

BLACKBOOK[®] PRO 18

G18

W777xx | TECHNICAL SPECIFICATION



FOURTEEN EDITIONS

W77703 Quantum	W77708 Delta	W77721 Maverick
W77722 Platinum	W77732 Dark Shadow	W77733 Interceptor
W77752 Challenger	W77753 Nova	W77762 Vanguard
W77763 Aurora	W77768 DarkStar	W77777 Speedmaster
W77788 Midnight	W77791 Midnight Extreme	

Purpose-built for sustained professional workloads. Engineered for thermal headroom, serviceability and long useful life.

AT A GLANCE

PROCESSOR	GRAPHICS	DISPLAY	MEMORY
Intel Core i9-14900HX	GeForce RTX 5070 Laptop	18" WQXGA+ 2560 x 1600	DDR5 16 GB to 128 GB
24 cores / 32 threads, up to 5.8 GHz	8 GB GDDR7, 100 W + 15 W Dyn. Boost	180 Hz, 100% DCI-P3, HDR400	Dual M.2 NVMe, 500 GB to 16 TB

MODEL IDENTITY

Product name	Venom® BlackBook® Pro 18 G18
Model family	W777xx
Chipset	Intel HM770
Form factor	18-inch mobile workstation
Category	Pro Series – MuscleBook
Platform	Intel Raptor Lake HX55 Refresh
Operating system	Windows 11 Pro
Editions	14 (see Configuration Matrix)

PROCESSOR

Processor	Intel® Core™ i9-14900HX
Code name	Raptor Lake HX55 Refresh · Intel 7 process
Cores / threads	24 cores (8 Performance + 16 Efficient), 32 threads
P-core frequency	2.2 GHz base / up to 5.8 GHz max turbo
E-core frequency	1.6 GHz base / up to 4.1 GHz max turbo
Cache	36 MB Intel® Smart Cache
Processor base power	55 W (Intel rating)
Maximum turbo power	157 W (Intel rating)
Chassis CPU allocation	85 W (build sheet: TDP + TGP = 85 W + 115 W)
PCIe	PCIe 5.0 / 4.0, 20 lanes
Integrated graphics	Intel® UHD Graphics

Processor ratings are Intel published figures for the part. The chassis allocation figures are the platform thermal design values and are what this machine actually sustains – they are quoted here so the two are not confused.

GRAPHICS

Discrete GPU	NVIDIA® GeForce RTX™ 5070 Laptop GPU
Architecture	NVIDIA Blackwell · GB206
CUDA cores	4,608
Tensor cores	5th generation
RT cores	4th generation
AI performance	798 AI TOPS
Boost clock	1,425 – 2,347 MHz (varies with power configuration)
Graphics memory	8 GB GDDR7
Memory interface	128-bit
Memory bandwidth	384 GB/s
Total graphics power	100 W + 15 W Dynamic Boost = 115 W – the maximum configuration NVIDIA permits for this GPU
Host interface	PCIe 5.0
Rendering features	DLSS 4 with Multi Frame Generation · NVIDIA Reflex 2 · hardware-accelerated ray tracing
Display outputs	HDMI and Mini DisplayPort are driven by the discrete GPU; both USB-C ports are driven by the integrated GPU
GPU modes	dGPU and Hybrid, selectable in Venom Control Center; iGPU power-saving mode On / Off / Auto
Display switching	MUX. The internal display can be driven directly by the discrete GPU, bypassing the integrated GPU

GPU part specifications are NVIDIA published data. The 115 W figure is this chassis.

MEMORY

Type	DDR5 SO-DIMM
Slots	2 · user accessible
Speeds supported	5200 / 5600 / 6400 MHz
Capacities	16 GB, 32 GB, 64 GB, 96 GB, 128 GB by edition
Speed	5600 MHz

STORAGE

Drive class	Professional workstation-grade NVMe SSDs
Selection standard	Specified for sustained write performance and endurance under continuous professional workloads, not peak burst figures
Interface	PCIe Gen 4 ×4 NVMe
Slots	2 · M.2 2280 · both Gen 4
RAID	RAID 0 and RAID 1 supported
Capacities	500 GB, 1 TB, 2 TB, 4 TB, 8 TB, 16 TB by edition
Sequential read	Up to 7,000 MB/s
Recovery media	External Recovery Drive supplied – full factory restore

DISPLAY

Panel size	18-inch · bent PCB
Aspect ratio	16:10
Resolution	WQXGA+ 2560 × 1600 (4.09 million pixels)
Surface	Venom Vision anti-glare
Calibration	X-Rite factory colour calibration
Colour modes	Standard, sRGB, DCI-P3, Adobe RGB – switchable in Control Center
Colour gamut	100% DCI-P3; calibratable across DCI-P3 / Adobe RGB / sRGB
Refresh rate	180 Hz
HDR	HDR400
Pantone®	Pantone® Validated – royalty licensed on this build

