

Features of Latitude 7490

The features topics call out the different views of the computer along with the ports and components available in each view.

Front and side view



1	Camera (optional)	2	Camera status light (optional)
3	Infrared emitter (optional)	4	Infrared (IR) camera (optional)

5	Camera	6	Infrared emitter (optional)
7	Camera-status light	8	Microphones
9	Power button	10	Security cable slot
11	Network port	12	USB 3.1 Gen 1 port with PowerShare
13	microSD card slot	14	micro-SIM card slot (optional)
15	Headset port	16	Fingerprint reader (optional)
17	NFC sensor (optional)	18	Status light
19	Speakers	20	Touchpad
21	Smartcard reader (optional)	22	Pointstick (optional)
23	USB 3.1 Gen 1 port	24	HDMI port
25	DisplayPort over USB Type-C(optional Thunderbolt™ 3)	26	Power connector port
27	Service Tag label		

Technical specifications

This topic lists out the technical specifications for your computer.

Table 5. Specifications

Type	Feature
Model Number	Latitude 7490
Processor family	8th Generation Intel Core up to i7 processors 7th Generation Intel Core up to i5 processors
Operating System	• Microsoft Windows 10 Home • Microsoft Windows 10 Pro 64 bit • Ubuntu
Memory	• DDR4 2400 SDRAM operates at 2133 with Intel 7th Gen • DDR4 2400 SDRAM operates at 2400 with Intel 8th Gen • 2 DIMM slots supporting up to 32GB
Chipset	Intel Kaby Lake -U/R—Integrated in the processor
Graphics	• Intel HD Graphics 620 (7th Gen Intel Core • Intel UHD Graphics 620 (8th Gen Intel Core)
Display	• 14.1 inches HD (1366 x 768) Anti-Glare, HD CAM/Mic, WLAN capable, Mag Alloy back, Non Touch • 14.1 inches HD (1366 x 768) Anti-Glare, HD CAM/Mic, WLAN/WWAN, Mag Alloy back, Non Touch • 14.1 inches FHD (1920 x 1080) Anti-Glare, HD CAM/Mic, WLAN capable, Mag Alloy back, Non Touch • 14.1 inches FHD (1920 x 1080) Anti-Glare, HD CAM/Mic, WWAN/WLAN, Mag Alloy back, Non Touch • 14.1 inches FHD (1920 x 1080) Anti-Glare, Mic only, WLAN capable, Mag Alloy back, Non Touch • 14.1 inches FHD (1920 x 1080) Anti-Glare, Super Low Power Panel (SLP), HD CAM/Mic, WLAN w/ASA, Narrow Border Mag Alloy back, Non Touch

	• 14.1 inches FHD (1920 x 1080) Anti-Glare, Super Low Power Panel (SLP), IR CAM/Mic, WLAN w/ASA, Narrow Border Mag Alloy back, Non Touch • 14.1" FHD (1920 x 1080), Anti-Glare, HD CAM/Mic, WLAN/WWAN, Mag Alloy back, On-cell Touch • 14.1 inches FHD (1920 x 1080), Anti-Glare, HD CAM/Mic, WLAN w/ASA, Narrow Border Carbon Fiber back, On-cell Touch • 14.1 inches FHD (1920 x 1080), Anti-Glare, IR CAM/Mic, WLAN w/ASA, Narrow Border Carbon Fiber back, On-cell Touch
Storage options	Primary Storage: • 128 GB M.2 2280 SATA SSD • 256 GB M.2 2280 SATA SSD • 512 GB M.2 2280 SATA SSD • 512 GB M.2 2280 SATA SED SSD • 128 GB M.2 2230 PCIe SSD • 256 GB M.2 2280 PCIe SSD • 512 GB M.2 2280 PCIe SSD • 1 TB M.2 2280 PCIe SSD • 256 GB M.2 2280 PCIe SED SSD • 512 GB M.2 2280 PCIe SED SSD
Security	TPM 2.0 FIPS 140-2 Certified, TCG Certified (February 2018) Optional Hardware Authentication Bundle 1: FIPS 201 Contacted Smart Card with Control Vault 2.0 Advanced Authentication with FIPS 140-2 Level 3 Certification Optional Hardware Authentication Bundle 2: Touch Fingerprint Reader, FIPS 201 Contacted Smart Card, Contactless Smart Card, NFC, Control Vault 2.0 Advanced Authentication with FIPS 140-2 Level 3 Certification
Docking options	• Dell Dock WD15 (optional) • Dell Thunderbolt Dock TB16 (optional)
Multimedia	• Integrated High-Quality Speakers • Headset and mic combo jack • Noise reducing array microphones • Optional HD or IR Cam or No webcam
Optical Drive Options	External Options Only
Battery options	• 42 Whr Prismatic, ExpressCharge Capable • 60 Whr Polymer, ExpressCharge Capable • 60 Whr Long Life Cycle Polymer
Power adapter	• E5 65 W • E5 65 W rug. Type for India only • E5 90 W • E4 65 W HF (BFR/PVC Free) • Dell Power Companion PW7015L
Connectivity	• Qualcomm QCA61x4A 2x2 AC + BT 4.1 (non vPro) • Qualcomm QCA6174A XR 2x2 AC + BT4.1 (non vPro) • Intel Dual-Band Wireless-AC 8265 2x2 + BT 4.2 (vPro)

	• Qualcomm Snapdragon X7 LTE-A (DW5811e) for AT&T, Verizon and Sprint, US. (DAO) • Qualcomm Snapdragon X7 LTE-A (DW5811e) (EMEA/APJ/ROW) • Qualcomm Snapdragon X7 HSPA+ (DW5811e) (China/Indonesia/India) • Qualcomm Snapdragon X7 LTE-A (DW5816e) (Japan, ANZ, India, South Korea, Taiwan)
Ports, Slots, and Chassis	• HDMI 1.4(1) • Universal Jack • MultiMedia card reader (SD 4.0) • uSIM (external) • 3x USB 3.1 Gen1 (one with PowerShare) • DisplayPort over USB Type-C(optional Thunderbolt 3(1) • RJ45 • Optional Smartcard • Noble lock wedge slot • DC-in
Regulatory and Environmental Compliance	• Energy Star 6.1 (restrict Ubuntu)-tied to specific bases • EPEAT registered • BFR/PVC Free Configuration Option
Palmrest	• No Smart card or Fingerprint Reader with Display port over Type C (Available with Single Pointing non-backlit keyboard) • No Smart card or Fingerprint Reader with Display port over Type C (Available with Dual Pointing backlit keyboard) • Smart card only with Display port over Type C (Available with Single Pointing backlit or non-backlit keyboards) • Smart card only with Display port over Type C (Available with Dual Pointing backlit keyboard) • No Smart card or Fingerprint Reader with Thunderbolt (Available with Single Pointing backlit or non-backlit keyboards) • No Smart card or Fingerprint Reader with Thunderbolt (Available with Dual Pointing backlit keyboard) • Smart card only with Thunderbolt (Available with Single Pointing backlit or non-backlit keyboards) • Smart card only with Thunderbolt (Available with Dual Pointing backlit keyboard) • Full Security with Display port over Type C (Available with Single Pointing backlit or non-backlit keyboards) • Full Security with Display port over Type C (Available with Dual Pointing backlit keyboard) • Full Security with Thunderbolt (Available with Single Pointing backlit or non-backlit keyboards) • Full Security with Thunderbolt (Available with Dual Pointing backlit keyboard)
Internal Keyboards	• 14.1 inches Single Pointing, non backlit • 14.1 inches Dual Pointing, backlit

Dimensions and Weight

This topic lists out the dimensions of the system in detail.

Table 6. Dimensions and weight for Latitude 7490

Dimensions	**Inches**	**Millimeter**
Width	13.03	331.0
Depth	8.70	220.9
Height (Front to Back, Non-Touch)	0.69 0.70	17.47 17.9
Starting weight	**Pounds**	**Kilograms**
	3.11	1.4

4

Marketing System Configurations

This chapter lists the operating system configurations supported in a system. It also lists the processor, memory, storage options available for this system. It will help the team in identifying whether a specific configuration is supported by the system.

Supported operating systems

Table 7. Operating systems

Windows	• Microsoft Windows 10 Pro 64 bit • Microsoft Windows 10 Home 64 bit
Other	• Ubuntu
OS media support	• Dell.com/support to download eligible Windows OS • USB media available as upsell

Intel processor technology

Latitude 7290, 7390 and 7490 series are built with Intel 8th Generation Core Processor and Intel 7th Generation Core Processor technologies.

- 8th generation Quad Core Processor
- 7th generation Dual Core Processor
- Intel 14nm Manufacturing Process Technology

Table 8. Processor configurations - 8th generation Quad Core Processor

Processor support list	UMA graphics
Intel Core i5-8250U (Quad Core, 3.4GHz, 6M Cache, 15W)	Intel UHD Graphics 620
Intel Core i5-8350U (Quad Core, 3.6GHz, 6M Cache, 15W) vPro	Intel UHD Graphics 620
Intel Core i7-8650U (Quad Core, 3.9 GHz, 8M Cache, 15W) vPro	Intel UHD Graphics 620

Table 9. Processor configurations - 7th generation Dual Core Processor

Processor support list	UMA graphics
Intel Core i3-7130U (Dual Core, 2.7 GHz, 3M cache, 15W)	Intel HD Graphics 620
Intel Core i5-7300U (Dual Core, 3.5 GHz, 3M Cache, 15W) vPro	Intel HD Graphics 620

Memory

Your computer supports a maximum of 16 or 32 GB of memory; however, 32-bit operating systems, can only use a maximum of 4GB of address space. Moreover, certain components within the computer require address space in the 4GB range. Any address space reserved

for these components cannot be used by computer memory; therefore, the amount of memory available to a 32-bit operating system is less than 4GB.

