



DURABOOK
Prepared for the Unexpected

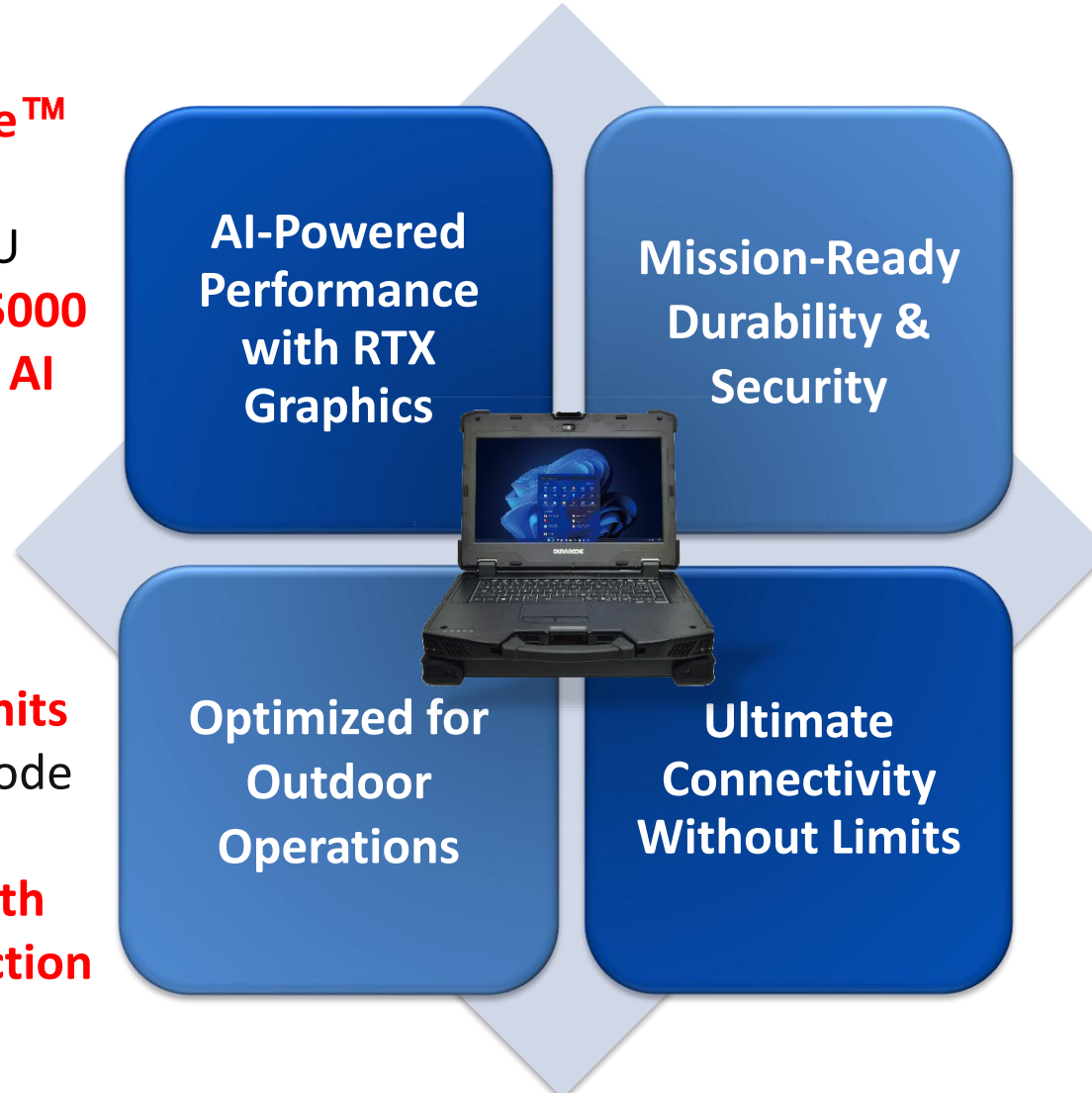
DURABOOK Z14I-HG MOBILE WORKSTATION INTRODUCTION

DURABOOK MARKETING DIVISION

UNIQUE SELLING PROPOSITION

- **Intel® Meteor Lake Core™ Ultra U Processors**
- Embedded AI Boost NPU
- **NVIDIA® RTX™ 3500/ 5000 Ada Discreate VGA and AI Accelerator**
- Intel® Graphics

- 14" Full HD DynaVue® Technology up to **1200 nits**
- Night Vision/ Stealth Mode
- Four Touch Modes
- **Long Lasting Battery with Battery charging protection**



- IP66
- MIL-STD 810H
- Wide temperature operation **(-29°C - 63°C / -20°F ~ 145°F)**
- **Dual Quick-Release Storage**
- **Windows 11 Secured-Core PC**
- **Windows Hello Camera**

- Multiple I/O Ports with **two Thunderbolt 4, five 2.1 HDMI**, three USB Type A, two RJ-45, two RS-232
- **Wi-Fi 7**, BT 5.4, **4G/ 5G**, **Dual SIM**

TARGETS & APPLICATIONS

Applications

- Field operations requiring real-time 3D mapping and simulation
- Drone/UAV control with high-resolution data processing
- AI and machine learning model training and inference
- On-site CAD/CAM and structural modeling
- Assets for remote monitoring and predictive maintenance

