# T1A ThinkStation Lenovo P330 Refurbished Intel® Core™ i7 i7-8700T 16 GB DDR4-SDRAM 512 GB SSD NVIDIA® Quadro® P620 Windows 10 Pro Mini PC Workstation Black

**Brand :** T1A

**Product family:** ThinkStation

**Product code:** D-P330-MU-T001

**Product name :** Lenovo ThinkStation P330 Refurbished

Lenovo P330 Tiny Workstation, Intel Core i7-8700T 2.4GHZ, 512 GB NVMe, 16 GB RAM, NVIDIA Quadro P620 miniDP, WIN 10 PRO
T1A ThinkStation Lenovo P330 Refurbished. Processor frequency: 2.4 GHz, Processor family: Intel® Core™ i7, Processor model: i7-8700T. Internal memory: 16 GB, Internal memory type: DDR4-SDRAM, Memory clock speed: 2666 MHz. Total storage capacity: 512 GB, Storage media: SSD. On-board graphics card model: Intel® UHD Graphics 630, Discrete graphics card model: NVIDIA® Quadro® P620. Operating system installed: Windows 10 Pro, Operating system architecture: 64-bit. Power supply: 135 W. Chassis type: Mini PC. Product type: Workstation

## Processor

| | |
|---|---|
| Processor manufacturer * | Intel |
| Processor family * | Intel® Core™ i7 |
| Processor generation | 8th gen Intel® Core™ i7 |
| Processor model * | i7-8700T |
| Processor cores | 6 |
| Processor threads | 12 |
| Processor boost frequency | 4 GHz |
| Processor frequency * | 2.4 GHz |
| Processor socket | LGA 1151 (Socket H4) |
| Processor cache | 12 MB |
| Processor cache type | Smart Cache |
| System bus rate | 8 GT/s |
| Bus type | DMI3 |
| Processor lithography | 14 nm |
| Processor operating modes | 64-bit |
| Processor codename | Coffee Lake |
| Thermal Design Power (TDP) | 35 W |
| Configurable TDP-down | 25 W |
| Configurable TDP-down frequency | 1.9 GHz |
| Tjunction | 100 °C |
| PCI Express slots version | 3.0 |
| Maximum number of PCI Express lanes | 16 |
| PCI Express configurations | 1x16, 1x8+2x4, 2x8 |
| Number of processors installed | 1 |
| Stepping | U0 |
| Maximum internal memory supported by processor | 64 GB |
| Memory types supported by processor | DDR4-SDRAM |
| Memory clock speeds supported by processor | 2666 MHz |
| Memory bandwidth supported by processor (max) | 41.6 GB/s |

## Memory

| | |
|---|---|
| Internal memory * | 16 GB |
| Internal memory type | DDR4-SDRAM |
| Memory slots | 2x SO-DIMM |

## Ports & interfaces

| | |
|---|---|
| Combo headphone/mic port | ✓ |
| On/off button | ✓ |

## Design

| | |
|---|---|
| Chassis type * | Mini PC |
| Volume | 1 L |
| Placement supported | Horizontal/Vertical |
| Water cooling system | ✗ |
| Product colour * | Black |
| Refurbished | ✓ |

## Performance

| | |
|---|---|
| Motherboard chipset | Intel Q370 |
| Audio chip | Realtek ALC233 |
| Audio system | High Definition Audio |
| Password protection | ✓ |
| Password protection type | Power on |
| Trusted Platform Module (TPM) | ✓ |
| Product type * | Workstation |

## Software

| | |
|---|---|
| Operating system installed * | Windows 10 Pro |
| Operating system architecture | 64-bit |

## Processor special features

| | |
|---|---|
| Intel 64 | ✓ |
| Enhanced Intel SpeedStep Technology | ✓ |
| Embedded options available | ✓ |
| Intel® InTru™ 3D Technology | ✓ |
| Intel® Clear Video HD Technology (Intel® CVT HD) | ✓ |
| Intel Clear Video Technology | ✓ |
| Intel VT-x with Extended Page Tables (EPT) | ✓ |
| Intel TSX-NI | ✓ |
| Idle States | ✓ |
| Thermal Monitoring Technologies | ✓ |
| Intel Stable Image Platform Program (SIPP) | ✓ |