- Greater than 4GB memory requires a 64-bit operating system
- Only memory type supported: DDR4 SDRAM
- Not backward compatible with DDR3 memory modules

Table 10. Memory specifications for Latitude 7290 and 7390

Memory	Latitude 7290 and 7390 series
SO-DIMM Slot	One
Minimum memory configuration	4 GB
Maximum memory configuration	16 GB
DIMM configuration	
4G 2400MHz DDR4 (1x4GB)	Yes
8G 2400MHz DDR4 (1x8GB)	Yes
16G 2400MHz DDR4 (1x16GB)	Yes

Table 11. Memory specifications for Latitude 7490

Memory	Latitude 7490 series
SO-DIMM Slot	Two
Minimum memory configuration	4 GB
Maximum memory configuration	32 (16 x2) GB
DIMM configuration	
4G 2400MHz DDR4 (1x4G)	Yes
8G 2400MHz DDR4 (2 X 4G)	Yes
8G 2400MHz DDR4 (1 X 8G)	Yes
16G 2400MHz DDR4 (2x8G)	Yes
32G 2400MHz DDR4 (2x16G)	Yes

Primary storage options

Mobility Solid State Drives offer highly reliable, durable & lightweight storage. SSDs provide improved performance & operate quieter & cooler than standard hard drives.

Self-Encrypting drives provide hardware encrypted data protection which can be activated within a few seconds centrally & can be much safer and faster than software based encryption. Note: Encrypted drives require the system be configured in AHCI mode.

Table 12. Storage options

Primary storage
SSD-M.2-2280-128GB-SATA
SSD-M.2-2280-256GB-SATA

SSD-M.2-2280-512GB-SATA
SSD-M.2-2280-512GB-SATA-SED
SSD M.2 2230-128GB-PCIe
SSD-M.2-2280-256GB-PCIe
SSD-M.2-2280-512GB-PCIe
SSD-M.2-2280-1TB-PCIe
SSD-M.2-2280-256GB-PCIe-SED
SSD-M.2-2280-512GB-PCIe-SED

Connectivity options

Table 13. Connectivity options

	Connectivity Option	Latitude 7290, 7390, 7490	Regions	Carriers
WLAN, WLAN + WWAN	Qualcomm Snapdragon X7 LTE-A (DW5811e)	Yes	DAO	US Verison, AT&T, Sprint (DW5811) and EMEA non-carrier tied Cus kit supported on all WWAN modules
	Qualcomm Snapdragon X7 LTE-A (DW5811e)	Yes	EMEA/APJ/ROW	US Verison, AT&T, Sprint (DW5811) and EMEA non-carrier tied Cus kit supported on all WWAN modules
	Qualcomm Snapdragon X7 HSPA+ (DW5811e)	Yes	China/Indonesia/India	US Verison, AT&T, Sprint (DW5811) and EMEA non-carrier tied Cus kit supported on all WWAN modules
	Qualcomm Snapdragon X7 LTE-A (DW5816e)	Yes	Japan, ANZ, India, South Korea, Taiwan	US Verison, AT&T, Sprint (DW5811) and EMEA non-carrier tied Cus kit supported on all WWAN modules
WLAN +WWAN	Qualcomm QCA61x4A 2x2 AC + BT 4.1	Yes	All	N/A
	Qualcomm QCA6174A XR 2x2 AC + BT4.1	Yes	All	N/A
	Intel Dual-Band Wireless-AC 8265 2x2 + BT 4.2 (vPro)	Yes	All	N/A

NOTE:

- SIM connector is 100% populated on PWA
- SIM feature support is tied only to (1) back cover with WWAN Antenna, and (2) Palmrest Chassis with SIM Tray Slot. Both of these decisions are at POS, not APOS.
- SIM Slot is not 100%, but tied to hinge up with WWAN antenna.
- WWAN antenna decision must be made at POS.
- No WLAN CUST kits

5

Engineering specifications

This chapter lists out the specification of each and every component in a comprehensive format. Specific features/models/configurations/ options discussed in the document may or may not be available.

Storage options

This topic lists out the detailed specifications of the supported SSD.

Table 14. 128 GB M.2 2280 SATA Class 20 SSD

Capacity (GB)	128
Dimensions mm (W x D x H)	22 x 80 x 2.38
Interface type and Maximum speed	Up to 6 Gb/s (SATA 3.0)
MTFF	1.4M hours
Logical Blocks	250,069,680
Power Source:	
Power Consumption (reference only)	Idle 1.7W, Active 4.5W
Environmental Operating Conditions (Non-Condensing):	
Temperature Range	0°C to 70°C
Relative Humidity Range	10% to 90%
Op Shock (@0.5ms)	1,500G
Environmental Non-Operating Conditions (Non-Condensing):	
Temperature Range	-40°C to 70°C
Relative Humidity Range	5% to 95%

Table 15. 256 GB M.2 2280 SATA Class 20 SSD

Capacity (GB)	256
Dimensions mm (W x D x H)	22 x 80 x 2.38
Interface type and Maximum speed	Up to 6 Gb/s (SATA 3.0)
MTFF	1.4M hours
Logical Blocks	500,118,192
Power Source:	
Power Consumption (reference only)	Idle 1.7W, Active 4.5W
Environmental Operating Conditions (Non-Condensing):	
Temperature Range	0°C to 70°C
Relative Humidity Range	10% to 90%

Op Shock (@0.5ms)	1,500G
Environmental Non-Operating Conditions (Non-Condensing):	
Temperature Range	-40°C to 70°C
Relative Humidity Range	5% to 95%

Table 16. 512 GB M.2 2280 SATA Class 20 SSD

Capacity (GB)	512
Dimensions mm (W x D x H)	22 x 80 x 2.38
Interface type and Maximum speed	Up to 6 Gb/s (SATA 3.0)
MTFF	1.4M hours
Logical Blocks	1,000,215,216
Power Source:	
Power Consumption (reference only)	Idle 1.7W, Active 4.5W
Environmental Operating Conditions (Non-Condensing):	
Temperature Range	0°C to 70°C
Relative Humidity Range	10% to 90%
Op Shock (@0.5ms)	1,500G
Environmental Non-Operating Conditions (Non-Condensing):	
Temperature Range	-40°C to 70°C
Relative Humidity Range	5% to 95%

Table 17. 512 GB M.2 2280 SATA Class 20 SSD SED

Capacity (GB)	512
Dimensions mm (W x D x H)	22 x 80 x 2.38
Interface type and Maximum speed	Up to 6 Gb/s (SATA 3.0)
MTFF	1.4M hours
Logical Blocks	1,000,215,216
Power Source:	
Power Consumption (reference only)	Idle 1.7W, Active 4.5W
Environmental Operating Conditions (Non-Condensing):	
Temperature Range	0°C to 70°C
Relative Humidity Range	10% to 90%
Op Shock (@0.5ms)	1,500G
Environmental Non-Operating Conditions (Non-Condensing):	
Temperature Range	-40°C to 70°C
Relative Humidity Range	5% to 95%

Table 18. 128 GB M.2 2230 PCIe Class 35 SSD

Capacity (GB)	128
Dimensions mm (W x D x H)	22 x 30 x 2.38
Interface type and Maximum speed	PCIe Gen3 8Gb/s (up to 2 lanes)
MTFF	1.4M hours
Logical Blocks	250,069,680
Power Source:	
Power Consumption (reference only)	Idle 1.7W, Active 4.5W
Environmental Operating Conditions (Non-Condensing):	
Temperature Range	0°C to 70°C
Relative Humidity Range	10% to 90%
Op Shock (@0.5ms)	1,500G
Environmental Non-Operating Conditions (Non-Condensing):	
Temperature Range	-40°C to 70°C
Relative Humidity Range	5% to 95%

Table 19. 256 GB M.2 2280 PCIe Class 40 SSD

Capacity (GB)	256
Dimensions mm (W x D x H)	22 x 80 x 2.38
Interface type and Maximum speed	PCIe Gen3 8 Gb/s (up to 4 lanes)
MTFF	1.4M hours
Logical Blocks	500,118,192
Power Source:	
Power Consumption (reference only)	Idle 1.7W, Active 4.5W
Environmental Operating Conditions (Non-Condensing):	
Temperature Range	0°C to 70°C
Relative Humidity Range	10% to 90%
Op Shock (@0.5ms)	1,500G
Environmental Non-Operating Conditions (Non-Condensing):	
Temperature Range	-40°C to 70°C
Relative Humidity Range	5% to 95%

Table 20. 512 GB M.2 2280 PCIe Class 40 SSD

Capacity (GB)	512
Dimensions mm (W x D x H)	22 x 80 x 2.38
Interface type and Maximum speed	PCIe Gen3 8 Gb/s (up to 4 lanes)
MTFF	1.4M hours

Logical Blocks	1,000,215,216
Power Source:	
Power Consumption (reference only)	Idle 1.7W, Active 4.5W
Environmental Operating Conditions (Non-Condensing):	
Temperature Range	0°C to 70°C
Relative Humidity Range	10% to 90%
Op Shock (@0.5ms)	1,500G
Environmental Non-Operating Conditions (Non-Condensing):	
Temperature Range	-40°C to 70°C
Relative Humidity Range	5% to 95%

