

# **PERFORMANCE**

### **Processor**

### **Processor Family**

Up to one Intel® Xeon®, Core™ i9, i7, i5, or i3 processor

#### **Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-10100	4	8	3.6GHz	4.3GHz	6MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10300	4	8	3.7GHz	4.4GHz	8MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10320	4	8	3.8GHz	4.6GHz	8MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10400	6	12	2.9GHz	4.3GHz	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10500	6	12	3.1GHz	4.5GHz	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10600	6	12	3.3GHz	4.8GHz	12MB	DDR4-2666	Intel UHD Graphics 630
Core i7-10700	8	16	2.9GHz	4.8GHz	16MB	DDR4-2933	Intel UHD Graphics 630
Core i9-10900	10	20	2.8GHz	5.2GHz	20MB	DDR4-2933	Intel UHD Graphics 630
Xeon W-1250	6	12	3.3GHz	4.7GHz	12MB	DDR4-2666	Intel UHD Graphics P630
Xeon W-1270	8	16	3.4GHz	5.0GHz	16MB	DDR4-2933	Intel UHD Graphics P630
Xeon W-1290	10	20	3.2GHz	5.2GHz	20MB	DDR4-2933	Intel UHD Graphics P630

### **Processor Sockets**

1x FCLGA1200

# **Operating System**

# **Operating System**

- Windows® 10 Home 64
- Windows 10 Pro 64
- Windows 10 Pro 64 for Workstations
- Ubuntu Linux LTS
- No operating system

# **Graphics**

# **Integrated Graphics**

- Intel UHD Graphics 630
- Intel UHD Graphics P630

### **Discrete Graphics Support**

Supports up to two NVIDIA® Quadro® P1000

# **Discrete Graphics Offering**

Graphics	Memory	Power	Connector	SLI / NVlink
Quadro P400	2GB GDDR5	30W	3x miniDP	None
Quadro P620	2GB GDDR5	40W	4x miniDP	None
Quadro P1000	4GB GDDR5	50W	4x miniDP	None

# **Monitor Support**

### **Monitor Support**

Supports multiple displays via onboard video ports and discrete graphics

# **Chipset**

### Chipset

Intel W480 chipset

# **Memory**

# **Memory Type**

# ThinkStation P340 SFF



- DDR4-2933 UDIMM ECC
- DDR4-2933 UDIMM non-ECC

#### **Memory Slots**

4 DIMM sockets with 2 channels

### **Memory Protection**

ECC on models with ECC DIMMs and Xeon processor

### Max Memory[1]

Up to 128GB

### Notes:

1. The max memory is based on the test results with current Lenovo® memory offerings. The system may support more memory as the technology develops.

# **Storage**

### **Storage Support**

Up to 1x 3.5" SATA HDD / 2x 2.5" SATA HDD / SSD + 4x M.2 PCle SSD

- 3.5" HDD up to 4TB
- 2.5" SATA HDD up to 1TB each
- 2.5" SATA SSD up to 1TB each
- M.2 SSD up to 2TB each
- Optional Intel Optane<sup>™</sup> Memory

### **Storage Controllers**

Storage Controller	Туре	Interface	RAID	Cache
Onboard Intel RST PCIe RAID	Standard	PCIe NVMe	0/1	None
Onboard Intel RST SATA RAID	Standard	SATA 6.0Gb/s	0/1	None

### **Storage Type**

Disk Type	Interface	RPM	Offering
3.5" SATA HDD	SATA 6Gb/s	7.2K	1TB/2TB/4TB/6TB
2.5" SATA HDD	SATA 6Gb/s	7.2K	1TB FIPS
2.5" SATA SSD	SATA 6Gb/s	-	512GB/1TB
M.2 PCle SSD	PCIe NVMe	-	256GB/512GB/1TB/2TB

# **Removable Storage**

### **Optical Support**

Optional one 9.0mm optical drive, DVD-ROM, DVD±RW, and Blu-ray

### **Card Reader**

- · SD card reader
- No card reader

### Multi-Media

#### **Audio Chip**

High Definition (HD) Audio, Realtek® ALC623 codec

# **Power Supply**

# **Power Supply**

Power	Туре	Efficiency	Key Features
310W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
380W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified

