

Lenovo P3 Tiny Gen 2

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Product Name	P3 Tiny Gen 2
Product Display Name	ThinkStation P3 Tiny Gen 2
Information Date	11-Jun-25
Hardware Maintenance Manual	TBD
Drivers & Software	TBD
Available Whitepapers	TBD

SECTION I: Platform Overview

Description	Engineered to go where others cant, the Lenovo ThinkStation P3 Tiny Gen 2 offers uncompromising performance in a form factor that is 96% smaller than a traditional desktop. At only one liter in total volume, the industrys smallest workstation combines the power of Intel Core Ultra processors (Series 2) and NVIDIA RTX graphics in a simple, efficient design.
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CPU

Processor Support	Intel Arrow Lake-S Series
Socket Type	Socket-V (LGA 1851)

Operating Systems

Preloaded	Windows 11 Pro 64-bit Windows 11 Home 64-bit Windows 11 IOT LTSC Ubuntu 24.04 LTS
Supported	Red Hat Enterprise Linux Ubuntu 24.04 LTS

Memory

Slots	2
Channels	Supports up to 2 DIMM Sockets, 2 Channels
Type	DDR5 ECC and non-ECC CSODIMM DDR5 ECC and non-ECC SODIMM
ECC Support	Yes, CPU Dependent
Speed	Up to 6400MT/s CSODIMM Up to 5600MT/s SODIMM
Max DIMM Size	64GB DDR5 CSODIMM 48GB DDR5 SODIMM
Max System Memory	128GB
Disclaimers	*Memory speed impacted by number and type of DIMMs installed. *Memory speed can be dependent on the individual CPU capabilities.

Storage

PCIe	1 x M.2 2280 PCIe Connector, Gen 5 Onboard (from CPU) 1 x M.2 2280 PCIe Connector, Gen 4 Onboard (from PCH) 1 x M.2 2280 PCIe Connector, Gen 4 Onboard (from PCH)
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Video

Integrated Graphics	Intel Graphics (CPU dependent)
Discrete Graphics	Nvidia RTX A400 (miniDP x4) – 4GB GDDR6, PCIe4, Single-Slot Nvidia RTX A1000 (miniDP x4) – 8GB GDDR6, PCIe4, Single-Slot
Multi-GPU Support	Yes
Type	PCIe Add-In-Card
Bus Interface	PCIe x8 Gen 4 Routed From CPU

Slots

Slot 1	PCIe 4.0 x8, Half Height, Half Length, 50W, With Latch
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Front I/O

USB	2 x USB-A 3.2 Gen 2 (10Gb/s) – one supports 21A charging 1 x USB-C 3.2 Gen 2 (20Gb/s)
Audio	1 x Combo Audio/Microphone Jack (3.5mm)
Disclaimers	Actual USB throughput will vary depending on the type and quantity of USB devices used.

Rear I/O

USB	3 x USB-A 3.2 Gen 2 (10Gb/s) 1 x USB-A 3.2 Gen 1 (5Gb/s)
DisplayPort	1 x Standard DP 1.4 Optional 2 x DP 1.2 (Config dependent), via flexible I/O port card
HDMI	1 x Standard HDMI 2.1 Optional 2 x HDMI 2.0 (Config dependent), via flexible I/O port card Optional 2 x HDMI 2.1 (Config dependent), via flexible I/O port card
Type-C	Optional 1 x USB-C 3.1 Gen 1 (Config dependent), via flexible I/O port card
VGA Port	Optional 2 x VGA Port (Config dependent), via flexible I/O port card
Serial Port	Optional 2 x Serial Port (Config dependent), via flexible I/O port card Optional 1 x Serial Port Expansion PCIe x1 Adapter
Ethernet	1 x Standard Optional 2 x 2.5G LAN Port (Config dependent), via flexible I/O port card
Optional USB Adapter	Dual USB-A 3.2 Gen 1 (CPU dependent), via flexible I/O card Quad USB-A 3.2 Gen 1 (CPU dependent), via flexible I/O card
Optional Network Adapter	Intel I350-T2 Dual Port Gigabit Ethernet Adapter Intel I350-T4 Quad Port Gigabit Ethernet Adapter Broadcom 5720 Dual Port Gigabit Ethernet Adapter Broadcom 5719 Quad Port Gigabit Ethernet Adapter Intel Gale Peak 2 BE200 WiFi7 + Bluetooth 5 PCIe Adapter
Disclaimers	Actual USB throughput will vary depending on the type and quantity of USB devices used.