AUDIO

Speakers	4 × 2 W – two front-firing, two in the hinge area
Drivers	2 × 13 × 40 mm and 2 × 16 × 9 mm
Smart amplifier	Realtek ALC1308
Codec	Realtek ALC274N
Processing	Nahimic audio equaliser
Noise suppression	Supported
Microphones	Dual digital microphone array with AI noise cancellation
Analogue output	3.5 mm headphone / microphone combo jack

EXTERNAL I/O



FRONT

Cooling exhaust



RIGHT

2 × USB-A 3.2 Gen 1 (5 Gbps)
1 × Kensington Nano lock slot



LEFT

1 × 2.5 Gbps RJ-45 LAN (drop-jaw)
1 × USB-A 3.2 Gen 1 (5 Gbps)
1 × USB-C 3.2 Gen 2, DisplayPort 1.4, PD 100 W
1 × 3.5 mm universal audio jack



REAR

1 × USB-C 3.2 Gen 2, DisplayPort 2.1, PD 140 W
1 × DC-in
1 × Mini DisplayPort 2.1a (UHBR10, 40 Gbps)
1 × HDMI 2.1 (FRL-12G, 48 Gbps)

PORT DETAIL

USB Type-A	3 × USB 3.2 Gen 1, 5 Gbps (1 left, 2 right)
USB Type-C (rear)	USB 3.2 Gen 2, 10 Gbps · DisplayPort 2.1 · Power Delivery 140 W
USB Type-C (left)	USB 3.2 Gen 2, 10 Gbps · DisplayPort 1.4 · Power Delivery 100 W
USB-C display source	Both USB-C ports are driven by the integrated GPU
HDMI	1 × HDMI 2.1, FRL-12G, 48 Gbps · up to 8K 60 Hz · discrete GPU
Mini DisplayPort	1 × Mini DisplayPort 2.1a, UHBR10, 40 Gbps · up to 8K 60 Hz · discrete GPU
Networking	1 × 2.5 Gbps RJ-45 Base-T
RJ-45 mechanism	Half-height drop-jaw connector – a hinged lower jaw opens as the plug is inserted, so a full-size Ethernet plug seats in a chassis thinner than the connector. No dongle, no adapter
Audio	1 × 3.5 mm universal audio jack, all headset types
Power	1 × DC-in, 20 V. Platform offers 12 A and 20 A jacks; the 280 W adapter uses the 20 A (B1)

WIRELESS

Wi-Fi	Intel® Wi-Fi 6E AX211, tri-band 2.4 / 5 / 6 GHz, 802.11 a/b/g/n/ac/ax
Bluetooth	Bluetooth® 5.3 as specified on this build. Intel rates the AX211 module for Bluetooth 5.4
Maximum link rate	2.4 Gbps (Intel published figure for the AX211)
Spatial streams	2 × 2
Channel bandwidth	Up to 160 MHz

THERMAL DESIGN

Fans	Three – two large thermal fans plus a dedicated system fan
Thermal interface	Phase-change thermal pad (air)
Heat pipes	2 × wide flattened heat pipes, running the full width of the board and shared across CPU and GPU
Heat exchangers	2 × fin stacks, one above each main fan, exhausting through the rear corners
Layout	Wide-body heat pipe layout with high-efficiency modules
Design class	200 W-class combined thermal load
CPU allocation	85 W
GPU allocation	115 W TGP
Performance modes	Office, Balance, Turbo, Custom · plus Fan Boost

Heat pipe and fin stack counts are taken from teardown photography of the shipping unit. Any additional pipework concealed beneath board shielding is not counted here.

POWER

AC adapter	Venom Ultra Slim 280 W, 20 V – the same adapter in every market
Input range	100–240 V worldwide
Power cable	Region-appropriate mains lead supplied for the destination market
Battery	99 Wh smart lithium-polymer, 4S1P
Air travel	Below the 100 Wh IATA carry-on threshold
System charging	DC-in only. The 280 W adapter is required for full CPU and GPU performance
USB-C Power Delivery	Rear 140 W, left 100 W – port ratings for powering and charging attached devices, not a charging path for the machine

CHASSIS

Structure	High-strength hybrid structure
Top cover (A)	Aluminium · black · sandblasted and anodised
Colour	Black (standard)
Keyboard deck (C)	Polymer · black
Base cover (D)	Polymer · black
Feet	Textured rubber
Dimensions	400 (W) × 291.5 (D) × 21.6–24.5 (H) mm 15.75 (W) × 11.48 (D) × 0.85–0.96 (H) in
Height	21.6 mm at the front edge, tapering to 24.5 mm at the rear
Weight	2.65 kg / 5.84 lb (including battery)