## Memory

| | |
|---|---|
| Memory clock speed | 2666 MHz |
| Non-ECC | ✔ |

## Storage

| | |
|---|---|
| Total storage capacity * | 512 GB |
| Storage media * | SSD |
| Optical drive type * | ✘ |
| Number of storage drives installed | 1 |
| Total SSDs capacity | 512 GB |
| Number of SSDs installed | 1 |
| SSD capacity | 512 GB |
| NVMe | ✔ |
| Card reader integrated | ✘ |

## Graphics

| | |
|---|---|
| Discrete graphics card * | ✔ |
| On-board graphics card * | ✔ |
| Discrete graphics card model * | NVIDIA® Quadro® P620 |
| Discrete graphics card memory | 2 GB |
| Discrete graphics memory type | GDDR5 |
| Number of discrete graphics cards | 1 |
| On-board GPU manufacturer | Intel |
| On-board graphics card family | Intel® UHD Graphics |
| On-board graphics card model * | Intel® UHD Graphics 630 |
| On-board graphics card base frequency | 350 MHz |
| On-board graphics card dynamic frequency (max) | 1200 MHz |
| Maximum on-board graphics card memory | 64 GB |
| Number of displays supported (on-board graphics) | 3 |
| On-board graphics card DirectX version | 12.0 |
| On-board graphics card OpenGL version | 4.5 |
| On-board graphics card ID | 0x3E92 |
| Graphics card Mini DisplayPort ports quantity | 4 |

## Network

| | |
|---|---|
| Ethernet LAN * | ✔ |
| Ethernet LAN data rates | 10,100,1000 Mbit/s |
| Cabling technology | 10/100/1000Base-T(X) |

## Ports & interfaces

| | |
|---|---|
| USB 3.2 Gen 1 (3.1 Gen 1) Type-A ports quantity * | 3 |
| USB 3.2 Gen 1 (3.1 Gen 1) Type-C ports quantity * | 1 |
| USB 3.2 Gen 2 (3.1 Gen 2) Type-A ports quantity * | 2 |
| DVI port | ✘ |
| HDMI ports quantity * | 1 |
| DisplayPorts quantity | 1 |
| Ethernet LAN (RJ-45) ports | 1 |
| Microphone in | ✔ |
| Headphone outputs | 1 |

## Processor special features

| | |
|---|---|
| Intel® AES New Instructions (Intel® AES-NI) | ✔ |
| Intel® Secure Key | ✔ |
| Intel® OS Guard | ✔ |
| Intel Trusted Execution Technology | ✔ |
| Execute Disable Bit | ✔ |
| Intel Enhanced Halt State | ✔ |
| Intel Software Guard Extensions (Intel SGX) | ✔ |
| Intel® Clear Video Technology for Mobile Internet Devices (Intel CVT for MID) | ✔ |
| Processor package size | 37.5 x 37.5 mm |
| Supported instruction sets | AVX 2.0, SSE4.1, SSE4.2 |
| Processor code | SR3WX |
| Scalability | 1S |
| CPU configuration (max) | 1 |
| Thermal solution specification | PCG 2015A |
| Intel Virtualization Technology for Directed I/O (VT-d) | ✔ |
| Intel Identity Protection Technology version | 1.00 |
| Intel Stable Image Platform Program (SIPP) version | 1.00 |
| Intel Secure Key Technology version | 1.00 |
| Intel Virtualization Technology (VT-x) | ✔ |
| Intel TSX-NI version | 1.00 |
| Processor ARK ID | 129948 |
| Intel® Turbo Boost Technology | 2.0 |
| Intel® Hyper Threading Technology (Intel® HT Technology) | ✔ |
| Intel® Quick Sync Video Technology | ✔ |
| Intel® Identity Protection Technology (Intel® IPT) | ✔ |
| Conflict-Free processor | ✔ |

## Power

| | |
|---|---|
| Power supply * | 135 W |
| Power supply input voltage | 100 - 240 V |

## Operational conditions

| | |
|---|---|
| Operating temperature (T-T) | 10 - 35 °C |
| Storage temperature (T-T) | -40 - 60 °C |
| Operating relative humidity (H-H) | 20 - 80% |
| Storage relative humidity (H-H) | 20 - 90% |
| Operating altitude | -15.2 - 3048 m |
| Non-operating altitude | -15.2 - 10668 m |

## Certificates

| | |
|---|---|
| Compliance certificates | RoHS |

## Sustainability

| | |
|---|---|
| Sustainability certificates | EPEAT Gold, ENERGY STAR |

## Weight & dimensions

| | |
|---|---|
| Width * | 36.5 mm |
| Depth * | 182.9 mm |
| Height * | 179 mm |
| Weight * | 1.4 kg |

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