Ethernet

Vendor	Intel Jacksonville I219-LM (w/ AMT 16.x)
Speeds	10/100/1000 Mbps
Functions	PXE, ASF, WOL, Jumbo Frames, Teaming
Connectors	1 x RJ45

Audio

Vendor	Realtek
Type	Integrated Audio
Internal Speaker	Yes, 1.5W
Connectors	Mic + Headphone combo jack
Chipset	ALC233VB
Number of Channels	2
Number of Bits/Audio Resolution	2 channels of DAC support 24-bit PCM format 2 stereo of ADC support 16-bit PCM format

Thermal

Temp Sensors	Ambient Sensor
Fans	1 x CPU Fans

Power Specifications

Power Supply	170W	230W	300W	330W
Power Efficiency	90% Efficient @ 50% Load	90% Efficient @ 50% Load	90% Efficient @ 50% Load	90% Efficient @ 50% Load
Operating Voltage Range	100 – 240V	100 – 240V	100 – 240V	100 – 240V
Rated Voltage Range	90-264VAC	90-264VAC	90-264VAC	90-264VAC
Rated Line Frequency	47Hz / 63Hz	47Hz / 63Hz	47Hz / 63Hz	47Hz / 63Hz
Operating Line Frequency Range	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz
Rated Input Current	2.5A	3.5A	4.5A	4.5A
Graphics	No	No	No	No
Power Supply Fan	No	No	No	No
ENERGY STAR Qualified (config dependent)	Yes	Yes	Yes	Yes
Aux Power Drop	No	No	No	No

BIOS

Vendor	AMI
Self-Healing BIOS	Yes

Chassis Information

Color	Raven Black
PSU	170W, 230W, 300W, and 330W Available, Autosensing
Thermal Solutions	One System Fan Standard
Dimensions	37mm / 1.5" H 182mm / 7.2" D 179mm / 7.0" W
Weight	1.4kg / 3lbs
Disclaimers	1. The system dimensions may vary depending on configurations. 2. The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

Packaging Dimensions

Height (mm/in)	141mm / 5.6"
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Width (mm/in)	268mm / 10.6"
Depth (mm/in)	490mm / 19.3"
Weight (kgs/lbs)	2.8kg / 6 lbs
Disclaimers	1. The system dimensions may vary depending on configurations. 2. The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

Security & Serviceability

TPM	Infineon SLB9672, FW 15.23, TPM 2.0
Asset ID	Yes, 1024 x 8bit
vPro	Intel vPro for WS (AMT 16.x)
Cable Lock Support	Yes, Standard
Serial, Parallel, USB, Audio, Network, Enable/Disable Port Control	Yes
Power-On Password	Yes
Setup Password	Yes
NIC LEDs (integrated)	Yes
Access Panel Key Lock	No
Boot Sequence Control	Yes
Padlock Support	No
Boot without keyboard and/or mouse	Yes
Access Panel	Tool-less Side Cover Removal
Optical Drive	Optional via External ODD Box
Expansion Cards	Retained With Screws
Processor Socket	Tool-less
Memory	Tool-less
System Board	Retained With Screws
Restore CD/DVD/USB Set	Not Included, Restore Media Available via Lenovo Customer Support Center