KEYBOARD AND TOUCHPAD

Keyboard	Full-size with numeric keypad · US layout
Switch type	Membrane with mechanical-like tactility
Key travel	1.8 mm
Key pitch	19 mm desktop pitch
Keycap size	16.2 mm
Keycap dish	0.4 mm
Backlight	Single-zone RGB, adjustable in Venom Control Center
Touchpad	Glass precision touchpad, multi-gesture with palm rejection
Dedicated keys	Copilot key (can be disabled) · Fn lock · on-screen display toggle

CAMERA

Camera	FHD and IR dual-sensor, dual digital microphones
Biometrics	Windows Hello infrared facial recognition
Privacy	Mechanical shutter latch

SECURITY

Platform security	TPM 2.0
Physical security	Kensington® Nano lock slot
Camera privacy	Mechanical shutter latch
Firmware security	UEFI firmware with Secure Boot, supervisor and user passwords, and TPM 2.0 measured boot

SOFTWARE

Operating system	Windows 11 Pro
System software	Venom Control Center (CCX)
Control Center functions	System monitor · performance modes · Fan Boost · GPU mode · colour calibration · keyboard lighting · Wi-Fi, Bluetooth, touchpad, webcam, Fn and Copilot toggles
Bundled software	A deliberately minimal load: Google Chrome, Adobe Reader and Venom Control Center
Not included	No trialware, no third-party security suites, no bundled utilities

EDITIONS

All fourteen editions share the platform specification in this document. Processor and graphics are common to every edition; memory and storage are the variables.

MODEL	EDITION	PROCESSOR	GRAPHICS	MEMORY	STORAGE
W77703	Quantum	Core i9-14900HX	RTX 5070 8 GB	16 GB DDR5-5600	500 GB
W77708	Delta	Core i9-14900HX	RTX 5070 8 GB	16 GB DDR5-5600	1 TB
W77721	Maverick	Core i9-14900HX	RTX 5070 8 GB	32 GB DDR5-5600	500 GB
W77722	Platinum	Core i9-14900HX	RTX 5070 8 GB	32 GB DDR5-5600	1 TB
W77732	Dark Shadow	Core i9-14900HX	RTX 5070 8 GB	64 GB DDR5-5600	1 TB
W77733	Interceptor	Core i9-14900HX	RTX 5070 8 GB	64 GB DDR5-5600	2 TB (1+1)
W77752	Challenger	Core i9-14900HX	RTX 5070 8 GB	96 GB DDR5-5600	1 TB
W77753	Nova	Core i9-14900HX	RTX 5070 8 GB	96 GB DDR5-5600	2 TB (1+1)
W77762	Vanguard	Core i9-14900HX	RTX 5070 8 GB	128 GB DDR5-5600	1 TB
W77763	Aurora	Core i9-14900HX	RTX 5070 8 GB	96 GB DDR5-5600	4 TB (2+2)
W77768	DarkStar	Core i9-14900HX	RTX 5070 8 GB	128 GB DDR5-5600	2 TB (1+1)
W77777	Speedmaster	Core i9-14900HX	RTX 5070 8 GB	128 GB DDR5-5600	4 TB (2+2)
W77788	Midnight	Core i9-14900HX	RTX 5070 8 GB	128 GB DDR5-5600	8 TB (4+4)
W77791	Midnight Extreme	Core i9-14900HX	RTX 5070 8 GB	128 GB DDR5-5600	16 TB (8+8)

OPERATING ENVIRONMENT

Operating temperature	0 °C to 35 °C (32 °F to 95 °F)
Storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Operating humidity	10% to 90% RH, non-condensing
Storage humidity	5% to 95% RH, non-condensing
Operating altitude	-15.2 m to 3,048 m (-50 ft to 10,000 ft)
Storage altitude	-15.2 m to 10,668 m (-50 ft to 35,000 ft)

The environmental ranges above are the standard operating envelope for a notebook of this class.

COMPLIANCE AND CERTIFICATION

Regulatory	CE · FCC · RCM · UKCA
Safety	IEC 62368-1
Environmental	RoHS · REACH · WEEE
Battery transport	UN 38.3

SERVICE AND SUPPORT

Warranty	3-year pickup-and-return warranty
How it works	The machine is collected from your site by courier and returned after repair, at no cost
Support	Venom Help Desk
Escalation	Help-desk ticket, assigned specialist, written steps, telephone, approved remote access, and where required no-cost courier pickup, repair and return
Recovery	External Recovery Drive supplied in box
Serviceability	User-accessible memory (2 SO-DIMM) and storage (2 × M.2 2280)
Trade-in	Eligible BlackBooks up to seven years old may re-enter the Venom Value Cycle
Regional variations	Warranty terms, service delivery and available configurations vary by market. Contact your point of purchase for the terms that apply to you

DOCUMENT CONTROL

Document	VNM-BB-P18-G18
Revision	Version 1.0
Sources	Venom engineering and build specifications; Intel and NVIDIA published component data

DISCLAIMER

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