Table 21. 1 TB M.2 2280 PCIe Class 40 SSD

Capacity (GB)	1024
Dimensions mm (W x D x H)	22 x 80 x 3.73
Interface type and Maximum speed	PCIe Gen3 8 Gb/s (up to 4 lanes)
MTFF	1.4M hours
Logical Blocks	2,000,409,264
Power Source:	
Power Consumption (reference only)	Idle 1.7W, Active 4.5W
Environmental Operating Conditions (Non-Condensing):	
Temperature Range	0°C to 70°C
Relative Humidity Range	10% to 90%
Op Shock (@0.5ms)	1,500G
Environmental Non-Operating Conditions (Non-Condensing):	
Temperature Range	-40°C to 70°C
Relative Humidity Range	5% to 95%

Table 22. 256 GB M.2 2280 PCIe Class 40 SSD SED

Capacity (GB)	256
Dimensions mm (W x D x H)	22 x 80 x 2.38
Interface type and Maximum speed	PCIe Gen3 8Gb/s (up to 4 lanes)
MTFF	1.4M hours
Logical Blocks	500,118,192
Power Source:	
Power Consumption (reference only)	Idle 1.7W, Active 4.5W
Environmental Operating Conditions (Non-Condensing):	
Temperature Range	0°C to 70°C

Relative Humidity Range	10% to 90%
Op Shock (@0.5ms)	1,500G
Environmental Non-Operating Conditions (Non-Condensing):	
Temperature Range	-40°C to 70°C
Relative Humidity Range	5% to 95%

Table 23. 512 GB M.2 2280 PCIe Class 40 SSD SED

Capacity (GB)	512
Dimensions mm (W x D x H)	22 x 80 x 2.38
Interface type and Maximum speed	PCIe Gen3 8Gb/s (up to 4 lanes)
MTFF	1.4M hours
Logical Blocks	1,000,215,216
Power Source:	
Power Consumption (reference only)	Idle 1.7W, Active 4.5W
Environmental Operating Conditions (Non-Condensing):	
Temperature Range	0°C to 70°C
Relative Humidity Range	10% to 90%
Op Shock (@0.5ms)	1,500G
Environmental Non-Operating Conditions (Non-Condensing):	
Temperature Range	-40°C to 70°C
Relative Humidity Range	5% to 95%

Ports and Connectors

Table 24. Ports and Connectors

Feature	Specifications
USB	Latitude 7290 and 7390 • Type-C USB 3.1 Gen 1 Display port (optional Thunderbolt) • Two USB 3.1 Gen1 ports—one PowerShare capable Latitude 7490 • Type-C USB 3.1 Gen 1 Display port (optional Thunderbolt) • Three USB 3.1 Gen1 ports—one PowerShare capable
Video	HDMI 1.4
Network adapter	RJ-45 network adapter
Modem	N/A

Expansion ports	• uSD 4.0 Memory card reader • 1 3042, 1 3030, 1 2280 M.2 slots	
Smartcard	Optional	
Docking	Security cable slot	
uSIM	External tray tied to WWAN hinge up	

Table 25. Ports and connectors - Audio

Feature	Specifications	
Audio	• Four-channel high definition audio • Realtek ALC3246 Controller • Stereo conversion: 24-bit (analog-to-digital and digital-to-analog) • Internal Interface - high-definition audio codec • External Interface - microphone-in and stereo headphones/speakers universal connector • Speakers: Power: 2X2 Wrms • Internal speaker amplifier: 2 watt per channel • Internal microphone: digital microphone (dual microphone with camera) • No volume control buttons, only support hot-key keyboard button	

Camera specifications

Easy Remote Collaboration:

- Video conference online with an optional built-in camera
- Windows Hello feature can be enabled with IR Camera embedded

Table 26. Camera specifications for Latitude 7290

Camera features	12 inches HD
Camera Type	HD fixed focus
IR Camera	N/A
Sensor Type	CMOS sensor technology
Resolution: Motion Video	Up to 1280x720 (0.92MP)
Resolution: Still Image	Up to 1280 x 720 (0.92MP)
Imaging Rate	Up to 30 frames per second

Table 27. Camera specifications for Latitude 7390

Camera features	13 inches HD/FHD	13 inches FHD	13 inches FHD touch
Camera Type	HD fixed focus	HD fixed focus	HD fixed focus
IR Camera	N/A	Yes	N/A
Sensor Type	CMOS sensor technology	CMOS sensor technology	CMOS sensor technology
Resolution: Motion Video	Up to 1280x720 (0.92MP)	Up to 1280x720 (0.92MP)	Up to 1280x720 (0.92MP)
Resolution: Still Image	Up to 1280 x 720 (0.92MP)	Up to 1280 x 720 (0.92MP)	Up to 1280 x 720 (0.92MP)
Imaging Rate	Up to 30 frames per second	Up to 30 frames per second	Up to 30 frames per second

Table 28. Camera specifications for Latitude 7490

Camera features	14 inches HD/FHD	14 inches Super Low Power FHD	14 inches FHD touch
Camera Type	HD fixed focus	HD fixed focus	HD fixed focus
IR Camera	N/A	Yes	Yes
Sensor Type	CMOS sensor technology	CMOS sensor technology	CMOS sensor technology
Resolution: Motion Video	Up to 1280x720 (0.92MP)	Up to 1280x720 (0.92MP)	Up to 1280x720 (0.92MP)
Resolution: Still Image	Up to 1280 x 720 (0.92MP)	Up to 1280 x 720 (0.92MP)	Up to 1280 x 720 (0.92MP)
Imaging Rate	Up to 30 frames per second	Up to 30 frames per second	Up to 30 frames per second

Wireless communications

Table 29. Qualcomm QCA61x4A 802.11ac Dual Band (2x2) Wireless Adapter + Bluetooth 4.1 LE M.2 Wireless Card

Attribute	Specification
Host interface	M.2 2230 form factor (WiFi– PCIe, Bluetooth – USB)
Network standard	802.11a, 802.11b, 802.11g, 802.11n and 802.11ac
Wi-Fi Alliance Certifications	802.11a, 802.11b, 802.11g, WPA, WPA2, WMM, 11ac, Wifi-Direct, WMM-Power Save, Wifi Protected Setup, Voice-Personal
Operating Frequency Bands	2.4 GHz (802.11b/g/n) and 5 GHz (802.11a/n/ac)
Dual Stream N	Dual Stream Diversity and 2x2 MIMO operations in 2.4GHz and 5GHz
	Dual Stream N + MIMO + ASA (Active Steering Antennas)

Attribute	Specification
Data Rate	802.11ac – Up to 867 Mbps; 802.11n - Up to 450 Mbps; 802.11a/g - Up to 54 Mbps
	802.11b - Up to 11 Mbps
Receive Sensitivity	802.11ac: -59 dBm @ 400 Mbps; - 57dBm @ 866.7 Mbps
	802.11n/a: -67 dBm @ 300 Mbps ; -70 dBm @ 144.4 Mbps
	802.11g/a: -75 dBm @ 54 Mbps
	802.11b: -85 dBm @ 11 Mbps
Security	Open, Shared, WPA, WPA-PSK, WPA2, WPA2-PSK
Authentication	EAP-TLS, EAP-TTLS (MSCHAPv2), PEAPv0(EAP-MS-CHAPv2)
EAP Methods	
Client Utility	Native Wi-Fi and Bluetooth Microsoft UI support
Software Support	Microsoft WHQL certified for Windows 7/8.1 and Windows 10; Linux
Radio On/Off	Hardware and software on/off disables transmit and receive to comply with aviation in-flight restrictions
Roaming	Seamless roaming between 802.11a, 802.11b, 802.11b/g, 802.11n and 802.11ac access points
Wake On Wireless	Supported
Miracast (WiFi Display)	Native Miracast support by Windows 8.1 and 10
Wireless PAN Standard	Dual-mode Bluetooth 4.1, BLE
Bluetooth Data rates	Up to 3 Mbps
Bluetooth Operating Frequency Bands	2.4 GHz
Transmission	FHSS (Frequency Hopping Spread Spectrum)
Bluetooth Data Encryption	128-bit encryption
Temperature	Operating temperature -10°C to 65°C
	Storage temperature of -45°C to 70°C
Humidity	Up to 90%

Table 30. Qualcomm QCA6174A Extended Range 802.11ac MU-MIMO Dual Band (2x2) Wi-Fi + Bluetooth 4.1 LE M.2 Wireless Card

Attribute	Specification
Host interface	M.2 2230 form factor (WiFi– PCIe, Bluetooth – USB)
Network standard	802.11a, 802.11b, 802.11g, 802.11n and 802.11ac
Wi-Fi Alliance Certifications	802.11a, 802.11b, 802.11g, WPA, WPA2, WMM, 11ac, Wifi-Direct, WMM-Power Save, Wifi Protected Setup, Voice-Personal
Operating Frequency Bands	2.4 GHz (802.11b/g/n) and 5 GHz (802.11a/n/ac)
Dual Stream N	Dual diversity antenna switching for systems designed with main and auxiliary antennas 2x2 MIMO operation when in 802.11n mode with 2x2 or greater Access Point