Operating Environment

Air Temperature	Operating: 5_ – 35_ (41F to 95F)
Storage	Storage: -40_C to 60_C (-40_F to 140_F) in Original Shipping Carton Storage: -10_C to 60_C (14_F to 140_F) Without Carton
Humidity	Relative Humidity Operating: 20% to 80% (non-condensing) Relative Humidity Storage/Transit: 10% to 90% (non-condensing) Wet Bulb Temperature Operating: 25_C (77_F) max Wet Bulb Temperature Non-operating: 40_C (104_F) max
Altitude	Operating: 0m to 3048m (0ft to 10000ft) Storage: 0m to 12,192m (0ft to 40000ft)
Vibration	Package Vibration: Random,1.04G at 2-200 Hz, 1 octave/min Operating Vibration: Random,0.27G at 5-500 Hz, 0.5 octave/min Non-Operating Vibration: Random,1.04G at 2-200 Hz, 1 octave/min
Shock	Operating Shock: Bottom half-sine pulse with a change in velocity of 37.4 cm/sec (14.7 inches/sec) Rack Operation Shock: 45-G faired square wave with a velocity change of 441 cm/sec (173.7 inches/sec) Non-operating Shock: 45-G faired square wave with a velocity change of 441 cm/sec (173.7 inches/sec)
Disclaimers	Extended operating temperatures are possible – please contact your Lenovo Rep

SECTION II: Platform Detail

Board Size	6.7" x 6.9" (171mm x 175mm)
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Layout	Custom ATX
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Motherboard Core

Processor Support	Intel Arrow Lake-S Series
Socket Type	Socket-V (LGA 1851)
Memory Support	DDR5 up to 6400MHz CSODIMM Memory (non-ECC) DDR5 up to 5600MHz SODIMM Memory (non-ECC)
Voltage Regulator	65W TDP Capable
Chipset (PCH)	Intel W880 Chipset
Flash	1 x 64MB
Super I/O	IT5652E
Clock	Intel Native isCLK
Audio	Realtek ALC233VB Codec
Ethernet	Intel Jacksonville I219-LM

Supported Components

Processor Level	Intel Arrow Lake
Processor	Intel Ultra 7 265 Intel Ultra 7 265T Intel Ultra 5 245 Intel Ultra 5 245T Intel Ultra 5 235 Intel Ultra 5 235T Intel Ultra 5 225 Intel Ultra 5 225T
Memory Type	CSODIMM 6400 MHz / SODIMM 5600 MHz
Memory	8GB 6400MHz DDR5 non-ECC CSODIMM 16GB 6400MHz DDR5 non-ECC CSODIMM 32GB 6400MHz DDR5 non-ECC CSODIMM 64GB 6400MHz DDR5 non-ECC CSODIMM 8GB 5600MHz DDR5 ECC SODIMM 16GB 5600MHz DDR5 ECC SODIMM 32GB 5600MHz DDR5 ECC SODIMM 48GB 5600MHz DDR5 ECC SODIMM
Disclaimers	*Memory speed dependent on CPU support.

Storage

M.2 PCIe Solid State Drive (SSD)	512GB M.2 PCIe SSD, Gen 5 x4, NVMe, OPAL 1024GB M.2 PCIe SSD, Gen 5 x4, NVMe, OPAL 2048GB M.2 PCIe SSD, Gen 5 x4, NVMe, OPAL 256GB M.2 PCIe SSD, Gen 4 x4, NVMe, OPAL 512GB M.2 PCIe SSD, Gen 4 x4, NVMe, OPAL 1024GB M.2 PCIe SSD, Gen 4 x4, NVMe, OPAL
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RAID

RAID Levels and Requirements	NVMe Drives Support RAID 0/1/5
Notes	Supported RAID levels for a system will vary from the stated capabilities of the RAID controller due to dependencies on the number and capacity of physical disks in the system and on customer requirements for performance, fault tolerance, or data redundancy.