Military/Government



Engineering & Construction



Industrial/Manufacturing



Professional Service



Z14I-HG MOBILE WORKSTATION

FULLY RUGGED GRAPHICS PERFORMANCE WORKSTATION

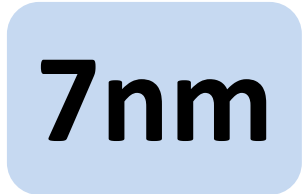


- **Intel® Core™ Ultra 7 155U/ 165U** up to 4.9 GHz; with vPro Technology.
- Embedded **Intel® AI Boost NPU** to optimize AI performance
- **NVIDIA® RTX™ 3500 Ada** with **12GB GDDR6** memory
- **NVIDIA® RTX™ 5000 Ada** with **16GB GDDR6** memory (optional)
- **Up to 5 x HDMI 2.1 Display Output** (4x through NVIDIA GPU)
- 14" **FHD** (1920 x1080) with **1,200 nits** DynaVue® sunlight readable display and capacitive multi-touch function
- **Dual removable** quick-release storage drives
- MIL-STD-810H & IP66 certified



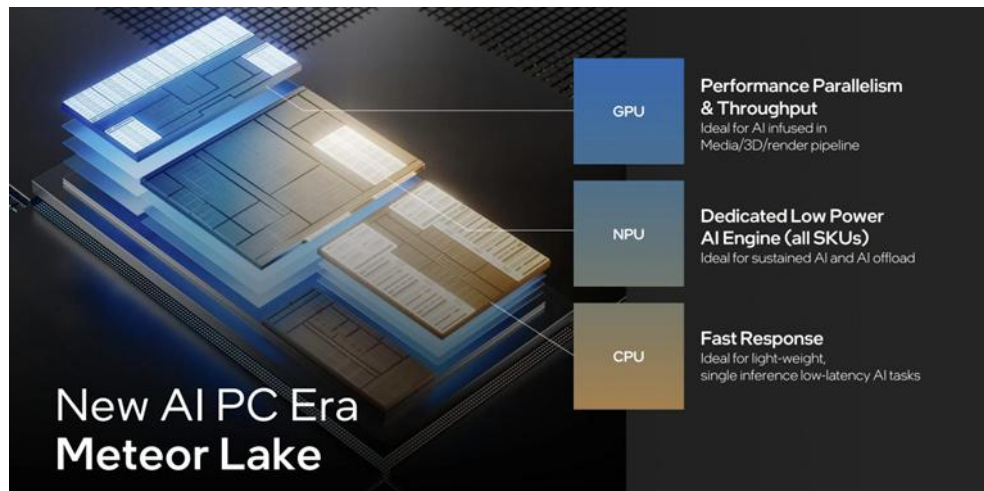
COMPUTING POWER WITH AI

14TH GENERATION CPU



- Z14's **Meteor Lake Core™ Ultra Processor**, with 3 types of performance-tailored cores **totaling to 12 cores, boasts a 12MB cache**, achieving **37% higher** performance than previous generation. Intel® Meteor Lake processor also offers true **Hardware AI Acceleration** with multi-compute engines, **CPU + GPU + AI Boost NPU**.

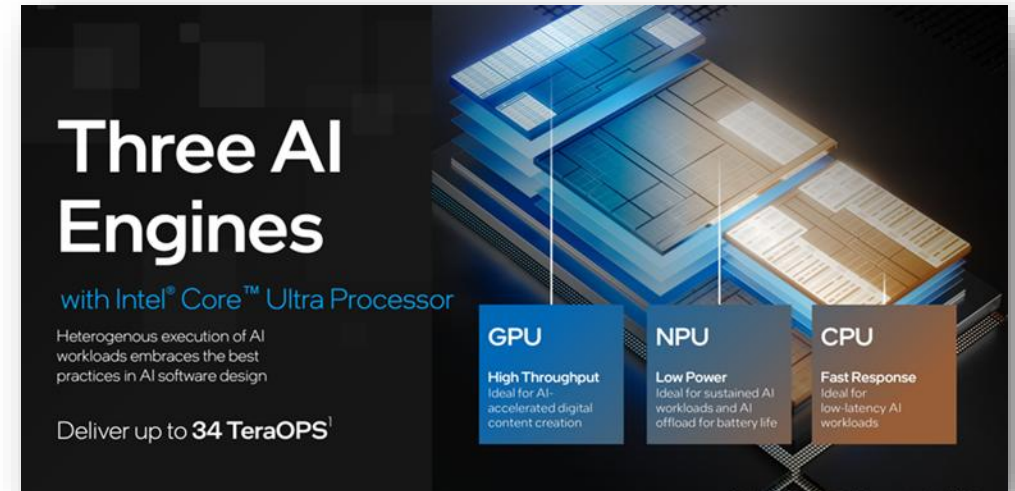
- Manufactured with Intel 4 (**7nm**) semiconductor process, Core Ultra CPU offers **20% higher performance per watt** than 11th Gen Tiger Lake **10nm** CPU.



	Intel® Core i5 1135G7	Intel® Ultra 5 125U Meteor Lake	Intel® Ultra 7 155U Meteor Lake
Turbo Speed	Up to 4.2 GHz	Up to 4.3 GHz	Up to 4.8 GHz
# of Physical Cores	4 Cores	12 Cores	12 Cores
Cache	8MB	12MB	12MB
CPU Mark	9,834	13,561	14,973

AI WORKSTATION POWER. BUILT RUGGED.

