

A

PREFEITURA MUNICIPAL DE BOMBINHAS - SC

PREGÃO PRESENCIAL Nº 008/2023

PEDIDO DE ESCLARECIMENTO

Partner Tecnologia Eireli, inscrita no CNPJ sob N.º 33.643.773/0001-45, apresenta PEDIDO DE ESCLARECIMENTO de forma tempestiva, visto que interposta nesta data de 22/março/2023, quarta-feira, em estrita observância ao prazo estabelecido no subitem 8.1 do Edital, com a necessária antecedência de até 02 (dois) dias úteis anteriores à data final fixada para recebimento das propostas, que está prevista para o próximo dia 27/março/2023.

Referente aos Itens 1 e 2, nas condições gerais do Termo de Referência, letra "c", é pedido... "Configuração proposta compatível com sistemas operacionais: compatibilidade com pelo menos uma distribuição Ubuntu Linux 12 ou superior homologada no site <http://www.ubuntu.com/certification/desktop/>"...

Com a intenção de oferecermos o equipamento da marca LENOVO, modelo ThinkCentre M70q Gen 3, viemos através desta esclarecer se será aceito como prova de compatibilidade certificação emitida pelo site: <https://ubuntu.com/certified/202004-27805>. Pode se perceber por este site, também da UBUNTU, que toda a família de produtos "ThinkCentre M70 TOWER/SFF/TINY", da fabricante LENOVO possui certificação. (ANEXO I)

Aproveitamos também, para comprovar através do e-mail recebido da fabricante (ANEXO II), onde a mesma afirma que todos os modelos da família "ThinkCentre M70 TOWER/SFF/TINY", são compatíveis e possuem certificação UBUNTU.

Gostaríamos ainda de registrar, como consta no catálogo oficial do produto da fabricante, encontra-se a informação que o equipamento está apto para trabalhar com o sistema operacional da UBUNTO(ANEXO III).

Desta forma, entendemos que será aceito o equipamento ThinkCentre M70q Gen 3 da fabricante LENOVO.

Está correto o nosso entendimento?

Palhoça, 22 de março de 2023.

PARTNER TECNOLOGIA LTDA

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ANEXO

I

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Lenovo ThinkCentre M70 TOWER/SFF/TINY

Desktop system certified with Ubuntu

Release

- **Ubuntu 20.04 LTS 64 Bit**

Pre-installed in some regions with a custom Ubuntu image that takes advantage of the system's hardware features and may include additional software. Standard images of Ubuntu may not work well, or at all.

Kernel

This system was tested with 20.04 LTS, running the 5.6.0-1011-oem kernel.

BIOS

LENOVO: M2WKT0DA

Hardware

Network Intel Corp. Ethernet Connection (11) I219-V pci (8086:0d4d)

Processor Intel Corp. Intel(R) Pentium(R) Gold G6400T CPU @ 3.40GHz

Video Intel Corp. CometLake-S GT1 [UHD Graphics 610] pci (8086:9ba8 17aa:316e)

Wireless Intel Corp. Wireless AX201 pci (8086:06f0)

[Hardware details >](#)

Issues? Let us know

If there is an issue with the information for this system, please let us know
<[https://answers.launchpad.net/ubuntu-certification/+addquestion?](https://answers.launchpad.net/ubuntu-certification/+addquestion?field.title=Feedback+on+the+Lenovo+ThinkCentre+M70+TOWER/SFF/TINY+(202004-27805)>)
field.title=Feedback on the Lenovo ThinkCentre M70 TOWER/SFF/TINY (202004-
27805)>.

ANEXO

II

Pessoal, bom dia!

Na data de ontem 16/03 eu e o Gustavo da PARTNER TECNOLOGIA, realizamos uma pequena reunião de alinhamento e o caso já foi resolvido.

Muito obrigado pelo empenho e dedicação de todos.

Atenciosamente.

Felipe Moitinho

Sr. Channel Account Manager

Lenovo Brasil

In case you need to contact my manager,
his contact details are:

Sr. Sales Project Manager

Katia Kellis – ksilva2@lenovo.com

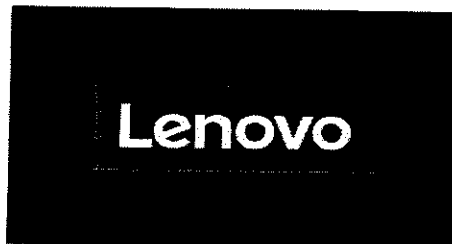
<https://www.lenovopartnerhub.com/pt/web/lenovo-global-site/getting-started>

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11 2112-1434

E-fmoitinho1@lenovo.com



De: Declaracoes Lenovo <declaracoes@lenovo.com>

Enviada em: sexta-feira, 17 de março de 2023 09:25

Para: Licitacao - Partner <contato@partnerti.com.br>; Katia Kellis <ksilva2@lenovo.com>; Felipe Moitinho1 <fmoitinho1@lenovo.com>; Daniela Valente <dvalente@lenovo.com>

Assunto: RE: [External] META ANUAL

Prezados, bom dia, tudo bem?