# **DESIGN**

# Mechanical



#### **Form Factor**

Mini-tower (8.2L)

### **Dimensions (WxDxH)**

92.5 x 309.7 x 339.5 mm (3.6 x 9.3 x 13.4 inches)

#### Weight

5.65 kg (12.46 lbs, maximum configuration)

#### **Bays**

- 1x 2.5" disk bay (optional, comes with disk or Storage Bay Upgrade Kit)
- 1x 3.5" disk bay (optional, comes with disk or Storage Bay Upgrade Kit)

#### M.2 Slots

Up to 4x M.2 SSD:

- 2 via onboard slots
- 2 via Single M.2 to PCle adapter

#### **Expansion Slots**

- Two PCIe 3.0 x16
- One PCle 3.0 x1

#### **Expansion Slots Offering**

Slot 1: PCle 3.0 x16, low profile, links to CPU

Slot 2: PCle 3.0 x1, low profile, links to PCH

Slot 3: PCIe 3.0 x16 (negotiable link width x4), low profile, links to PCH

# CONNECTIVITY

### **Network**

#### **Onboard Ethernet**

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ45, supports Wake-on-LAN

#### **Optional Ethernet**

Additional Ethernet options via PCIe adapter

#### WLAN + Bluetooth™

- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- No WLAN and Bluetooth

# **Ports**

# Front Ports[1]

- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x USB-C 3.2 Gen 1
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

### Rear Ports[2]

- 2x USB 2.0
- 2x USB 3.2 Gen 1
- 1x serial (9-pin)
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)
- 2x DisplayPort™

# **Optional Rear Ports**

- 2x USB 2.0
- 2x USB-C 3.2 Gen 2 (via 2-port USB-C expansion card)
- 1x video (DisplayPort, HDMI®, or USB-C)
- 1x Thunderbolt™
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCle x1)
- 1x serial
- 4x serial (via 4-port serial expansion card, PCle x1)
- 1x parallel
- 2x PS/2



#### Notes:

1. The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed. USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formely USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formely USB 3.1 Gen 2): 10 Gbit/s;

USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

Thunderbolt 3: 40 Gbit/s;

FireWire 400: 400 Mbit/s;

FireWire 800: 800 Mbit/s;

2. For video ports on discrete graphics, please see graphics section

### SECURITY & PRIVACY

# **Security**

#### **Security Chip**

Discrete TPM 2.0, TCG certified

### **Physical Locks**

- (Optional) E-lock
- (Optional) Cable lock
- Kensington® Security Slot

#### **Chassis Intrusion Switch**

- · Chassis intrusion switch
- · No chassis intrusion switch

#### **BIOS Security**

- Power-on password
- Administrator password

### **MANAGEABILITY**

### **System Management**

# **System Management**

- · Intel vPro Technology, DASH
- · Standard Manageability

# **SERVICE**

### Warranty

#### **Base Warranty**

3-year limited onsite service (with 9x5 NBD, for most models)

### **ENVIRONMENTAL**

# **Environmental Specifications**

# **Temperature**

Operating: 10° C to 35° C (50° F to 95° F)

Storage:  $-40^{\circ}$ C to  $60^{\circ}$ C ( $-40^{\circ}$ F to  $140^{\circ}$ F) in original shipping carton

Storage: -10°C to 60°C (14°F to 140°F) without carton

### Altitude

Operating: -15.2m to 3048m (-50ft to 10000ft) Storage: -15.2m to 10668m (-50ft to 35000ft)

### Humidity

Relative Humidity Operating: 10% 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:  $40^{\circ}$ C ( $104^{\circ}$ F) max

# **CERTIFICATIONS**

# **Green Certifications**

### **Green Certifications**

- EPEAT™ Silver
- ENERGY STAR® 8.0
- RoHS compliant

# **ISV Certifications**

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Please visit www.thinkworkstations.com/isv-certifications/