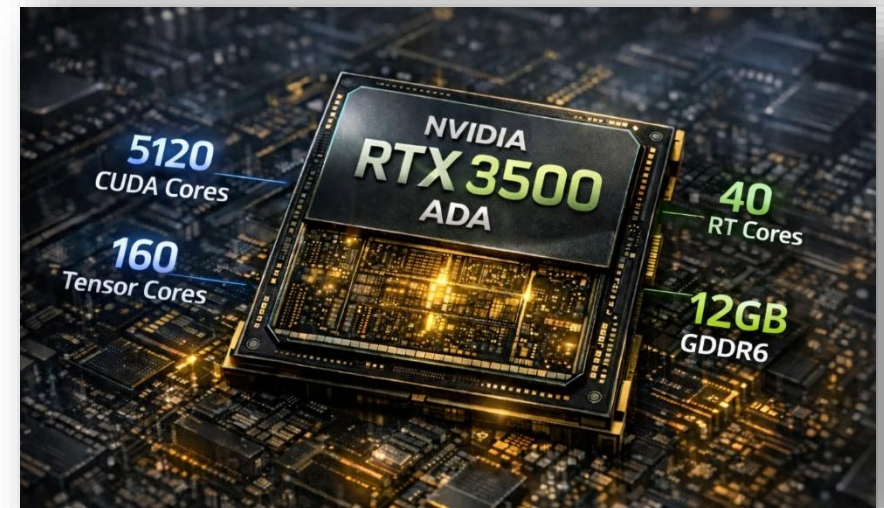
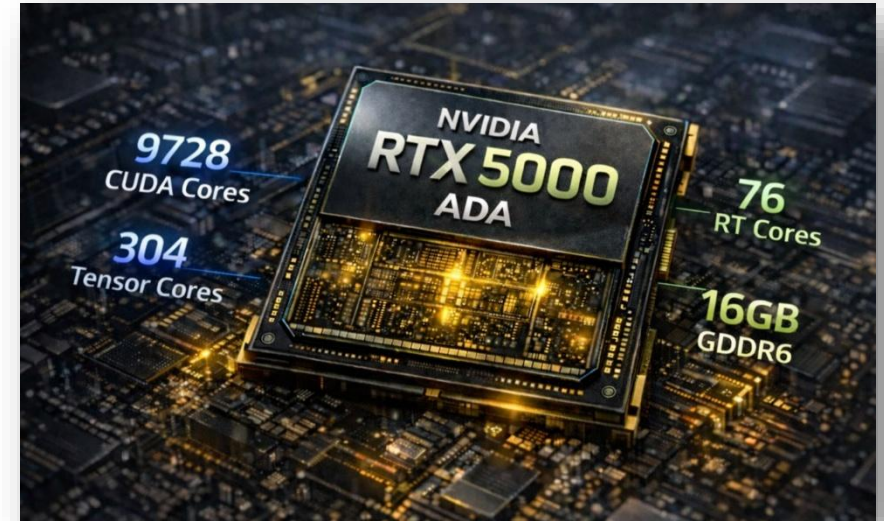
- Z14I-HG is the first fully rugged laptop to integrate **Intel® AI engine**, delivering up to **34 TOPS** alongside powerful **NVIDIA® RTX™ 3500/5000 Ada** graphics, enabling unprecedented AI performance of up to **682 TOPS**.
- Powered by the **NVIDIA® RTX™ Ada architecture**, it provides workstation-class parallel computing, advanced AI acceleration, and high-end visualization performance for the most demanding workloads.



ADVANCED NVIDIA® RTX™ ADA TECHNOLOGY

NVIDIA® RTX™ 3500 & 5000 ADA

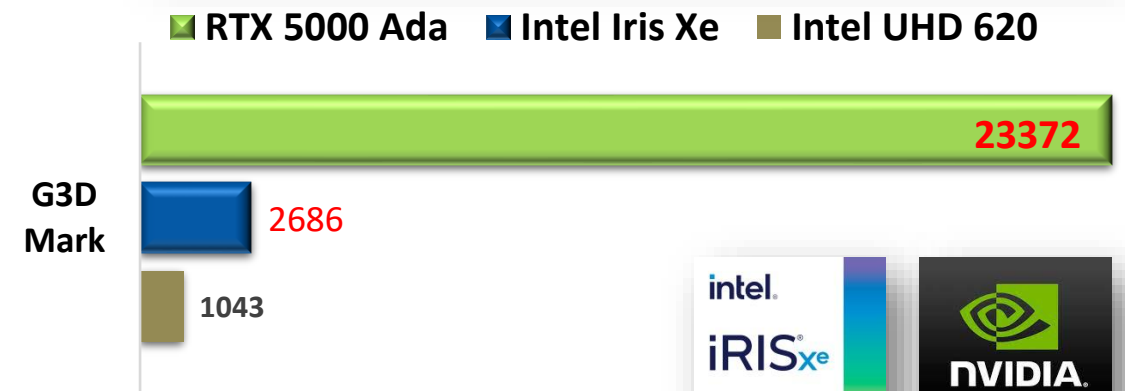
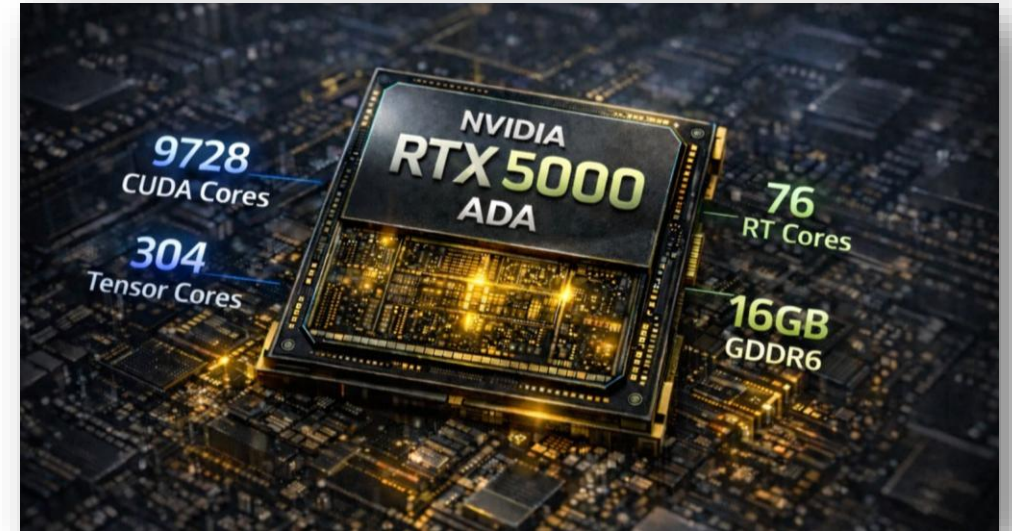
- Fourth-Gen Tensor Cores
 - ✓ Deliver maximum AI performance with **FP4 precision** and **DLSS 4 acceleration**
- New Streaming Multiprocessors
 - ✓ Optimized for **neural shaders** and **next-generation AI workload**
- Third-Gen Ray Tracing Cores
 - ✓ Enable **real-time ray tracing** and support for **mega-scale geometry**
- NVIDIA® Ada Lovelace Max-Q Technology
 - ✓ Designed for **maximum performance with superior power efficiency**
- High-Performance GDDR6 Memory
 - ✓ Up to **16GB** for complex AI projects and large datasets
- Latest NVENC / NVDEC Engines
 - ✓ Up to **three simultaneous video encode/decode engines** with professional **4:2:2** support