A certificação UBUNTU, é emitida pela a mesma, então não temos controle sobre como é demonstrada pelo o site oficial.

Só temos essa disponível para o M70q G3(<https://ubuntu.com/certified/202004-27805>), inclusive TODA A FAMÍLIA ThinkCentre M70 TOWER/SFF/TINY, está certifica e homologada funcionando perfeitamente.

att.

From: Licitacao - Partner <contato@partnerti.com.br>

Sent: Thursday, March 16, 2023 3:55 PM

To: Declaracoes Lenovo <declaracoes@lenovo.com>; Katia Kellis <ksilva2@lenovo.com>; Felipe Moitinho1 <fmoitinho1@lenovo.com>; Daniela Valente <dvalente@lenovo.com>

Subject: RES: [External] META ANUAL

Bom dia time LENOVO.

Com relação a Microsoft, tudo OK.

Esta opção de link da UBUNT, já tinha argumentado com o cliente mas o mesmo alega que esta certificação é para LAPTOP e não para o Tiny M70q Gen 3 (desktop micro).

PARTNER TECNOLOGIA

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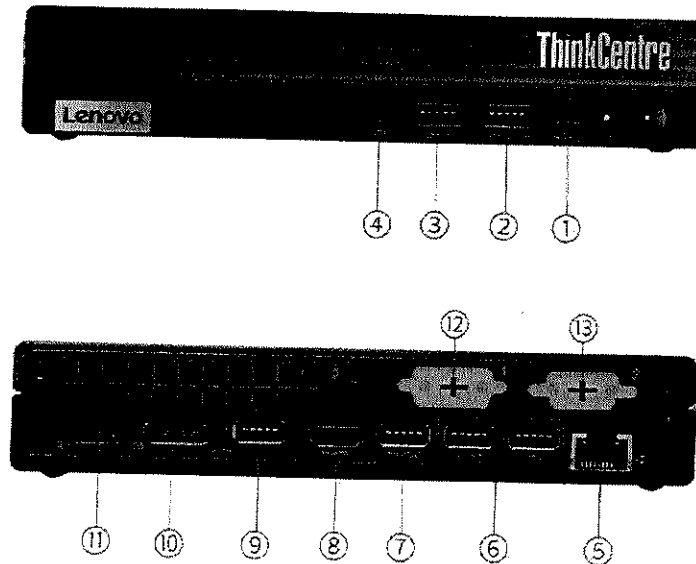


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ANEXO

III

OVERVIEW



1. USB-C 3.2 Gen 1	8. HDMI 2.1 TMDS
2. USB 3.2 Gen 2 (Always On and fast charge)	9. USB 3.2 Gen 1
3. USB 3.2 Gen 2	10. DisplayPort 1.4
4. Headphone / microphone combo jack (3.5mm)	11. Power connector
5. Ethernet (RJ-45)	12. Punch out port 1 *
6. 2x USB 3.2 Gen 2	13. Punch out port 2 *
7. 1x USB 2.0 (with smart power-on feature)	

Notes:

- * Ports with * are only available on selected models



PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 12th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G6900T	2	2	2.8GHz	-	4MB	DDR4-3200	Intel UHD Graphics 710
Pentium Gold G7400T	2	4	3.1GHz	-	6MB	DDR4-3200	Intel UHD Graphics 710
Core i3-12100T	4 (4 P-core + 0 E-core)	8	P-core 2.2GHz	P-core 4.1GHz	12MB	DDR4-3200	Intel UHD Graphics 730
Core i3-12300T	4 (4 P-core + 0 E-core)	8	P-core 2.3GHz	P-core 4.2GHz	12MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12400T	6 (6 P-core + 0 E-core)	12	P-core 1.8GHz	P-core 4.2GHz	18MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12500T	6 (6 P-core + 0 E-core)	12	P-core 2.0GHz	P-core 4.4GHz	18MB	DDR4-3200	Intel UHD Graphics 770
Core i5-12600T	6 (6 P-core + 0 E-core)	12	P-core 2.1GHz	P-core 4.6GHz	18MB	DDR4-3200	Intel UHD Graphics 770
Core i7-12700T	12 (8 P-core + 4 E-core)	20	P-core 1.4GHz / E-core 1.0GHz	P-core 4.6GHz / E-core 3.4GHz	25MB	DDR4-3200	Intel UHD Graphics 770
Core i9-12900T	16 (8 P-core + 8 E-core)	24	P-core 1.4GHz / E-core 1.0GHz	P-core 4.8GHz / E-core 3.6GHz	30MB	DDR4-3200	Intel UHD Graphics 770

Operating System

Operating System**

- Windows® 11 Pro
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 DG Windows 10 Pro 64
- Windows 10 IoT Enterprise LTSC 2021
- Ubuntu Linux
- No operating system

Notes:

1. Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 710	Integrated	Shared	1x HDMI® 2.1 TMDs, 1x DP 1.4, 2x punch out ports (2x HDMI/VGA/DP) or [USB-C* with DP function, HDMI/VGA/DP]	4096x2160@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2160@60Hz(DP), 4096x2160@60Hz(USB-C with DP function)	DirectX® 12
Intel UHD graphics 730	Integrated	Shared	1x HDMI 2.1 TMDs, 1x DP 1.4, 2x punch out ports (2x HDMI/VGA/DP) or [USB-C with DP function, HDMI/VGA/DP]	4096x2304@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function)	DirectX 12

Intel UHD graphics 770	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4, 2x punch out ports ([2x HDMI/VGA/DP] or [USB-C with DP function, HDMI/VGA/DP])	4096x2304@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function)	DirectX 12
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Notes:

- The information of integrated graphics are not applicable for the models without integrated graphics (for the details, please refer to processor section)

Monitor Support

Monitor Support.

