

Apple MacBook Pro

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Herstellernummer MX2E3D/A
Apple



MacBook Pro
Hello, Apple Intelligence.

Zusammenfassung

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Apple MacBook Pro , Apple M, 36.1 cm (14.2"), 3024 x 1964 pixels, 24 GB, 512 GB, macOS Sequoia

Apple MacBook Pro . Product type: Laptop, Form factor: Clamshell. Processor family: Apple M, Processor model: M4 Pro. Display diagonal: 36.1 cm (14.2"), Display resolution: 3024 x 1964 pixels. Internal memory: 24 GB. Total storage capacity: 512 GB, Storage media: SSD. On-board graphics card model: Apple GPU. Operating system installed: macOS Sequoia. Product colour: Silver. Weight: 1.6 kg

Merkmale

Packaging content

Cables included USB Type-C to MagSafe 3

Security

Fingerprint reader Yes

Brand-specific features

Brand specific technologies Wide color (P3)
Accessibility features Closed Captions, Increase Contrast, Reduce Motion, Siri

Weight & dimensions

Width	312.6 mm
Depth	221.2 mm
Height	15.5 mm
Weight	1.6 kg

Battery

Battery technology	Lithium Polymer (LiPo)
Battery capacity	72.4 Wh
Continuous video playback time	22 h
Browsing time (Wi-Fi)	14 h
Fast charging	Yes

and Dictation, Switch Control, Text to Speech, VoiceOver, Zoom

Memory

Internal memory	24 GB
Memory form factor	On-board

Performance

Ambient light sensor	Yes
Voice control	Yes

Software

Pre-installed software	App Store, Books, Calendar, Contacts, FaceTime, Find My, Freeform GarageBand, Home, iMovie, iPhone Mirroring, Keynote, Mail, Maps, Messages, Music, News, Notes, Numbers, Pages, Photo Booth, Photos, Podcasts, Preview, QuickTime Player, Reminders, Safari, Shortcuts, Stocks, Time Machine, TV, Voice Memos, Weather
Operating system installed	macOS Sequoia

Sustainability

Sustainability certificates	ENERGY STAR
Doesn't contain	PVC/BFR, Arsenic, Mercury

Keyboard

Pointing device	Trackpad
Numeric keypad	No
Keyboard backlit	Yes

Power

AC adapter power	70 W
AC adapter frequency	50 - 60 Hz
AC adapter input voltage	100 - 240 V

Processor special features

Intel® Evo™ Platform Verified	No
Video decode engine	Yes
Video encode engine	Yes

Audio

Operational conditions

Operating temperature (T-T)	10 - 35 °C
Storage temperature (T-T)	-25 - 45 °C
Operating relative humidity (H-H)	0 - 90%
Operating altitude	0 - 3000 m
Maximum shipping altitude	10500 m

Design

Product type	Laptop
Product colour	Silver
Form factor	Clamshell
Housing material	Aluminium
Introduction year	2024
Introduction month	October

Other features

DisplayPort version	2.1
Video formats supported	AV1, H.264, HEVC, ProRes
Maximum storage altitude	4500 m
Video compression formats	AV1, H.264, HEVC, ProRes, ProRes RAW
Dolby technologies	Dolby Atmos, Dolby Digital, Dolby Digital Plus
Warranty period	1 year(s)

Network

Mobile network generation	Not supported
Top Wi-Fi standard	Wi-Fi 6E (802.11ax)
Wi-Fi standards	Wi-Fi 6E (802.11ax)
Mobile network connection	No
Ethernet LAN	No
Bluetooth	Yes
Bluetooth version	5.3

Ports & interfaces

HDMI ports quantity	1
Thunderbolt 5 ports quantity	3
Intel® Thunderbolt 5	Yes
Headphone outputs	1
Docking connector	Yes
Charging port type	MagSafe 3
Headphone connectivity	3.5 mm
USB Type-C DisplayPort Alternate Mode	Yes

Processor

Processor manufacturer	Apple
Processor family	Apple M
Processor generation	Apple M Pro 4th Gen
Processor model	M4 Pro
Processor cores	12
Performance cores	8
Efficient cores	4

Number of built-in speakers	6
Built-in microphone	Yes
Number of microphones	3
Audio formats supported	AAC, ALAC, FLAC, MP3

Camera

Front camera	Yes
Front camera resolution (numeric)	12 MP
Front camera resolution	1920 x 1080 pixels
Front camera HD type	Full HD

Coprocessor model	Neural Engine
Coprocessor cores	16

Storage

Total storage capacity	512 GB
Storage media	SSD
Total SSDs capacity	512 GB
Number of SSDs installed	1
SSD capacity	512 GB
Intel® Optane™ Memory module installed	No
Optical drive type	No
Card reader integrated	Yes
Compatible memory cards	SDXC

Graphics

Discrete graphics card model	Not available
On-board graphics card	Yes
On-board GPU manufacturer	Apple
Discrete graphics card	No
On-board graphics card family	Apple
On-board graphics card model	Apple GPU
On-board graphics card cores	16
On-board graphics card 4K support	Yes
On-board graphics card 6K support	Yes
Memory bandwidth (max)	273 GB/s

Display

Display diagonal	36.1 cm (14.2")
Display resolution	3024 x 1964 pixels
Touchscreen	No
Panel type	Mini LED
Display technology marketing name	Liquid Retina XDR
Display number of colours	1.073 billion colours
Display brightness	1000 cd/m ²
Maximum display brightness (HDR)	1600 cd/m ²
Standard Dynamic Range (SDR) brightness	1000 cd/m ²
Pixel density	254 ppi
True Tone technology	Yes
Maximum refresh rate	120 Hz
Contrast ratio (typical)	1000000:1
High Dynamic Range (HDR) supported	Yes
High Dynamic Range (HDR) technology	Dolby Vision, Extreme Dynamic Range (XDR), High Dynamic Range 10 (HDR10), High Dynamic Range 10+ (HDR10 Plus), Hybrid Log-Gamma (HLG)
ProMotion technology	Yes
Display refresh rates supported	47.95 Hz, 50.00 Hz, 60.00 Hz, 48.00 Hz, 59.94 Hz
Number of external displays supported	2

Preisänderungen und Irrtümer vorbehalten. Alle Produkte solange der Vorrat reicht.