GRAPHICS PERFORMANCE

INTEL® GRAPHICS + NVIDIA® RTX™ 3500/ 5000 ADA

- The Z14I-HG features enhanced Intel® Graphics with **4 Xe cores**, delivering up to **200% higher** performance per watt compared to Iris® Xe graphics. Its 3D rendering performance is also **2.5x faster** than Intel® UHD 620.
- For professionals handling demanding graphics workloads, the Z14I-HG can also be configured with discrete NVIDIA® RTX™ 3500 or 5000 Ada GPUs, delivering up to **23x** faster 3D effective speed performance than Intel® UHD 620.



Source: [PassMark](#)

GRAPHICS PERFORMANCE COMPARISON

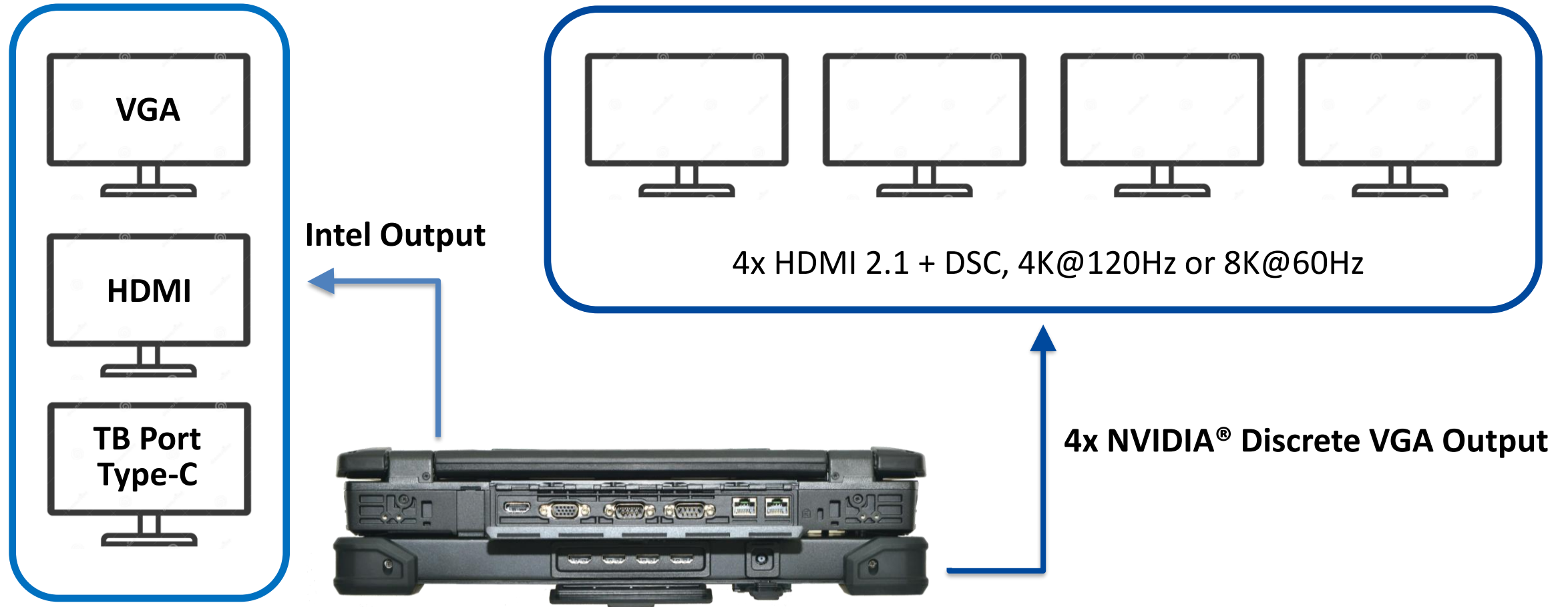
NVIDIA® RTX™ 3500/ 5000 ADA

Feature	RTX™ 5000 Ada	RTX™ 3500 Ada	RTX™ A500
Architecture	Ada Lovelace	Ada Lovelace	Ampere
CUDA Cores	9,728	5,120	2,048
Tensor (AI) Cores	304 (4 th Gen)	160 (4 th Gen)	64 (3 rd Gen)
Ray Tracing Cores	76 (3 rd Gen)	40 (3 rd Gen)	16 (2 nd Gen)
AI Performance (INT8)	682 TOPS	369 TOPS	100 TOPS
PassMark (3DMark)	23,372	19,606	6,611
Memory	16GB GDDR6 (ECC)	12 GB GDDR6 (ECC)	4 GB GDDR6
Memory Bandwidth	576 GB/s	432 GB/s	112 GB/s

- Over **3.5x** the Graphics Power: With a PassMark score of **23,372**, render complex 3D models or analyze large datasets in real-time, right on-site.
- Nearly **7x** the AI Power: Leverage **682 TOPS** of dedicated AI performance to run predictive maintenance and analytics, delivering insights without delay.
- **4x** the Memory for Complex Projects: The **16 GB ECC GDDR6** memory handles massive schematics, sensor data, and multiple applications simultaneously, even when offline.