Supports up to 4 independent displays via (onboard DP, onboard HDMI, punch out port 1 [VGA / HDMI / DP / USB-C], and punch out port 2 [VGA / HDMI / DP])

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory⁽¹⁾

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

- 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⁽¹⁾

Up to two drives, 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 1TB
- M.2 SSD up to 2TB

Storage Type^{*}**

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0

RAID

No support

Notes:

- The storage capacity supported is based on the test results with current Lenovo storage offerings. The system may support larger storage as the technology develops.

Removable Storage

Optical**

- DVD-ROM, slim (9.0mm), via USB external ODD box
- DVD burner (DVD±RW), slim (9.0mm), via USB external ODD box
- None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256VB codec

Speakers**

- Single speaker, 2W x1
- Premium single speaker, 2W x1

Power Supply

Power Supply[1]**

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
90W	Adapter	89%	Autosensing
135W	Adapter	89%	Autosensing
No power supply	-	-	-

Notes:

1. The optional 90w adapter may increase performance scores when I2500T/I2400T CPUs are installed.

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), black
- No mouse

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)^[2]

Models	Dimensions
Tiny only	179 x 182.9 x 36.5 mm with rubber feet (7.05 x 7.2 x 1.44 inches with rubber feet)
Tiny & ODD	204.2 x 186.6 x 64 mm with rubber feet (8.04 x 7.35 x 2.52 inches with rubber feet)

Packaging Dimensions (WxDxH)**

- Tiny only : 490 x 268 x 141 mm (19.29 x 10.55 x 5.55 inches)
- Tiny & ODD : 490 x 268 x 166 mm (19.29 x 10.55 x 6.54 inches)

Weight^[2]

Models	Weight
Tiny only	Around 1.25 kg (2.76 lbs)
With VESA mount & ODD box	Around 1.74 kg (3.84 lbs)

Packaging Weight**

- Tiny only: 2.85 kg (6.28 lbs)
- Tiny & ODD: 3.58 kg (7.89 lbs)

Case Color

Raven black

Bays

1x 2.5" disk bay

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

(Optional) toolless chassis open (toolless chassis screw required) and toolless M.2 SSD, HDD, memory assembly / removal

Stand

- Vertical stand
- No stand

IO Box

No IO box

Mounting

- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- None

Others

- (Optional) Dust filter
- (Optional) Power adapter cage
- Supports Smart Power On

Notes:

1. The system dimensions 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.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet⁽¹⁾

- No optional Ethernet
- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth⁽²⁾⁽³⁾

- Intel Wi-Fi[®] 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, M.2 card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- No WLAN and Bluetooth

Notes:

1. Optional Ethernet card occupied puch out port 2
2. Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitation

Ports⁽⁴⁾**Front Ports**

- 1x USB 3.2 Gen 2
- 1x USB 3.2 Gen 2 (Always On and 5V@2.1A charging)
- 1x USB-C 3.2 Gen 1 (support data transfer and 5V@0.9A charging)
- 1x headphone / microphone combo jack (3.5mm)

Optional Front Ports

None

Rear Ports⁽⁵⁾

- 1x HDMI 2.1 TMDS

- 1x DisplayPort™ 1.4
- 1x USB 2.0
- 1x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x Ethernet (RJ-45)

Optional Rear Ports**⁽¹⁾

- Punch out port 1 (one of VGA / DisplayPort / HDMI / serial / USB-C 2.0 with DisplayPort function)
- Punch out port 2 (one of VGA / DisplayPort / HDMI / serial / RJ-45)

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, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;
USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;
USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
Thunderbolt™ 3/4: 40 Gbit/s
2. For video ports on discrete graphics, please see graphics section
3. USB-C 3.2 Gen 1 only available for models with 135W adapter

Monitor Cable

Monitor Cable***

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Certificate based BIOS management
- Cover presence switch
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management**⁽¹⁾

- Intel vPro® Enterprise
- Intel vPro Essentials
- Non-vPro

Notes:

1. Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty⁽¹⁾

Base Warranty^{**}

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

1. The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications

Green Certifications

- (Optional) EPEAT™ Gold
- ENERGY STAR® 8.0
- ErP Lot 3 and Lot 7
- TCO Certified 9.0
- RoHS compliant

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

Mil-Spec Test

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

• Feature with ** means that only one offering listed under the feature is configured on selected models.

• Feature with *** means that one or more offerings listed under the feature could be configured on selected models.



- models.
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