Optical Drive/Removable Media

DVD-ROM Drive	Optional via External ODD Box – Slim DVD-ROM Drive
DVD Burner/CD-RW Drive	Optional via External ODD Box – Slim DVD Burner/CD-RW Drive

Keyboard and Pointing Devices

Keyboard	AI Traditional USB Keyboard AI Calliope USB Keyboard AI EOS Wireless Keyboard
Pointing Devices	Calliope USB Mouse

PCIe Adapters

Network	Intel I350-T2 Dual Port Gigabit Ethernet Adapter Intel I350-T4 Quad Port Gigabit Ethernet Adapter Broadcom 5720 NetXtreme PCIe 1Gb 2-port RJ45 Ethernet Adapter Broadcom 5719 NetXtreme PCIe 1Gb 4-port RJ45 Ethernet Adapter
WiFi Cards	Intel Gale Peak 2 BE200 WIFI7 + Bluetooth 5.4 PCIe
Parallel Card	4-Port Serial Expansion Card PCIe x1

SECTION III: Supported Component Detail

CPU Specifications Part 1

CPU	Intel Ultra 9 285T 1.4GHz/24C/24T/36M 35W	Intel Ultra 9 285 2.5GHz/24C/24T/36M 65W	Intel Ultra 7 265T 1.5GHz/20C/20T/30M 35W	Intel Ultra 7 265 2.4GHz/20C/20T/30M 65W	Intel Ultra 5 245T 2.2GHz/14C/14T/24M 35W
# of Cores	24C	24C	20C	20C	14C
# of Threads	24T	24T	20T	20T	14T
Processor Base Frequency	1.4 GHz	2.5GHz	1.5GHz	2.4GHz	2.2GHz
Max Turbo Frequency	5.4GHz	5.6GHz	5.3GHz	5.3GHz	5.1GHz
Cache	36M	36M	30M	30M	24M
TDP	35W	65W	35W	65W	35W

CPU Specifications Part 2

CPU	Intel Ultra 5 245 3.5GHz/14C/14T/24M 65W	Intel Ultra 5 235T 2.2GHz/14C/14T/24M 35W	Intel Ultra 5 235 3.4GHz/14C/14T/24M 65W	Intel Ultra 5 225T 2.5GHz/10C/10T/20M 35W	Intel Ultra 5 225 3.3GHz/10C/10T/20M 65W
# of Cores	14C	14C	14C	10C	10C
# of Threads	14T	14T	14T	10T	10T
Processor Base Frequency	3.5GHz	2.2GHz	3.4GHz	2.5GHz	3.3GHz
Max Turbo Frequency	5.1GHz	5.0GHz	5.0GHz	4.9GHz	4.9GHz
Cache	24M	24M	24M	20M	20M
TDP	65W	35W	65W	35W	65W

Solid State Storage Specifications Part 1

Drive	NVMe 2280 M.2 512GB Gen5 PCIe SSD (OPAL)	NVMe 2280 M.2 1TB Gen5 PCIe SSD (OPAL)	NVMe 2280 M.2 2TB Gen5 PCIe SSD (OPAL)
Dimensions Millimeters (W x D x H)	22x80x2.38mm	22x80x2.38mm	22x80x2.38mm
Interface Type	PCIe Gen 5×4	PCIe Gen 5×4	PCIe Gen 5×4
Power Active (AVG)	10W	10W	10W
Power Idle	50mW	50mW	50mW
Typical Sequential Read	13000 MB/s	13800 MB/s	13800 MB/s
Typical Sequential Write	6000 MB/s	11000 MB/s	12000 MB/s
Burst Random Read (4K Queue Depth 32/8 thread);	1400K IOPS	2200K IOPS	2200K IOPS
Burst Random Write (4K Queue Depth 32/8 thread)	1600K IOPS	1600K IOPS	1700K IOPS
Operating Temperature Range	0 to 70C	0 to 70C	0 to 70C