Z14I-HG GRAPHICAL WORKSTATION

APPLICATION ILLUSTRATION



COPILOT - THE AI ASSISTANT AT WORK

YOUR EVERYDAY AI COMPANION

Microsoft Copilot is an AI-powered assistant available in Windows 11.

It leverages the power of AI to boost productivity and unlock creativity.

- Find answers and inspiration from the web.
- Works within Microsoft 365 apps, documents, and conversations.
- Integrates with security systems, data analysis, and business applications.



COPILOT KEY



THUNDERBOLT™ 4 Technology

UNIVERSAL CABLE CONNECTIVITY

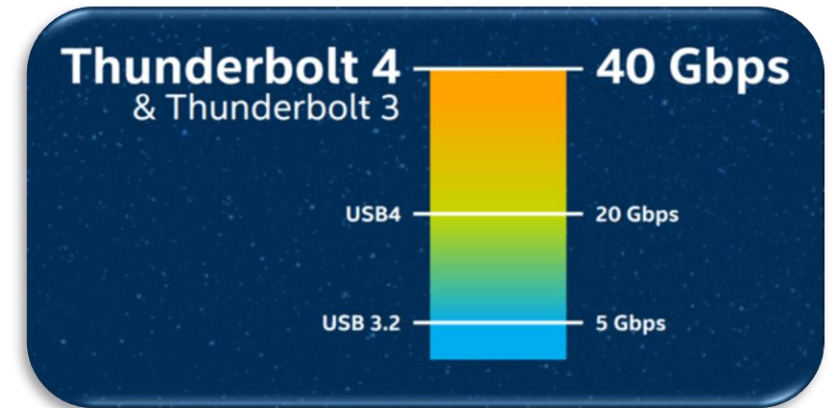


THUNDERBOLT™

Thunderbolt 4 is the latest version of Intel's Thunderbolt line.

Thunderbolt 4 is more powerful and makes connecting the modern workspace more flexible and simpler than ever.

- Delivers 40Gb/s of bandwidth
- One port supports multiple protocols
 - USB 4
 - DisplayPort
 - PCIe
- Support up to **2x** 4K displays
- It is backwards compatible with Thunderbolt 3 & USB-C
- Maximum flexibility for docking station
- Bi-directional power
 - Power share + power delivery (PD)



One universal port makes it simple to connect to multiple protocols



MAXIMUM CONNECTIVITY

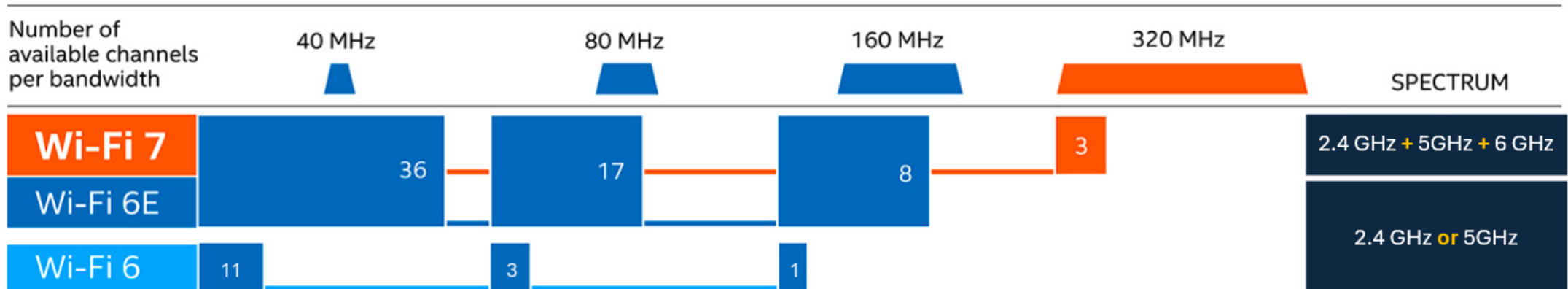
INTEL® WI-FI 7 BE200

- Intel® **Wi-Fi 7 BE200**, a revolution in Wi-Fi technology, provides advancement in connection speed, channel bandwidth, throughput and MLO (Multi-Link Operation).
- Wi-Fi 7 provides Extremely High Throughput (EHT) and additional **320 MHz Channels**.
- Wi-Fi 7 BE200 has max. data transfer speed of **46 Gbps**, **4.8x** faster than Wi-Fi 6 AX201's max speed of 9.6 Gbps
- Wi-Fi 7 BE200 with Bluetooth® **V5.4** provides data transfer range of up to 300 meters (= 984 ft)

Brand	Wireless Lan	Bluetooth	Wi-Fi Speed	Max Channel Bandwidth	Band
Durabook Z14I-HG	BE200	V5.4	46 Gbps	320 MHz	2.4 GHz + 5 GHz +6 GHz (Multi Link)
Market Solution P	AX201	V5.2	9.6 Gbps	160 MHz	2.4 GHz or 5 GHz (Single Link)

