ThinkCentre M90n-1 Nano IoT 11AH0012US

Product
ThinkCentre M90n-1 Nano IoT

Region
NA

Country/Region
USA

Machine Type
11AH

TopSeller
TopSeller

Processor
Core i3-8145U (2C / 4T, 2.1 / 3.9GHz, 4MB)

Graphics
Integrated Intel UHD Graphics 620

Monitor Cable
1x Type-C to HDMI

Memory
4GB Soldered DDR4-2666

Storage
512GB SSD M.2 2280 PCIe x4 NVMe opal

Optical
None

WLAN + Bluetooth
Intel 9560 11ac, 2x2 + BT5.0

Ethernet
RTL8111K + RTL8111HN, 2x RJ45

Chassis Intrusion Switch
Chassis Intrusion Switch

Kensington Cable Lock
None

Adapter Cage
None

Speaker
1Wx1

Dust Filter
None

VESA Mount
None

Stand
None

Keyboard / Mouse
2.4G / 2.4G

Power Supply
65W 88% Adapter

TUV Low Noise
None

System Management
None

Operating System
Windows 10 Pro 64

Bundled Software
None

Base Warranty
3-year, Onsite

Upsell Service Bundles
None

End of Support
2025-09-20

Announce Date
2019-08-20

Recommended Services

Good

3Y Premier Support Upgrade from 3Y Onsite
(5WS0V07841)

Notes:

California Electronic Waste Recycling Fee
In California, per state law, Lenovo charges an electronic waste recycling fee on this covered device at the time of sale of the product. For more information, go to:
https://www.calrecycle.ca.gov/Electronics/Consumer

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PSREF **https://psref.lenovo.com**
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ThinkCentre M90n-1 Nano IoT Platform Specifications

Processor	Intel® Celeron® or 8th Generation Intel Core™ i3 Processor					
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics
	Celeron 4205U	2 / 2	1.8G	2 MB	DDR4-2133	UHD 610
	Core i3-8145U	2 / 4	2.1G / 3.9G	4 MB	DDR4-2400	UHD 620

Memory
4GB / DDR4-2666* / soldered to systemboard, no sockets, non-ECC
* System automatically clocks down for the processors with lower memory controller

Storage
Support up to two M.2 SSD
Some: M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4*
Some: M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2
Some: Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4 (not support Celeron)
* M.2 SSD / Optane with SSD in PCIe 3.0 x 2 M.2 slot can only run at PCIe 3.0 x2

RAID
RAID 0/1 support (RAID preset only available via special bid model)

Optical
None

Graphics
Intel UHD Graphics 610/620 in processor, uses main memory, DirectX® 12, one DisplayPort™, one USB 3.1 Type-C Gen2 with display function, up to 2 independent displays;
Max resolution: 4096x2304 (DP)@60Hz; 4096x2304 (Type-C)@60Hz;

Monitor cable
Optional DP to VGA dongle, DP to HDMI dongle, Type-C to VGA dongle, Type-C to HDMI dongle, Type-C to DP dongle

Chipset
Intel SoC (System on Chip) platform

Front ports (Std.)*
2x USB 3.1 Gen2, 1x USB 3.1 Type-C Gen 2, one headphone / microphone combo jack (3.5mm), 2x serial

Rear ports (Std.)*
With Celeron: 1x USB 2.0, 1x USB 3.1 Type-C Gen 2 (with display function, support power-in [20V, > 45W]), 1x ethernet (RJ-45), 1x DisplayPort
With Core i3: 1x USB 3.1 Gen2, 1x USB 3.1 Type-C Gen 2 (with display function, support power-in [20V, > 45W]), 2x ethernet (RJ-45), 1x DisplayPort
* Depending on many factors, actual data transfer speed may be lower than theoretical speed

Audio support
Realtek ALC233VB / internal speaker (1watt)

WLAN
Some: 11ac wireless, M.2 Card, Realtek RTL8822CE (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, 1x1
Some: 11ac wireless, M.2 Card, Realtek RTL8822CE (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, 2x2
Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9462 (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, 1x1
Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, 2x2
Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, Intel vPro technology support, 2x2

Bluetooth
Some: Bluetooth 5.0 wireless, integrated in Wi-Fi + BT combo adapter

Ethernet
With Celeron: Gigabit ethernet, Realtek RTL8111K, 1x RJ-45, Wake on LAN®
With Core i3: Two gigabit ethernet, Realtek RTL8111K and RTL8111HN, 2x RJ-45 Wake on LAN®

Manageability
None

Security chip
Discrete TPM 2.0, TCG Certified

Security features
- Security slot (in rear for optional Kensington® MicroSaver® cable)
- Chassis intrusion switch
- Power-on password
- Administrator password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Individual USB port disablement

Keyboard
Some: Lenovo Calliope Keyboard (USB connector), black
Some: Lenovo Traditional Keyboard (USB connector), black
Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black

Mouse
Some: Lenovo Calliope Mouse (USB connector), black
Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black

Mechanical
Nano (fanless 0.55L), black color; metal case
Four M.2 slots: two for M.2 SSD (one PCIe 3.0 x4 and one PCIe 3.0 x2), one for WLAN, and one for WWAN

	Dimensions (WxDxH)	Weight (Approx.)
M90n-1 Nano IoT (fanless, 0.55L)	7.05" X 3.46" X 1.36" 179mm X 88mm X 34.5mm	1.58 lb (0.72 kg), vary by config

Mounting
Some: VESA mount bracket kit, supports VESA 75mm
Some: VESA mount bracket kit with adaper holder, supports VESA 75mm
Some: DIN rail mount bracket kit

Floor Stand
None

Power supply
Some: 65 watts AC/DC adapter, autosensing, 88% PSU
Some: 65 watts AC/DC adapter (wide temperature), autosensing, 88% PSU (only for Machine Type 11AS)

Limited warranty
Some: **1-year**, **limited onsite service** / service upgrades available
Some: **3-year**, **limited onsite service** / service upgrades available

Preload
Preloaded operating system
Some: Windows® 10 Pro 64-bit
Some: Windows 10 Home 64-bit
Some: Windows 10 IoT Enterprise (only available via special bid model)

Environment
ENERGY STAR® 7.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO 8.0, TUV ultra low noise verified (on some models), RoHS, WEEE, REACH

MIL-SPEC test
MIL-STD-810H (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Solar Radiation)

Accessories
For compatible accessories, please go to **http://smartfind.lenovo.com**

Note: The specifications above may not be available in all regions.

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