Endurance Rating (Lifetime Writes)	150 TB	300 TB	600 TB
Mean Time Between Failures (MTBF)	2.0M POH	2.0M POH	2.0M POH
Hardware Encryption	AES 256 bit	AES 256 bit	AES 256 bit

Solid State Storage Specifications Part 2

Drive	NVMe 2280 M.2 256GB Gen4 PCIe SSD (OPAL)	NVMe 2280 M.2 512GB Gen4 PCIe SSD (OPAL)	NVMe 2280 M.2 1TB Gen4 PCIe SSD (OPAL)
Dimensions Millimeters (W x D x H)	22x80x2.38mm	22x80x2.38mm	22x80x2.38mm
Interface Type	PCIe Gen 4×4	PCIe Gen 4×4	PCIe Gen 4×4
Power Active (AVG)	5.8W	5.8W	5.8W
Power Idle	35mW	35mW	35mW
Typical Sequential Read	5500 MB/s	6900 MB/s	6900 MB/s
Typical Sequential Write	3000 MB/s	6200 MB/s	6800 MB/s
Burst Random Read (4K Queue Depth 32/8 thread);	600K IOPS	660K IOPS	680K IOPS
Burst Random Write (4K Queue Depth 32/8 thread)	650K IOPS	600K IOPS	600K IOPS
Operating Temperature Range	0 to 70C	0 to 70C	0 to 70C
Endurance Rating (Lifetime Writes)	75 TB	150 TB	300 TB
Mean Time Between Failures (MTBF)	2.0M POH	2.0M POH	2.0M POH
Hardware Encryption	AES 256 bit	AES 256 bit	AES 256 bit

Integrated Graphics Adapter

Type	Intel Graphics
Display Interface	1x DP 1.2, 1x HDMI 2.0
Video Resolution (max)	4096×2304 @ 60Hz (DP) , 4096×2160@60Hz (HDMI)

Discrete Graphics Adapter

Adapter	Nvidia RTX A1000(miniDP x4) – 8GB GDDR6	Nvidia RTX A400(miniDP x4) – 4GB GDDR6
Bus Interface	PCI Express 4.0 _8	PCI Express 4.0 _8
Display Interface	Four mini-DisplayPort connectors	Four mini-DisplayPort connectors
Memory Clock Frequency (MHz)	6001MHz	6001MHz
Memory Size	8GB	4GB
Memory Interface	128bit	64bit
Memory Bandwidth	Up to 192GB/s	Up to 96GB/s
GPU Core Frequency (MHz)	Base:727 MHz Boost:1462 MHz Max Boost:2100 MHz	Base:1417 MHz Boost:1762 MHz Max Boost:2100 MHz
Maximum Power Consumption	50W	50W
Supported Resolutions and Max Refresh Rates (Hz) (Note: Analog and/or Digital)	DisplayPort 1.4a Maximum pixel clock: 2660M Pixels per second Maximum bandwidth: 32.4 Gbps Example of maximum resolutions with CVT-RB timings: 7680 _ 4320 _ 24 bpp at 120 Hz 7680 _ 4320 _ 36 bpp at 60 Hz 5120 _ 3200 _ 24 bpp at 60 Hz Up to four simultaneous displays	DisplayPort 1.4a Maximum pixel clock: 2660M Pixels per second Maximum bandwidth: 32.4 Gbps Example of maximum resolutions with CVT-RB timings: 7680 _ 4320 _ 24 bpp at 120 Hz 7680 _ 4320 _ 36 bpp at 60 Hz 5120 _ 3200 _ 24 bpp at 60 Hz Up to four simultaneous displays
Thermal Solution	Active	Active
Dimension	2.713 inches _ 6.463 inches, single-slot	2.713 inches _ 6.463 inches, single-slot