WI-FI 7 NEXT GENERATION CONNECTIVITY

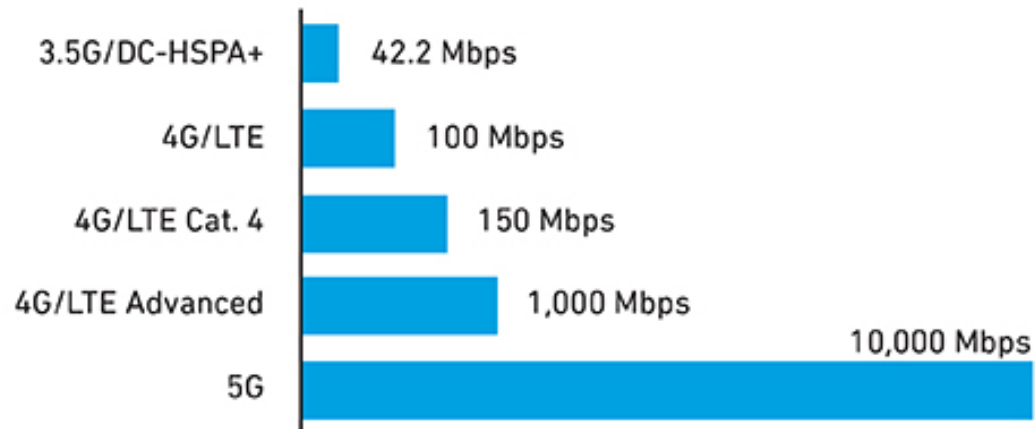
Wi-Fi 7 offers a 6 GHz frequency band in addition to Wi-Fi 6's 5 GHz and 2.4 GHz. Wi-Fi 7 also uses a unique new MLO (Multi-Link Operation) technology to transmits data by simultaneously connecting to two bands. The **extended 6GHz spectrum** and **Multi-Link Operation** offer **higher data transfer speed, wider bandwidth** and **reduced interference**.



SEAMLESS CONNECTIVITY

- Advanced wireless capabilities include cellular options of 4G LTE or 5G.
- 5G mobile connectivity offers ultrafast data transfer speed over previous generations of mobile networks, which is **100x** fast than 4G LTE. Providing always-on high-speed connectivity for workers in the field with improved productivity anytime, anywhere.

Downlink Speeds by Technical Generation



GOVERNMENT SECTOR

- Z14I-HG designed with **u-blox NEO M9N module** to provide high GPS accuracy.
- **And more**, featured by **RF Tri-pass-through** (WIFI, WWAN, GPS), in-field professionals can connect to the remote database in real time.



VIEW EVERY DETAIL

THE NEW GENERATION OF DYNAVUE® TECHNOLOGY

- 14" **FHD** (1920x1080) display.
- Sunlight readable touch panel with **1200 nits** DynaVue® **light-filtering** technology, providing a high contrast ratio (CR) to eliminate reflection and deliver the best clarity.
- 16:9 wide screen is the perfect ratio to view.



High Brightness

Light Filtering Technology

DynaVue®



ANTI-REFLECTIVE



**Increased Clarity &
Wider Viewing Angle**

VIEW EVERY DETAIL

THE NEW GENERATION OF DYNAVUE® TECHNOLOGY



WHY FHD?

200%
Higher

- Image is made by lines of pixels along the vertical and horizontal axis:
 - HD: 768p (1366 x 768 – approximately 1 million total pixels)
 - **Full HD: 1080p** (1920 x 1080 – approximately **2 million** total pixels)
- **Full HD is the standard resolution** for the most HD videos now.

✓ 4 touch modes: glove, stylus, water and finger mode.

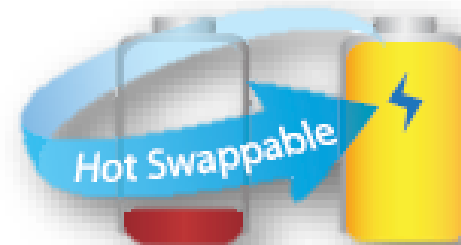


NON-STOP MOBILITY

EASY BATTERY SWAPPABLE CAPABILITIES

Zero Downtime with Hot-Swappable Technology

What's more, with an ultra-long battery life of **21.5 hours** and 5 minutes of bridge time in between battery changes, data loss and downtime are non-issues.



BATTERY CHARGING PROTECTION

To reduce battery aging, Durabook has developed four battery charging modes with enhanced charging algorithms for our customers to choose from.

4 Battery modes:

- **Regular Mode**
In this mode the battery will be fully charged.
- **Optimized Battery Charging (OBC)**
Battery charging will stop at 80% to reduce battery aging.
- **Temperature Control Mode (TCM)**
To extend the lifetime of the battery, charging is enhanced based on DURABOOK intelligent algorithm and battery temperature.
- **DURA² Charging (D2C)**
To maximize battery performance and lifespan, charging is enhanced based on DURABOOK intelligent algorithm and battery temperature. Battery charging will stop at 80%.



MILITARY-GRADE LEVEL

DUAL QUICK-RELEASE STORAGE

Dual Quick-Release NVMe PCIe SSD Storage

The Z14I-HG features two NVMe PCIe SSDs that are quick and easy to remove.

It is equipped with the latest NVMe PCIe SSD solution, providing up to 2TB of each storage.



MULTI-STORAGE MANAGEMENT



Z14I-HG is equipped with the latest NVMe PCIe SSD technology, with storage capacities ranging from 256GB to 2TB.

It can carry up to 3 SSDs, all designed with quick-release system for ease-of-use and supports RAID 0 and RAID 1.

- 1 x NVMe PCIe SSD
- 1 x NVMe PCIe SSD
- 1 x Media Bay 2.5" SATA III SSD

Featured with NVMe PCIe SSD performance:

- Speeds up to **7000 MB/s (PCIe Gen4)**
- **11x** faster than SATA III SSD

Type	Speed
Durabook Z14I-HG NVMe PCIe 4x4	7000 MB/s
Market SATA III Solution	600 MB/s

MULTIPLE WAYS OF SETUP

MEDIA BAY FOR YOUR CHOICE

Media bay options for user selection to achieve difference application fulfillments:

- Optical disk drive
- 2nd battery
- 3rd storage (SATA SSD)




MORE RUGGED THAN EVER

MIL-STD-810H & IP66 CERTIFIED

- With excellent design know-how, the Z14I-HG is able to withstand harsher environmental challenges than ever.
- Z14I-HG is MIL-STD 810H certified (Shock, Vibration, Rain, Dust, Altitude, Freeze/Thaw, High/Low Temperature, Temperature Shock, Humidity, **Solar Radiation, Salt Fog, Fungus Resistance**).