Attribute	Specification
	Dual Stream N + MIMO + ASA (Active Steering Antennas)
Data Rate	802.11ac – Up to 867 Mbps; 802.11n - Up to 450 Mbps; 802.11a/g - Up to 54 Mbps
	802.11b - Up to 11 Mbps
Receive Sensitivity	802.11ac: -67 dBm @ 400 Mbps; -63dBm @ 866.7 Mbps
	802.11n: -67 dBm @ 300 Mbps ; -70 dBm @ 144.4 Mbps (2G)
	802.11na: -70 dBm @ 300 Mbps ; -74 dBm @ 144.4 Mbps (5G)
	802.11g: -75 dBm @ 54 Mbps ; 802.11a: -76 dBm @ 54 Mbps ; 802.11b: -85 dBm @ 11 Mbps
Security	Open, Shared, WPA, WPA2, 802.1x(EAP-TLS, EAP-TTLS, PEAP, LEAP, EAP-FAST, EAP-SIM)
Authentication	
EAP Methods	EAP-FAST, EAP-TLS, EAP-TTLS (PAP, CHAP, MS-CHAP, MS-CHAP2), PEAP(GTC, EAP-TLS, MS-CHAPv2)
Client Utility	Native Wi-Fi and Bluetooth Microsoft UI support
Software Support	Microsoft WHQL certified for Windows 7/8.1 and Windows 10; Linux
Radio On/Off	Hardware and software on/off disables transmit and receive to comply with aviation in-flight restrictions
Roaming	Seamless roaming between 802.11a, 802.11b, 802.11b/g, 802.11n and 802.11ac access points
Wake On Wireless	Supported when using Magic Packet over the Air
Miracast (WiFi Display)	Supports Miracast (Wifi Display) on Windows 8.1/10
Wireless PAN Standard	Dual-mode Bluetooth 4.1, BLE
Bluetooth Data rates	Up to 3 Mbps
Bluetooth Operating Frequency Bands	2.4 GHz
Transmission	FHSS (Frequency Hopping Spread Spectrum)
Bluetooth Data Encryption	128-bit encryption
Temperature	Operating temperature -10°C to 65°C
	Storage temperature of -45°C to 70°C
Humidity	Up to 90%

Table 31. Intel Dual Band Wireless-AC 8265 (Windstorm Peak) 802.11AC 2x2 Wi-Fi + Bluetooth 4.2 LE M.2 Wireless Card

Attribute	Specification
Host interface	M.2 2230 form factor (WiFi– PCIe, Bluetooth – USB)
Network standard	IEEE 802.11a, 802.11b, 802.11g, 802.11n and 802.11ac MU-MIMO
Wi-Fi Alliance Certifications	802.11a, 802.11b, 802.11g, 802.11n, 802.11ac, WPA, WPA2, WMM and Wifi-Direct
Operating Frequency Bands	2.4 GHz (802.11b/g/n) and 5 GHz (802.11a/n/ac)

Attribute	Specification
Dual Stream N	Support for two transmit and receive antennas enable better wireless at the same distance when compared to older 802.11a/b/g solutions. Dual Stream N + MIMO + ASA (Active Steering Antennas)
Data Rate	Up to 867 Mbps
Receive Sensitivity	802.11ac: -65.5dBm(Typ) @ 400 Mbps; -61.5dBm(Typ) @ 866.7 Mbps 802.11n/a: -71.25dBm(Typ) @ 300 Mbps ; -74dBm(Typ) @ 144.4 Mbps 802.11g/a: -75 dBm @ 54 Mbps 802.11b: -89dBm(Typ) @ 11 Mbps
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA
Authentication Protocols	PAP, CHAP, TLS, GTC, MS-CHAP, MS-CHAPv2
Encryption	64-bit and 128-bit WEP, 128-bit AES-CCMP
Product Safety	UL, C-UL, CB (IEC60950-1)
Client Utility	Intel PRO/Set Wireless Software v19.0 and later.
Software Support	Microsoft Windows 10; Linux
Radio On/Off	Supported
Roaming	Supports seamless roaming between respective access points (802.11b, 802.11g, 802.11a/b/g, and 802.11a/b/g/n/ac)
Wake On Wireless	Supported when vPro /AMT is activated, or Windows 8.1/10 without Intel AMT
Miracast (WiFi Display)	Native Miracast support by Windows 8.1 and 10
Wireless PAN Standard	Dual-mode Bluetooth 4.2, BLE
Bluetooth Data rates	Up to 3 Mbps
Bluetooth Operating Frequency Bands	2.4 GHz
Transmission	FHSS (Frequency Hopping Spread Spectrum)
Bluetooth Data Encryption	128-bit encryption
Temperature	Operating temperature 0°C to 50°C (Full performance at shield temperatures up to 80°C) Storage temperature of -40°C to 70°C
Humidity	Up to 90% RH non-condensing (at temperatures of 25°C to 35°C)

Table 32. Active Steering Antennas

Attribute	Specification
Feature	In 5GHz WiFi operations Active Steering Antennas (ASA) enables multiple unique antenna patterns for each antenna and selects the

Attribute	Specification
	most optimal to improve RF signal strength resulting higher data rates and an enhanced wireless experience.
Operating Frequency Band	5GHz (5180MHz - 5825MHz)
Number of Antennas	2 (2x2 MIMO)
Supported Wireless Technologies	WiFi 802.11 a/n/ac
Enhanced performance	Up to 40% improved data transmission when compared to non-ASA enabled mode. Varies depending on network, environment, signal conditions, traffic loading and type.
Operating Systems	Windows 10 64-bit and Linux

WLAN — Miracast Support Matrix

Table 33. WLAN-MiracastSupport matrix

WLAN Card	Operating system	Miracast support
• Qualcomm QCA61x4A 802.11ac Dual Band (2x2) Wireless Adapter + Bluetooth 4.1 Wireless Card • Intel Dual-Band Wireless-AC 8265 Wi-Fi Wireless Card (No BT) (2x2) • Intel Dual-Band Wireless-AC 8265 Wi-Fi + BT 4.2 Wireless Card (2x2) • Qualcomm QCA6174A Extended Range 802.11ac MU-MIMO Dual Band (2x2) Wi-Fi + Bluetooth 4.1 LE M.2 Wireless Card	Windows 10 64-bit	Native support
• Qualcomm QCA61x4A 802.11ac Dual Band (2x2) Wireless Adapter + Bluetooth 4.1 Wireless Card • Intel Dual-Band Wireless-AC 8265 Wi-Fi Wireless Card (No BT) (2x2) • Intel Dual-Band Wireless-AC 8265 Wi-Fi + BT 4.2 Wireless Card (2x2) • Qualcomm QCA6174A Extended Range 802.11ac MU-MIMO Dual Band (2x2) Wi-Fi + Bluetooth 4.1 LE M.2 Wireless Card	Ubuntu 6.0	No support

Wireless communications Mobile Broadband

Table 34. Qualcomm Snapdragon X7 LTE-A (DW5811e)for AT&T, Verizon and Sprint, US (DAO)

Carrier	Verizon	AT&T	Sprint
Network	LTE CAT6	LTE CAT6	LTE CAT6
Speed (Downlink)	< 300 Mbps	< 300 Mbps	< 300 Mbps
Speed (Uplink)	< 50 Mbps	< 50 Mbps	< 50 Mbps
Fallback Network	NA	HSPA+	NA
Fallback Speed (Downlink)	NA	HSPA+ 42 Mbps	NA
Frequency Bands	Band 4, 13 LTE	Band 13 LTE Band 2, 4, 5, 17 and 7	Band 25, 26, 41 LTE
LTE/WWAN Antenna	Main (Tx/Rx) +Aux (Rx/GNSS)	Main (Tx/Rx) +Aux (Rx/GNSS)	Main (Tx/Rx) +Aux (Rx/GNSS)

Carrier	Verizon	AT&T	Sprint
Operating System Support	Windows 8.1, 32/64 bits	Windows 8.1, 32/64 bits	Windows 8.1, 32/64 bits
	Windows 7, 32/64 bits	Windows 7, 32/64 bits	Windows 7, 32/64 bits
	Windows 10, 32/64 bits	Windows 10, 32/64 bits	Windows 10, 32/64 bits
Host Interface	Supported both	Supported both	Supported both
	USB 3.1 Gen 1/ USB 2.0	USB 3.1 Gen 1/ USB 2.0	USB 3.1 Gen 1/ USB 2.0

Table 35. DW5811e Snapdragon X7 HSPA (Indonesia)

Carrier	Generic	Indonesia
Network		HSPA+
Host interface	USB 3.0/ USB 2.0	USB 3.0/ USB 2.0
Speed (Downlink)	< 42 Mbps	< 42 Mbps
Speed (Uplink)	< 5.76 Mbps	< 5.76 Mbps
Fallback Network	N\A	N\A
Fallback Speed (Downlink)	N\A	N\A
Frequency Bands	Band 1, 2, 3, 4, 5, 8, HSPA+	Band 1, 2, 3, 4, 5, 8, HSPA+
SIM	Yes	Yes
LTE/WWAN Antenna	Main (Tx/Rx) + Aux (Rx/GNSS)	Main (Tx/Rx) + Aux (Rx/GNSS)
Operating System Support	Windows 8.1, 32/64 bits	Windows 8.1, 32/64 bits
	Windows 7, 32/64 bits	Windows 7, 32/64 bits
	Windows 10, 32/64 bits	Windows 10, 32/64 bits
GNSS	Supports both autonomous GNSS (GPS + GLONASS) and assisted GNSS (A-GNSS)	Supports both autonomous GNSS (GPS + GLONASS) and assisted GNSS (A-GNSS)

Table 36. Qualcomm Snapdragon X7 LTE-A (DW5816E) (Japan/ANZ/China/India/South Korea/Taiwan)