Ethernet Specifications Group 1 Part 1

Card	Intel Wi-Fi 7 BE200 PCIe M.2 module	Intel I350-T2 Dual Port Gigabit Ethernet Adapter (Stony Lake T2)	Intel I350-T4 Quad Port Gigabit Ethernet Adapter (Stony Lake T4)
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Supplier PN	BE200.NCWC, MM# 99C462	I350T2G1P20, MM# 928941	I350T4G1P20, MM# 928942
Data Rates Supported	2.4G/5G/6G	10/100/1000Mbps (Copper)	10/100/1000Mbps (Copper)
Controller Details	Intel Wi-Fi 7 BE200	Intel Ethernet Controller I350	Intel Ethernet Controller I351
Controller Bus Architecture	PCIe 2.1 (5GT/s)	PCIe 2.1 (5GT/s)	PCIe 2.1 (5GT/s)
Data Transfer Mode	WLAN	Ethernet	Ethernet
Power Consumption	M.2 power supply: supply: 3.3V worst case: 2000mA	Copper: I350-T2 V2= 4.4W	Copper: I350T4V2= 5W
IEEE Standards Compliance	IEEE 802.11 be IEEE 802.11 a/b/d/e/g/h/i/l/k/n/r/u/v/w/ac/ax	IEEE 802.3/10BASE-T, 100BASE-TX, 1000BASE-T	IEEE 802.3/10BASE-T, 100BASE-TX, 1000BASE-T
Boot ROM Support	Wireless Functionality in Pre-boot Environment WiFi UEFI	PXE boot, Intel iSCSI Remote Boot for Windows, Linux and Vmware, Intel BootAgent Software via PXE or BootP, WDMS or UEFI	PXE boot, Intel iSCSI Remote Boot for Windows, Linux and Vmware, Intel BootAgent Software via PXE or BootP, WDMS or UEFI
Network Transfer Mode (Full/Half Duplex)	NA	Supported	Supported
Network Transfer Rate	NA	1,000Mbps Full Duplex	1,000Mbps Full Duplex
Operating System Driver Support	Windows 11, Linux, Free BSD	Windows 10/11, Linux, Free BSD, XEN, Vmware	Windows 10/11, Linux, Free BSD, XEN, Vmware
Manageability	Supported	Supported	Supported
Manageability Capabilities Alerting	Supported	Supported	Supported
Lithography		NA	
TDP	NA	Firmware Based Thermal Management	Firmware Based Thermal Management
Operating Temperature Range	0C to 50C	0C to 55C (32F to 131F)	0C to 55C (32F to 131F)
# of Ports	NA	2	4
Data Rate Per Port	2x2	10/100/1000Mbps (copper), 1000Mbps (fiber)	10/100/1000Mbps (copper), 1000Mbps (fiber)
System Interface Type	M.2: PCIe*, USB	PCIe Gen 2.1	PCIe Gen 2.1
NC Sideband Interface	Not Available	Not Available	Not Available
Jumbo Frames Supported	Yes	Yes	Yes
1000Base-T	NA	Yes	Yes
MACsec IEEE 802.1 AE		NA	
IEEE 1588	NA	Supported	Supported
Supported Under vPro	Supported	Not Available	Not Available