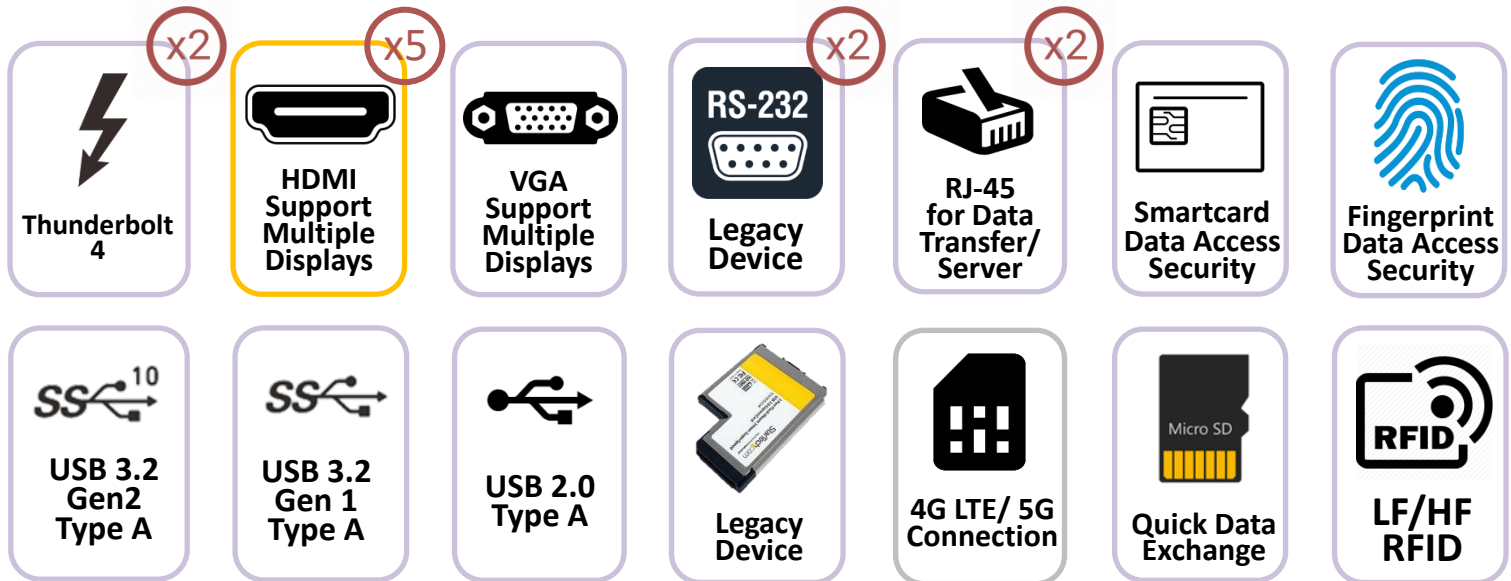
MILITARY STANDARD CERTIFIED	
 Durabook Z14I-HG	+ Solar Radiation + Salt Fog + Fungus Resistance
Market Solution P	N/A
Market Solution G	+ Explosive Atmosphere + Salt Fog

SPEAK ALL LANGUAGES

EXPANDABLE AND CONFIGURABLE I/O OPTIONS

Default built-in:

- **Thunderbolt 4 (Type C) x 2**
- USB 3.2 Gen 2 (Type A) x 1,
USB 3.2 Gen 1 (Type A) x 1,
USB 2.0 (type A) x 1
- **HDMI 2.1 x 5**
- **VGA ports x 1**
- **RJ-45 x 2**
- **RS-232 x 2** (support 422 and 485)
- **Smart Card/CAC reader**
- Dual SIM (Nano SIM & eSIM)
- microSD card reader
- **ExpressCard 54**
- Optional RFID reader *
- Optional fingerprint reader *



* by project support

IMPROVED SECURITY WITH WINDOWS HELLO

UTILIZE THE POWER OF BIOMETRICS-BASED TECHNOLOGY

- Z14I-HG supports Windows Hello face authentication. The Z14I-HG is equipped with a near infrared (IR) camera with facial recognition capability to authenticate and unlock Windows devices. Near infrared camera provides consistent image sensing capability in various ambient light environments, enabling users to login to Windows securely.