Carrier	Docomo	KDDI	Softbank	Telstra	Generic
Network	LTE CAT6	LTE CAT6	LTE CAT6	LTE CAT6	LTE CAT6
Speed (Downlink)	< 300 Mbps	< 300 Mbps	< 300 Mbps	< 300 Mbps	< 300 Mbps
Speed (Uplink)	< 50 Mbps	< 50 Mbps	< 50 Mbps	< 50 Mbps	< 50 Mbps
Fallback Network	HSPA+	NA	HSPA+	HSPA+	HSPA+
Fallback Speed (Downlink)	HSPA+ 42 Mbps	NA	HSPA+ 42 Mbps	HSPA+ 42 Mbps	HSPA+ 42 Mbps
Frequency Bands	LTE Band 1,3,19,21,28	LTE Band 1,18,28,41	LTE Band 1,8,41	LTE Band 1,3,7,8, 28	LTE Band 1,3,5,7,8, 18,19,21,28,38,39,40,41
	UMTS Band 1, 9, 19		UMTS band 1,8	UMTS Band 1, 5	

Carrier	Docomo	KDDI	Softbank	Telstra	Generic
					UMTS Band 1,5,6,8,9,19 TD-SCDMA Band 39
LTE/WWAN Antenna	Main (Tx/Rx) +Aux (Rx/GNSS)	Main (Tx/Rx) +Aux (Rx/GNSS)	Main (Tx/Rx) +Aux (Rx/GNSS)	Main (Tx/Rx) +Aux (Rx/GNSS)	Main (Tx/Rx) +Aux (Rx/GNSS)
Operating System Support	Windows 8.1, 32/64 bits	Windows 8.1, 32/64 bits	Windows 8.1, 32/64 bits	Windows 8.1, 32/64 bits	Windows 8.1, 32/64 bits
	Windows 7, 32/64 bits	Windows 7, 32/64 bits	Windows 7, 32/64 bits	Windows 7, 32/64 bits	Windows 7, 32/64 bits
	Windows 10, 32/64 bits	Windows 10, 32/64 bits	Windows 10, 32/64 bits	Windows 10, 32/64 bits	Windows 10, 32/64 bits
Host Interface	Supported both	Supported both	Supported both	Supported both	Supported both
	USB 3.1 Gen 1/USB 2.0	USB 3.1 Gen 1/USB 2.0	USB 3.1 Gen 1/USB 2.0	USB 3.1 Gen 1/USB 2.0	USB 3.1 Gen 1/USB 2.0

Wired communications

Table 37. Wired communications

Network Adapter (NIC) - Intel	Specifications
Intel i219LM Gigabit Ethernet Controller	Integrated on system board
External connector type	RJ-45
Data Rates	10/100/1000 Mbps
Controller bus architecture	PCI-e V1.1x1
Power consumption (full operation per data rate connection speed)	• 1000 Mbps: 542 mW • 100 Mbps: 264 mW • 10 Mbps: 306 mW
Power consumption (standby operation)	• WOL Disabled: 0mW (LAN disabled using BIOS) • No Link (w/ WOL): 0.13 mW (cable Disconnected) • 10 Mbps Idle (w/ WOL): 76 mW • 100 Mbps Idle (w/ WOL): 169 mW
IEEE standards compliance	802.3, 802.3ab, 802.3u, 802.az
Boot ROM Support	Support boot from PXE option ROM
Network Transfer Rate	Full duplex at 10, 100, or 1000 Mbps and half duplex at 10 or 100 Mbps.
Operating Temp/Storage Temp	0C to 85C/-40C to 125C(storage)
Operating Humidity	20% to 80% (non-condensing)
Operating System Driver support	Linux, Win7, Win8, Win10
Manageability	WOL, PXE
Management Capabilities Alerting	AMT 11 / DASH 1.1

Hardware and Software Security

Table 38. Hardware Security

Hardware Security	Available?
TPM 2.0 FIPS 140-2 Certified, TCG Certified	Yes
BIOS disable TPM (China)	Yes
Optional Control Vault 2.0 Advanced Authentication with FIPS 140-2 level 3 certification (HW authentication configurations)	Yes
Optional hardware authentication bundle 2: · FIPS 201 contacted smart card · Control Vault 2.0	Yes
Optional hardware authentication bundle 4: · Touch finger print reader · FIPS 201 contacted smart card · Contactless smart card · NFC · Control Vault 2.0	Yes
Security lock slot (Noble Wedge Lock)	Yes
SED (Opal 2.0 - SATA Interface)	Yes
Statement of Non-Volatility	Yes

Table 39. Software Security

Software security	Available?
Latitude Security software per software functional plan/cycle list	Yes
D-Pedigree for BIOS (Secure Supply Chain Functionality) provides : · Secure Supply Chain for a Product covers BIOS Image Integrity · Chain of Custody · Part Traceability	Yes

Security Option Fingerprint Reader

Table 40. Fingerprint Reader

Category	Description	NB-2024–S2
Sensor Technology	Describes the technology of the sensor (Optical, thermal, capacitive, etc.)	Active Thermal
Sensor Resolution	Resolution of image captured by sensor	385dpi
Sensor Size	physical size of sensor	11.9 mm x 11.9 mm
Sensor Pixel Size	Amount of pixels used to capture image	180x180 pixels
Connection to Dell ControlVault 2.0	N/A	SPI

Category	Description	NB-2024–S2
Dell ControlVault support	Device connects to Dell ControlVault for usage and processing	No
Dell ControlVault 2.0 support	Device connects to Dell ControlVault 2.0 for usage and processing . Enabled through Dell ControlVault driver .	Yes
Programmed False Accept Rate	Describes the programmed rate at which the fingerprint match algorithm is set to ensure false fingers are not accepted	0.10%
Programmed False RejectionRate	Describes the programmed rate at which the fingerprint match algorithm is set to inappropriately reject a proper finger	1.00%
Template storage	Describes the location of where templates are stored for future reference	Dell ControlVault encrypted
Markers to generate template	Number of markers utilized to generate a successful match of presented fingerprint	>12
Match on chip	Match of fingerprint occurs off host of main CPU to remove possibility of spoofing	No
FIPS 201 (PIV/HSPD-12) Certified	Device certified with FIPS 201/PIV/ HSPD-12 requirements	No
ANSI/INCITS 378 standard support	Template creation process provides support for ANSI/INCITS 378 standard	Yes

Security Option Dell ControlVault 2.0

Table 41. Dell ControlVault 2.0

Title	Description	Dell ControlVault 2.0
CPU Technology	N/A	250 Mhz ARM M3
RAM	N/A	385dpi
ROM	N/A	11.9 mm x 11.9mm
TPM included	TPM enumeration included within ControlVault	No
Host Interface	N/A	USB 2.0
Fingerprint Processing on Chip	Fingerprint processing occurs within secure boundary of ControlVault	Yes
Windows WBF Support	Support for Windows Biometric Framework when Fingerprint Reader is attached	Yes
FIPS 140-2 Level 3 Compliant	Device compliant with FIPS 140-3 Level 2 requirements	Yes
FIPS 140-2 Level 3 Certified	Device certified with FIPS 140-3 Level 2 requirements	Yes
Windows Certified	WHCK certified drivers for Windows 7, 8, 8.1, 10	Yes

Title	Description	Dell ControlVault 2.0
Compliance	Selective Suspend Support, Connected Standby Support, Modern Standby Support	Supports Selective Suspend as defined by Microsoft requirements

Security Option Contacted Smartcard Reader

Table 42. Contacted Smartcard Reader

Title	Description	Dell ControlVault 2.0 Smartcard Reader
ISO 7816 -3 Class A Card Support	Reader capable of reading 5 V powered smartcard	Yes
ISO 7816 -3 Class B Card Support	Reader capable of reading 3 V powered smartcard	Yes
ISO 7816 -3 Class C Card support	Reader capable of reading 1.8 V powered smartcard	No
T=0 support	Cards support character level transmission	Yes
T=1 support	cards support block level transmission	Yes
EMVCo Compliant	Compliant with EMVCo (for electronic payment standards) smartcard standards as posted to www.emvco.com	Yes
EMVCo Compliant	Formally certified based on EMVCO smartcard standards	Yes
PC/SC OS interface	Personal Computer/Smart Card specification for integration of hardware readers into personal computer environments	Yes
CCID driver compliance	Common driver support for Integrated Circuit Card Interface Device for OS level drivers.	Yes
Windows Certified	Device certified by Micrsoft WHCK	Yes
FIPS 201 (PIV/HSPD-12) Compliant via GSA	Device compliant with FIPS 201/PIV/ HSPD-12 requirement	Yes
ISO 7816-1 Compliant -	Specification for the reader	Yes
ISO 7816 -2 Compliant -	Specification for smartcard device physical characteristics (size, location of connection points, etc.)	N/A
Dell ControlVault support	Device connects to Dell ControlVault for usage and processing	Yes