Ethernet Specifications Group 1 Part 2

Model	Intel Wi-Fi 7 BE200 PCIe M.2 module	Intel I350-T2 Dual Port Gigabit Ethernet Adapter (Stony Lake T2)	Intel I350-T4 Quad Port Gigabit Ethernet Adapter (Stony Lake T4)
Connector	RF cable	2 x Ports RJ-45 Copper	4 x Ports RJ-45 Copper
Website	BE200	I350 T2	I350 T4
Auto-Negotiation	IEEE 802.11 be Auto-negotiaton	IEEE* 802.3* Auto-negotiaton	IEEE* 802.3* Auto-negotiaton
Intel vPro	Supported	Not Available	Not Available
Intel  Standard Manageability	Supported	Supported	Supported
Power Optimizer Platform Low-power Management Systems	Supported	Supported	Supported
Energy Efficient Ethernet	Supported	Supported	Supported
TCP/UDP Checksum and Segmentation Offload (IPv4 and IPv6)	Supported	Supported	Supported
Receive Side Scaling	Supported	Supported	Supported
Dual Tx and Rx Queues	Yes	Yes	Yes
Jumbo Frames (up to 9KB)	Supported	Supported	Supported
Teaming	Supported	Supported	Supported
Wake from Deep Sx	Supported(S4)	Supported	Supported
Server Operating System Support	Windows Server 2008, 2012, 2016, 2019 Linux (RHEL/SLES), Free BSD, Xen, Vmware	Windows Server 2008, 2012, 2016, 2019 Linux (RHEL/SLES), Free BSD, Xen, Vmware	Windows Server 2008, 2012, 2016, 2019 Linux (RHEL/SLES), Free BSD, Xen, Vmware
Network Proxy/ARP Support	Supported	Supported	Supported

SECTION IV: BIOS / Certifications / Standards / Environmental

BIOS Specifications

WMI Support	Compliant with Microsoft WBEM and the DMTF common information model
ROM-Based Setup Utility (F1)	System configuration setup program (text/graphic interface) available at power-on with F1 key
Bootblock Recovery	Recovers system BIOS if the flash ROM is corrupted
Replicated Setup	Saves system configuration settings to a file that can then be used to replicate the settings to other systems
Boot Control	Boot control available through ROM-based setup utility or with F12 key at power-on
Memory Change Alert	Power-on error message in the event of a decrease in system memory
Thermal Alert	Power-on error message in the event of a fan failure
Asset Tag	Supports ability to set SMBIOS type 2 baseboard asset tag field
System/Emergency ROM Flash Recovery with Video	Supports process to recover the system BIOS if the flash ROM is corrupted
Remote Wakeup/Remote Shutdown	System admin can power on/off a client computer from a remote location to provide maintenance
Quick Resume Time	Supports low power S3 (suspend to RAM) and prompt resume times
ROM Revision Level	System UEFI (BIOS) version reported in SMBIOS type 0 structure and in BIOS setup
Keyboard-less Operation	System can be booted without a keyboard
Per-port Control	Allows I/O ports to be individually enabled/disabled through ROM-based setup or WMI interface
Adaptive Cooling	Offers multiple settings for fan control ranging between better performance and better acoustics
Security	Supervisor, user and power-on passwords can protect boot and ROM-based setup - Chassis Intrusion Detection - UEFI Secure Boot Support - HDD Password Can Protect HDD Data - Windows UEFI Firmware Update Support - Device Guard Support - BIOS Guard, Boot Guard Support
Intel(R) AMT (includes ASF 2.0)	Allows system to be supported from a remote location
Intel(R) TXT	Intel(R) trusted execution technology provides a security foundation to build protections against software based attacks
Memory Modes	Supports mirroring, lock step, and sparing memory modes
Windows 10 Ready	Supports Windows 10 requirements for secure flash, UEFI v 2.7 device guard support spec

Industry Standard Specification Support

UEFI	Unified Extensible Firmware Interface v2.7
ACPI (Advanced Configuration and power Management Interface)	Advanced Configuration and Power Interface v6.2
ASF 2.0	DMTF Alert Standard Format Specification v2.0
ATA (IDE)	AT Attachment 6 with Packet Interface (ATA/ATAPI-6)
CD Boot	EI Torito Bootable CD-Rom Format Specification, v1.0
EHCI	Enhanced Host Controller Interface for Universal Serial Bus, Revision v1.0
PCI	PCI Local Bus v3.0 PC Firmware Specification 3.1
PCI Express	PCI Express Base Specification v5.0
SATA	Serial ATA Revision 3.0 Specification
TPM	Trusted Computing Group TPM Specification v2.0
UHCI	Universal Host Controller Interface Design Guide, Revision v1.1
USB	Universal Serial Bus Revision v1.1 Universal Serial Bus v2.0 Universal Serial Bus v3.0 Universal Serial Bus v3.2
SMBIOS	DMTF System Management Spec v3.2.1
XHCI	XHCI SPEC Revision v1.2