Security Option Contactless Smartcard Reader

Table 43. Contactless Smartcard Reader

Type	Description	Dell ControlVault 2.0 Contactless Smartcard Reader with NFC
Felica Card Support	Reader and software capable of supporting Felica contactless cards	Yes
Prox (Proximity) (125 kHz) Card support	Reader and software capable of supporting Prox /Proximity/125 kHz contactless cards	No
ISO 14443 Type A Card Support	Reader and software capable of supporting ISO 14443 Type A contactless cards	Yes
ISO 14443 Type B Card Support	Reader and software capable of supporting ISO 14443 Type B contactless cards	Yes
ISO/IEC 21481	Reader and software capable of supporting ISO/IEC 21481 compliant contactless cards and tokens	Yes
ISO/IEC 18092	Reader and software capable of supporting ISO/IEC 21481 compliant contactless cards and tokens	Yes
ISO 15693 Card Support	Reader and software capable of supporting ISO15693 contactless cards	Yes
NFC Tag Support	Supports reading and processing of NFC compliant tag information	Yes
NFC Reader Mode	Support for NFC Forum Defined Reader mode	Yes
NFC Writer Mode	Support for NFC Forum Defined Writer mode	Yes
NFC Peer-to-Peer Mode	Support for NFC Forum Defined Peer to Peer mode	Yes
EMVCo Compliant	Compliant with EMVCO smartcard standards as posted to www.emvco.com	Yes
EMVCo Certified	Formally certified based on EMVCO smartcard standards	Yes
NFC Proximity OS Interface	Enumerates NFP (Near Field Proximity) device for OS to utilize	Yes
PC/SC OS interface	Personal Computer/Smart Card specification for integration of hardware readers into personal computer environments	Yes
CCID driver compliance	Common driver support for Integrated Circuit Card Interface Device for OS level drivers.	Yes
Host Interface	What physical interface is the reader connected to the host on?	USB
Windows Certified	Device certified by Microsoft WHCK	Yes

Type	Description	Dell ControlVault 2.0 Contactless Smartcard Reader with NFC
Dell ControlVault support	Device connects to Dell ControlVault for usage and processing	Yes

Integrated graphics controller

Table 44. Integrated graphics controller - Intel HD graphics 620

Integrated Graphics Controller	Intel HD Graphics 620
Bus Type	Internal PCIe
Memory Interface	N/A (unified memory architecture)
Graphics Level	GT2
Estimated Maximum Power Consumption (TDP)	15 W included in the CPU power
Display Support	On System: • eDP (internal display) • HDMI • VGA via Optional Type-C port • DisplayPort 1.2 via Optional Type-C port • DVI via Optional Type-C port
Maximum Vertical Refresh Rate	Up to 85 Hz depending on resolution
Operating Systems Graphics/ Video API Support	Support for DirectX 12, OpenCL 2.0, OpenGL 4.3/4.4 , OpenGL ES
Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or digital)	System ports: Max Digital: (HDMI) 2560x1600, 4096x2304@24 Hz Docked: • Max Digital: (DisplayPort 1.2) 3840 x2160 @60 Hz • Max Digital: (SL-DVI) 1920x1080 @60 Hz • Analog: (VGA) system (14 inch/15 inch) 2048x1152 @60 Hz For 3 displays: • Up to 1920x1200 max resolution each (native or docked).
Numbers of Displays Supported	• System Ports: 3 displays max with LCD plus 2 displays max on each output (HDMI, Type-C) • Docked: 3 displays max (combo of LCD, VGA, DP, HDMI)

Table 45. Intel UHD Graphics 620 (8th Generation Intel Core) specification

Integrated Graphics Controller	Intel UHD Graphics 620 (8th Generation Intel Core)
Bus Type	Internal PCIe
Memory Interface	N/A (unified memory architecture)
Graphics Level	i3/i5/i7: GT2 (UHD 620)
Estimated Maximum Power Consumption (TDP)	10W (included in the CPU power)
Display Support	On System: • eDP (internal display)

	• HDMI • VGA via Optional Type-C port • DisplayPort 1.2 via Optional Type-C port • DVI via Optional Type-C port
Maximum Vertical Refresh Rate	Up to 85Hz depending on resolution
Operating Systems Graphics/ Video API Support	DirectX 11 (Windows 7/8.1), DirectX 12 (Windows 10), OpenGL 4.3
Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or digital)	System ports: • Max Digital: (HDMI) 4096x2304@24Hz • Analog: (VGA) system (14 inches/15 inches) or docking 2048x1152 @ 60Hz Docked: • Max Digital: (DisplayPort 1.2) 3860 x2160 @ 60Hz • Max Digital: (SL-DVI) 1920x1080 @ 60Hz • Analog: (VGA) system (14 inches/15 inches) 2048x1152 @ 60Hz For 3 displays: • Up to 1920x1200 max resolution each (native or docked).
Numbers of Displays Supported	• System Ports - 3 displays max with LCD plus 1 display max on each output (HDMI, VGA (14 inches/15 inches) • Docked - 3 displays max (combo of LCD, VGA, DP, HDMI)

Display specifications for Latitude 7290

Table 46. 12.5 inches (16:9) AG HD WLED 200 nits eDP 1.2 TN , HD CAM/Mic, WLAN capable, Mag Alloy back, Non Touch

Feature	Specification
Type	HD Anti-Glare
Luminance (typical)	200 nits
Dimensions (Active Area)	• Height: 155.52mm • Width: 276.62mm • Diagonal: 12.5 inch
Native Resolution	1366x768
Megapixels	1.05
Pixels per Inch (PPI)	125
Contrast Ratio (min)	300:1
Response Time (max)	25 msec rise/fall
Refresh Rate	60 Hz
Horizontal View Angle	+/- 40 degrees
Vertical View Angle	+10/-30 degrees
Pixel Pitch	0.2025 mm
Power Consumption (maximum)	2.9 W

Table 47. 12.5 inches (16:9) AG HD WLED 200 nits eDP 1.2 TN, HD CAM/Mic, WLAN/WWAN, Mag Alloy back, Non Touch

Feature	Specification
Type	HD Anti-Glare
Luminance (typical)	200 nits
Dimensions (Active Area)	• Height: 155.52mm • Width: 276.62mm • Diagonal: 12.5 inch
Native Resolution	1366x768
Megapixels	1.05
Pixels per Inch (PPI)	125
Contrast Ratio (min)	300:1
Response Time (max)	25 msec rise/fall
Refresh Rate	60 Hz
Horizontal View Angle	+/- 40 degrees
Vertical View Angle	+10/-30 degrees
Pixel Pitch	0.2025 mm
Power Consumption (maximum)	2.9 W

Table 48. 12.5 inches (16:9) AG HD WLED 200 nits eDP 1.2 TN, Mic only, WLAN capable, Mag Alloy back, Non Touch

Feature	Specification
Type	HD Anti-Glare
Luminance (typical)	200 nits
Dimensions (Active Area)	• Height: 155.52mm • Width: 276.62mm • Diagonal: 12.5 inch
Native Resolution	1366x768
Megapixels	1.05
Pixels per Inch (PPI)	125
Contrast Ratio (min)	300:1
Response Time (max)	25 msec rise/fall
Refresh Rate	60 Hz
Horizontal View Angle	+/- 40 degrees
Vertical View Angle	+10/-30 degrees
Pixel Pitch	0.2025 mm
Power Consumption (maximum)	2.9 W

Display specifications for Latitude 7390

Table 49. 13.3 inch(16:9) AG FHD WLED 300 nits eDP 1.3 WVA

Feature	Specification
Type	FHD Anti-Glare
Luminance (typical)	300 nits
Dimensions (Active Area)	• Height: 165.08 mm • Width: 293.47 mm • Diagonal: 13.3 inch
Native Resolution	1920 x 1080
Megapixels	2.07
Pixels per Inch (PPI)	166
Contrast Ratio (min)	600:1
Response Time (max)	35 msec rise/fall
Refresh Rate	60 Hz
Horizontal View Angle	+/- 80 degrees
Vertical View Angle	+/- 80 degrees
Pixel Pitch	0.153 mm
Power Consumption (maximum)	4.6 W

Table 50. 13.3 inch (16:9) AG FHD Touch WLED 300 nits eDP 1.3 WVA

Feature	Specification
Type	FHD Anti-Glare
Luminance (typical)	300 nits
Dimensions (Active Area)	• Height:165.08 mm • Width: 293.47 mm • Diagonal: 13.3 inch
Native Resolution	1920 x 1080
Megapixels	2.07
Pixels per Inch (PPI)	166
Contrast Ratio (min)	600:1
Response Time (max)	35 msec rise/fall
Refresh Rate	60 Hz
Horizontal View Angle	+/- 80 degrees
Vertical View Angle	+/- 80 degrees
Pixel Pitch	0.153 mm
Power Consumption (maximum)	5.2 W

Display specifications for Latitude 7490

Table 51. 14.0 inches (16:9) AG HD (1366 x 768) WLED 200 nits (typ) eDP 1.2 ,HD CAM/Mic, WLAN capable, Mag Alloy back, Non Touch

Feature	Specification
Type	HD Anti-Glare
Luminance (typical)	200 nits
Dimensions (Active Area)	• Height: 173.95 mm(maximum) • Width: 309.4 mm(maximum) • Diagonal: 14.0 inch
Native Resolution	1366 x 768
Megapixels	1.05
Pixels per Inch (PPI)	112
Contrast Ratio (min)	300:1
Response Time (max)	25 msec rise/fall
Refresh Rate	60 Hz
Horizontal View Angle (min)	+/- 40 degrees
Vertical View Angle (min)	+10/-30 degrees
Pixel Pitch	0.2265 mm
Power Consumption (maximum)	2.8 W

Table 52. 14.0 inches (16:9) AG HD (1366 x 768) WLED 200 nits (typ) eDP 1.2 ,HHD CAM/Mic, WLAN/WWAN, Mag Alloy back, Non Touch

Feature	Specification
Type	HD Anti-Glare
Luminance (typical)	200 nits
Dimensions (Active Area)	• Height: 173.95 mm(maximum) • Width: 309.4 mm(maximum) • Diagonal: 14.0 inch
Native Resolution	1366 x 768
Megapixels	1.05
Pixels per Inch (PPI)	112
Contrast Ratio (min)	300:1
Response Time (max)	25 msec rise/fall
Refresh Rate	60 Hz
Horizontal View Angle (min)	+/- 40 degrees
Vertical View Angle (min)	+10/-30 degrees
Pixel Pitch	0.2265 mm

Power Consumption (maximum)	2.8 W

Table 53. 14.0 inches (16:9) AG FHD (1920 x 1080) 300 nits, eDP 1.3 w/PSR, IPS, HD CAM/Mic, WLAN capable, Mag Alloy back, Non Touch

Feature	Specification
Type	FHD Anti-Glare
Luminance (typical)	300 nits
Dimensions (Active Area)	• Height: 173.95 mm(maximum) • Width: 309.4 mm(maximum) • Diagonal: 14.0 inch
Native Resolution	1920 x 1080
Megapixels	2.07
Pixels per Inch (PPI)	157
Contrast Ratio (min)	600:1
Response Time (max)	35 msec black to white
Refresh Rate	60 Hz
Horizontal View Angle (min)	+/- 80 degrees
Vertical View Angle (min)	+/- 80 degrees
Pixel Pitch	0.161 x 0.161 mm
Power Consumption (maximum)	3.8 W

Table 54. 14.0 inches (16:9) AG FHD (1920 x 1080) 300 nits, eDP 1.3 w/PSR, IPS, HD CAM/Mic, WWAN/WLAN, Mag Alloy back, Non Touch

Feature	Specification
Type	FHD Anti-Glare
Luminance (typical)	300 nits
Dimensions (Active Area)	• Height: 173.95 mm (maximum) without metal tabs mm • Width: 309.4 mm(maximum) • Diagonal: 14.0 inch
Native Resolution	1920 x 1080
Megapixels	2.07
Pixels per Inch (PPI)	157
Contrast Ratio (min)	1000:1
Response Time (max)	35 msec black to white
Refresh Rate	60 Hz
Horizontal View Angle (min)	+/- 80 degrees
Vertical View Angle (min)	+/- 80 degrees
Pixel Pitch	0.161 x 0.161 mm

Power Consumption (maximum)	3.8 W

Table 55. 14.0 inches (16:9) AG FHD (1920 x 1080) 300 nits, eDP 1.3 w/PSR, IPS, Mic only, WLAN capable, Mag Alloy back, Non Touch

Feature	Specification
Type	FHD Anti-Glare
Luminance (typical)	300 nits
Dimensions (Active Area)	• Height: 173.95 mm(maximum) • Width: 309.4 mm(maximum) • Diagonal: 14.0 inch
Native Resolution	1920 x 1080
Megapixels	2.07
Pixels per Inch (PPI)	157
Contrast Ratio (min)	600:1
Response Time (max)	35 msec black to white
Refresh Rate	60 Hz
Horizontal View Angle (min)	+/- 80 degrees
Vertical View Angle (min)	+/- 80 degrees
Pixel Pitch	0.161 x 0.161 mm
Power Consumption (maximum)	3.8 W

Table 56. 14.0 inches (16:9) AG FHD (1920 x 1080) 300 nits, eDP 1.3 w/PSR, IPS, Super Low Power Panel (SLP), HD CAM/Mic, WLAN w/ASA, Narrow Border Mag Alloy back, Non Touch

Feature	Specification
Type	FHD Anti-Glare
Luminance (typical)	300 nits
Dimensions (Active Area)	• Height: 173.95 mm(maximum) without metal tabs • Width: 309.4 mm(maximum) • Diagonal: 14.0 inch
Native Resolution	1920 x 1080
Megapixels	2.07
Pixels per Inch (PPI)	157
Contrast Ratio (min)	1000:1
Response Time (max)	35 msec black to white
Refresh Rate	60 Hz
Horizontal View Angle (min)	+/- 80 degrees
Vertical View Angle (min)	+/- 80 degrees
Pixel Pitch	0.161 x 0.161 mm

Power Consumption (maximum)	1.99 W

Table 57. 14.0 inches (16:9) AG FHD (1920 x 1080) 300 nits, eDP 1.3 w/PSR, IPS, Super Low Power Panel (SLP), IR CAM/Mic, WLAN w/ASA, Narrow Border Mag Alloy back, Non Touch

Feature	Specification
Type	FHD Anti-Glare
Luminance (typical)	300 nits
Dimensions (Active Area)	• Height: 173.95 mm(maximum) without metal tabs • Width: 309.4 mm(maximum) • Diagonal: 14.0 inch
Native Resolution	1920 x 1080
Megapixels	2.07
Pixels per Inch (PPI)	157
Contrast Ratio (min)	1000:1
Response Time (max)	35 msec black to white
Refresh Rate	60 Hz
Horizontal View Angle (min)	+/- 80 degrees
Vertical View Angle (min)	+/- 80 degrees
Pixel Pitch	0.161 x 0.161 mm
Power Consumption (maximum)	1.99 W

Table 58. 14.0 inches (16:9) AG FHD (1920 x 1080) 300 nits, eDP 1.3 w/PSR, IPS, HD CAM/Mic, WLAN/WWAN, Mag Alloy back, On-cell Touch

Feature	Specification
Type	FHD Anti-Glare
Luminance (typical)	300 nits
Dimensions (Active Area)	• Height: 173.95 mm(maximum) • Width: 309.4 mm(maximum) • Diagonal: 14.0 inch
Native Resolution	1920 x 1080
Megapixels	2.07
Pixels per Inch (PPI)	157
Contrast Ratio (min)	600:1
Response Time (max)	35 msec black to white
Refresh Rate	60 Hz
Horizontal View Angle (min)	+/- 80 degrees
Vertical View Angle (min)	+/- 80 degrees
Pixel Pitch	0.161 x 0.161 mm

Power Consumption (maximum)	4.1 W

Table 59. 14.0 inches (16:9) AG FHD (1920 x 1080) 300 nits, eDP 1.3 w/PSR, IPS, HD CAM/Mic, WLAN w/ASA, Narrow Border Carbon Fiber back, On-cell Touch

Feature	Specification
Type	FHD Anti-Glare
Luminance (typical)	300 nits
Dimensions (Active Area)	• Height: 173.95 mm(maximum) • Width: 309.4 mm(maximum) • Diagonal: 14.0 inch
Native Resolution	1920 x 1080
Megapixels	2.07
Pixels per Inch (PPI)	157
Contrast Ratio (min)	600:1
Response Time (max)	35 msec black to white
Refresh Rate	60 Hz
Horizontal View Angle (min)	+/- 80 degrees
Vertical View Angle (min)	+/- 80 degrees
Pixel Pitch	0.161 x 0.161 mm
Power Consumption (maximum)	4.1 W

Table 60. 14.0 inches (16:9) AG FHD (1920 x 1080) 300 nits, eDP 1.3 w/PSR, IPS, IR CAM/Mic, WLAN w/ASA, Narrow Border Carbon Fiber back, On-cell Touch

Feature	Specification
Type	FHD Anti-Glare
Luminance (typical)	300 nits
Dimensions (Active Area)	• Height: 173.95 mm(maximum) • Width: 309.4 mm(maximum) • Diagonal: 14.0 inch
Native Resolution	1920 x 1080
Megapixels	2.07
Pixels per Inch (PPI)	157
Contrast Ratio (min)	600:1
Response Time (max)	35 msec black to white
Refresh Rate	60 Hz
Horizontal View Angle (min)	+/- 80 degrees
Vertical View Angle (min)	+/- 80 degrees
Pixel Pitch	0.161 x 0.161 mm

Power Consumption (maximum)	4.1 W

Monitor support

Table 61. Monitor support

Docked	Dell Dock	Dell Thunderbolt Dock
Maximum Number of Displays=3 Two external monitors + LCD • LCD (HD/FHD) supported with Universal cable • VGA max. 1920*1200 @ 60Hz • DVI max. 1920*1200@60Hz • DP max. 3840*2160 @ 60Hz • USb Type-C (max. 3840*2160 @ 60Hz)	Maximum Number of Displays=3 Three from system and dock ports • VGA • DisplayPort (max. 3840*2160 @ 30Hz) • HDMI 1.4 (max. 3840*2160 @ 30Hz) supported with Universal cable	Maximum Number of Displays=3 Three from system and dock ports • VGA • DisplayPort • mini DipslayPort • HDMI 1.4 (max. 3840*2160 @ 30Hz) supported with Universal cable • USB Type-C (max. 3840*2160 @ 60Hz)

Battery specifications

This topics lists out the detailed battery specifications. Battery is a FRU and is beneath the back cover.