Social and Environmental Responsibility

Quality Control	Lenovo is a member of an eco declaration system that enforces regular independent quality control
Hazardous Substances and Preparation	Products do not contain more than; 0.1% lead, 0.01% cadmium, 0.1% mercury, 0.1% hexavalent chromium, 0.1% polybrominated biphenyls (PBB) or 0.1% polybrominated diphenyl ethers (PBDE). (See legal reference and Note B1) Products do not contain Asbestos Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), hydrobromofluorocarbons (HBFC), hydrochlorofluorocarbons (HCFC), Halons, carbontetrachloride, 1,1,1-trichloroethane, methyl bromide Products do not contain more than; 0.005% polychlorinated biphenyl (PCB), 0.005% polychlorinated terphenyl (PCT) in preparation Products do not contain more than 0.1% short chain chloroparaffins (SCCP) with 10-13 carbon atoms in the chain containing at least 48% per mass of chlorine in the SCCP Parts with direct and prolonged skin contact do not release nickel in concentrations above 0.5 microgram/cm_/week REACH Article 33 information about substances in articles is available at: https://www.lenovo.com/us/en/social_responsibility/social_responsibility_resources/
Batteries	UN38.3,MSDS
Safety, EMC Connection to the Telephone Network and Labeling	Not applicable

Acoustic Noise Emissions Declaration

LWAd(bels) Idle	3.1
LWAd(bels) Oper	3.7

Safety, EMC Connection to the Telephone Network and Labeling

Industry Standard Specifications	not applicable
Remote Manageability Software Solutions	not applicable
System Software Manager	Lenovo ThinkStation supports software management tools by Lenovo Vantage.

Regulations & Standards

EMC & Safety	FCC/IC VCCI BSMI KC RCM TUV-GS cTUVus IEC60950-1&IEC62368 CB Report/Certificate Saudi Arabia EQM Kuwait KUCAS China CCC Mark South Africa SABS Russia/Belarus/Kazakhstan/Kyrgyzstan/Armenia-EAC Morocco-CM Mexico-NOM Serbia KVALITET Ukraine UKRCEPRO India-BIS China SRRC Indonesia-SDPPI Malaysia-SIRIM Philippines-NTC
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Environmentals

Energy Star	ENERGY STAR 9.0
EPEAT	EPEAT Certification Available on Select Models
ErP Lot-3 2013	Yes
Hazardous Substances	Products do not contain more than; 0.1% lead, 0.01% cadmium, 0.1% mercury, 0.1% hexavalent chromium, 0.1% polybrominated biphenyls (PBB) or 0.1% polybrominated diphenol ethers (PBDE) Products do not contain Asbestos Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), hydrobromofluorocarbons (HBFC), hydrochlorofluorocarbons (HCFC), Halons, carbontetrachloride, 1,1,1-trichloroethane, methyl bromide Products do not contain more than; 0.005% polychlorinated biphenyl (PCB), 0.005% polychlorinated terphenyl (PCT) in preparation Products do not contain more than 0.1% short chain chloroparaffins (SCCP) with 10-13 carbon atoms in the chain containing at least 48% per mass of chlorine in the SCCP Parts with direct and prolonged skin contact do not release nickel in concentrations above 0.5 microgram/cm_/week
Materials Used	System 35% PCC recycled plastic in Front and Rear Bezel Packaging

	Carton: 90% Recycled and/or FSC certified content3 Cushion: 90% Recycled EPE
TCO Certification	10.0
Disclaimers	EPEAT registered where applicable. EPEAT registration varies by country. See www.epeat.net for registration status by country.