Table 62. Battery specifications

	42 WHr ExpressCharge Capable (3-cell) (prismatic)	60 WHr ExpressCharge Capable (4-cell) (polymer)	60 WHr Long Life Cycle battery (4-cell) (polymer)
Battery Type	Li-ion	Li-ion	Li-ion
System Compatibility	12/14 U UMA	12/14 U UMA	12/14 U UMA
Dimension:			
Length	200.5mm (7.89 inch)	238mm (9.37 inch)	238mm (9.37 inch)
Width	95.9mm (3.78 inch)	95.9mm (3.78 inch)	95.9mm (3.78 inch)
Height	5.70mm (0.22 inch)	5.70mm (0.22 inch)	5.70mm (0.22 inch)
Weight	185.00 g (0.41lb)	270.00 g (0.6lb)	270.00 g (0.6lb)
Voltage	11.4VDC	7.6VDC	7.6VDC
Typical Amp-hour capacity	3.68Ahr	7.89Ahr	7.89Ahr
Typical Watt-hour capacity	42Whr	60Whr	60Whr
Operating time **NOTE: Battery operating time varies depending on operating conditions and can be significantly reduced under certain power-intensive conditions.**			
Temperature range: Operating	Charge: 0 °C to 50 °C, 32 °F to 158 °F Discharge: 0 °C to 70 °C, 32 °F to 122 °F		
Temperature range:	-20°C to 65 °C (4 °F to 149 °F)		

	42 WHr ExpressCharge Capable (3-cell) (prismatic)	60 WHr ExpressCharge Capable (4-cell) (polymer)	60 WHr Long Life Cycle battery (4-cell) (polymer)
Non-Operating			
Charging time (ExpressCharge)	• 0~15degC: 4 hour • 16~60degC: 3 hours		
ExpressCharge Capable	Yes	Yes	No
BATTMAN Capable	Yes	Yes	No
Life span (approximate)	Standard pack : 1 year warranty for 300 cycles	Standard pack : 1 year warranty for 300 cycles	LCL pack : 3 year warranty for 1000 cycles

Express Charge benefits

- For a battery advertised as having the ExpressCharge feature, the battery typically will have greater than 80% charge after about an hour of charging with the system off, and fully charged in about 2 hours with the system off.
- Enabling Expresscharge requires that both the Latitude notebook and the battery that is used on the system be ExpressCharge capable. If any of the above requirements is missing, ExpressCharge will not be enabled.

Keyboard

Table 63. Keyboard Specifications for Latitude 7290

	12.5 (ISU/ISUB)
Number of keys	82 (U.S), 83 (UK), 84 (BZ), 86 (JP)
Layout	US/UK/ BZ/JP
Size	full sized (18.05mm key pitch)
Backlit keyboard option	Yes
Base no fingerprint reader, no contacted smartcard, no contactless smartcard, no Control Vault	Single Pointing Backlit/non-backlit
Smart card only Contacted smartcard, Control Vault	Single Pointing Backlit/non-backlit
Standard fingerprint reader, contacted smartcard, contactless smart card/NFC, Control Vault	Single Pointing Backlit/non-backlit

Table 64. Keyboard Specifications Latitude 7390

	13.3 (ISU/ISUB)
Number of keys	82 (U.S), 83 (UK), 84 (BZ), 86 (JP)
Layout	US/UK/ BZ/JP
Size	full sized (19.05 mm key pitch)

	13.3 (ISU/ISUB)
Backlit keyboard option	Single Pointing, non backlit and Single Pointing, backlit
Base no fingerprint reader, no contacted smartcard, no contactless smartcard, no Control Vault	Single Pointing Backlit/non-backlit
Smart card only Contacted smartcard, Control Vault	Single Pointing Backlit/non-backlit
Standard fingerprint reader, contacted smartcard, contactless smart card/NFC, Control Vault	Single Pointing Backlit/non-backlit

Table 65. Keyboard Specifications Latitude 7490

	14.1 (ISU/ISUB)
Number of keys	82 (U.S), 83 (UK), 84 (BZ), 86 (JP)
Layout	US/UK/ BZ/JP
Size	full sized (19.05mm key pitch
Backlit keyboard option	Yes
Base no fingerprint reader, no contacted smartcard, no contactless smartcard, no Control Vault	Single Pointing Non-backlit/ Dual Pointing Backlit
Smart card only Contacted smartcard, Control Vault	Dual Pointing Backlit
Standard fingerprint reader, contacted smartcard, contactless smart card/NFC, Control Vault	Dual Pointing Backlit

Hot Key combinations

Table 66. Keyboards Hot Key combinations for Latitude 7290 and 7390

Fn Key Combination	12 inches and 13 inches
Fn + ESC	Fn Toggle
Fn + F1	Speaker Mute
Fn + F2	Volume Down
Fn + F3	Volume Up
Fn + F4	Mic Mute
Fn + F5	Num Lock
Fn + F6	Scroll Lock
Fn + F8	Display Toggle (Win + P)
Fn + F9	Search
Fn + F10	Increase Keyboard Backlight Brightness

Fn + F11	Print screen
Fn + F12	Insert
Fn + Home	Wireless
Fn + End	Sleep
Fn + up Cursor	Panel Brightness Up
Fn + down Cursor	Panel Brightness Down

Table 67. Keyboards Hot Key combinations for Latitude 7490

Fn Key Combination	14 inches
Fn + ESC	Fn Toggle
Fn + F1	Speaker Mute
Fn + F2	Volume Down
Fn + F3	Volume Up
Fn + F4	Mic Mute
Fn + F5	Num Lock
Fn + F6	Scroll Lock
Fn + F8	Display Toggle (Win + P)
Fn + F9	Search
Fn + F10	Increase Keyboard Backlight Brightness
Fn + F11	Panel Brightness Down
Fn + F12	Panel Brightness Up
Fn + Prt Scr	Wireless
Fn + Insert	Sleep
Fn + Left Cursor	Home
Fn + Right Cursor	End

Touchpad

Table 68. Touch Pad

X/Y position resolution	X: 1221; Y:622
Size	Sensor-active area: X-axis 101.7mm (4.0 inch) Y-axis 52mm (2.04 inch)
Multi-Touch	Configurable single finger and multi-finger gestures

Table 69. Touch Pad

Supported Gestures	Windows 10
Cursor moving	Supported
Clicking/ tapping	Supported
Click and drag	Supported
2-finger scroll	Supported
2-finger Pinch/ Zoom	Supported
2-finger tap (Right Clicking)	Supported
3-finger tap (Invoke Cortana)	Supported
3-finger swipe up (See all open windows)	Supported
3-finger swipe down (Show the desktop)	Supported
3-finger swipe horizontally (Switch between open windows)	Supported
4-finger tap (Invoke Action Center)	Supported
4-finger swipe horizontally (Switch virtual desktops)	Supported

Power Adapters

Table 70. Power Adaptors specifications

Adapter Specifications	E5 65W*	E5 90W*	65W E5 for India
Input voltage	100 to 240 VAC	100 to 240 VAC	100 to 240 VAC
System Supportability	12/14/15 U UMA 14/15 H UMA 14/15 U Discrete	14/15 H Discrete 12/14/15 U UMA (upsell) 14/15 U Discrete (upsell)	12/14/15 U UMA 14/15 H UMA 14/15 U Discrete
Input current (max)	1.7 A	1.6 A	1.7 A
Input frequency	50 to 60 Hz	50 to 60 Hz	50 to 60 Hz
Output current	3.34 A (continuous)	4.62 A (continuous)	3.34 A (continuous)
Rated output voltage	19.5 VDC	19.5 VDC	19.5 VDC
Weight (lbs)	0.51	0.77	0.51
Weight (kg)	0.23	0.32	0.23
Dimensions (inches)	0.87 x 2.60 x 4.17	0.87 x 2.60 x 5.12	0.87 x 2.60 x 4.17
Dimensions (mm)	22 x 66 x 106	22 x 66 x 130	22 x 66 x 106
Temperature range:	0 o to 40 o C	0 o to 40 o C	0 o to 40 o C
Operating	32 o to 104 o F	32 o to 104 o F	32 o to 104 o F
Storage	-40 o to 70 o C -40 o to 158 o F	-40 o to 70 o C -40 o to 158 o F	-40 o to 70 o C -40 o to 158 o F

Table 71. Power Adaptors length and weight

	E4 BFR/PVC free or E5 65W Standard Power Cord+ Adapter OR E4 BFR/PVC free	E5 90W Standard Power Cord+ Adapter
Weight	E5/E4 BFR/PVC	E5
Grams	310	310
Pounds	0.68	0.68
Length	E5/E4 BFR/PVC	E5
Meters	2.9	2.9
Feet + Inches	9 feet 2.2 inches	9 feet 2.2 inches

Operating conditions

Table 72. Operating conditions and MIL-STD 810G Testing Performed

Model	Dell Latitude 7000 Series
Temperature Range	Operating 0°C to 35°C (32°F to 95°F) Storage –40°C to 65°C (–40°F to 149°F)
Relative humidity (maximum)	Operating 10% to 90% (non-condensing) Storage 5% to 95% (non-condensing)
Altitude (maximum)	Operating : 0 to 3048 m (0 to 10,000 ft) Storage: 0 to 10668 m
MIL-STD-810G Tests Performed	• METHOD 500.5 LOW PRESSURE (ALTITUDE) Procedure I - Storage/Air Transport • METHOD 501.5 HIGH TEMPERATURE Procedure I Induced (Storage and Transition) Conditions • METHOD 500.5 LOW PRESSURE (ALTITUDE) Procedure II - Operation/Air Carriage • METHOD 501.5 HIGH TEMPERATURE Procedure II - Operation Cycling temperature exposure • METHOD 502.5 LOW TEMPERATURE Procedure I (Exaggerated) • METHOD 502.5 LOW TEMPERATURE Procedure II • METHOD 507.5 Procedure II Humidity Aggravated Cycle • METHOD 510.5 SAND AND DUST Procedure I • IP5x Dust Ingress Duration: 8 hours • METHOD 514.6 VIBRATION Procedure I • Method 516.6 SHOCK Procedure I: Functional Shock • Method 516.6 SHOCK Procedure IV: Transit Drop; Modified to be dropped at 30 • Method 516.5 SHOCK Procedure II: Material to be Packaged • Method 516.5 SHOCK Procedure V: Crash Hazard Shock • Method 516.6 SHOCK Procedure VI: Bench Handling

6

Getting help

Contacting Dell

NOTE: If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

1 Go to **Dell.com/support.**
2 Select your support category.
3 Verify your country or region in the **Choose a Country/Region** drop-down list at the bottom of the page.
4 Select the appropriate service or support link based on your need.