Windows Hello



Face Authentication

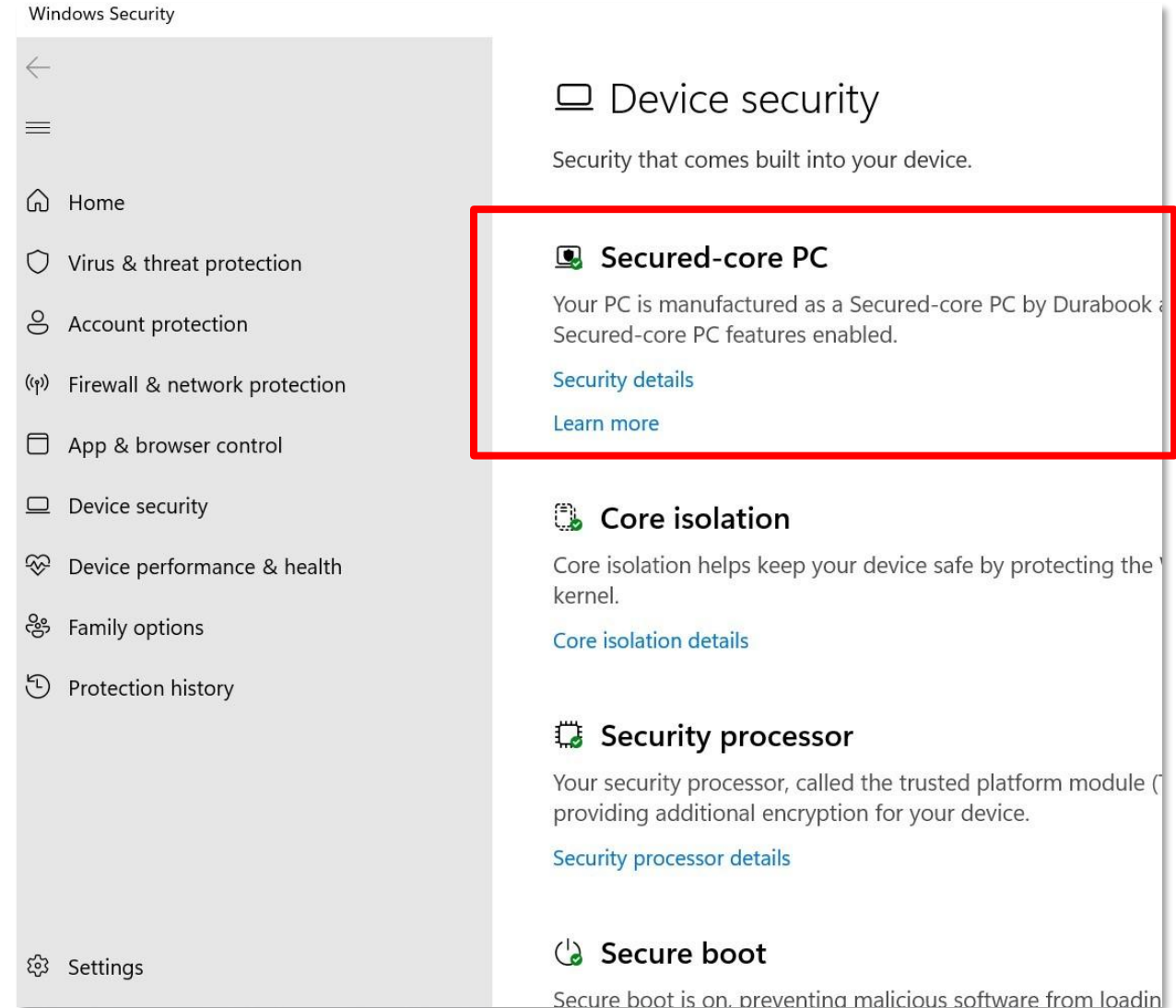


ELEVATE PROTECTION WITH SECURED-CORE PC

SUPPORTING WINDOWS HELLO

*Secured-core PC is project base

- **Multifactor Authentication (MFA)**
 - Capacitive Fingerprint Reader
 - Camera for Windows Hello facial recognition
 - Smart Card reader
 - LF/HF-RFID reader
- **Sniff out any tampering bootups**
 - TPM2.0 prevents tampering or malicious attacks.



Z14I-HG ANATOMY

2MP CAMERA WITH PRIVACY SHUTTER
OPTIONAL 5MP IR CAMERA FOR WINDOWS HELLO

◀ FRONT BACK ▶



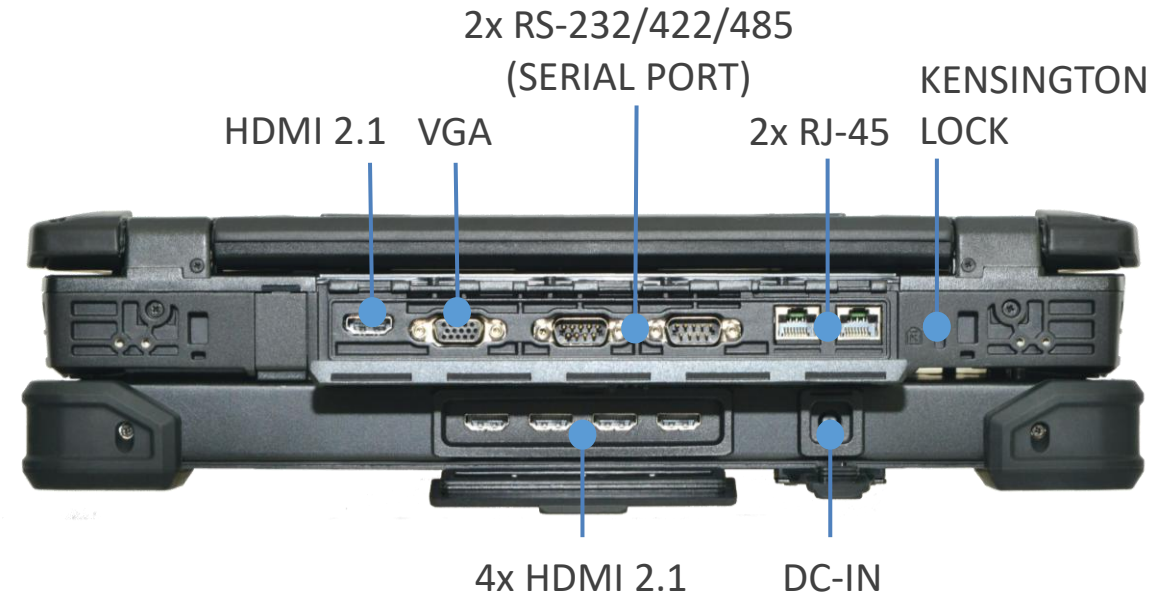
14.0" 1200 NITS SUNLIGHT
READABLE DISPLAY

4 TOUCH MODES: GLOVE,
STYLUS, WATER & FINGER

2x PROGRAMMABLE
KEYS

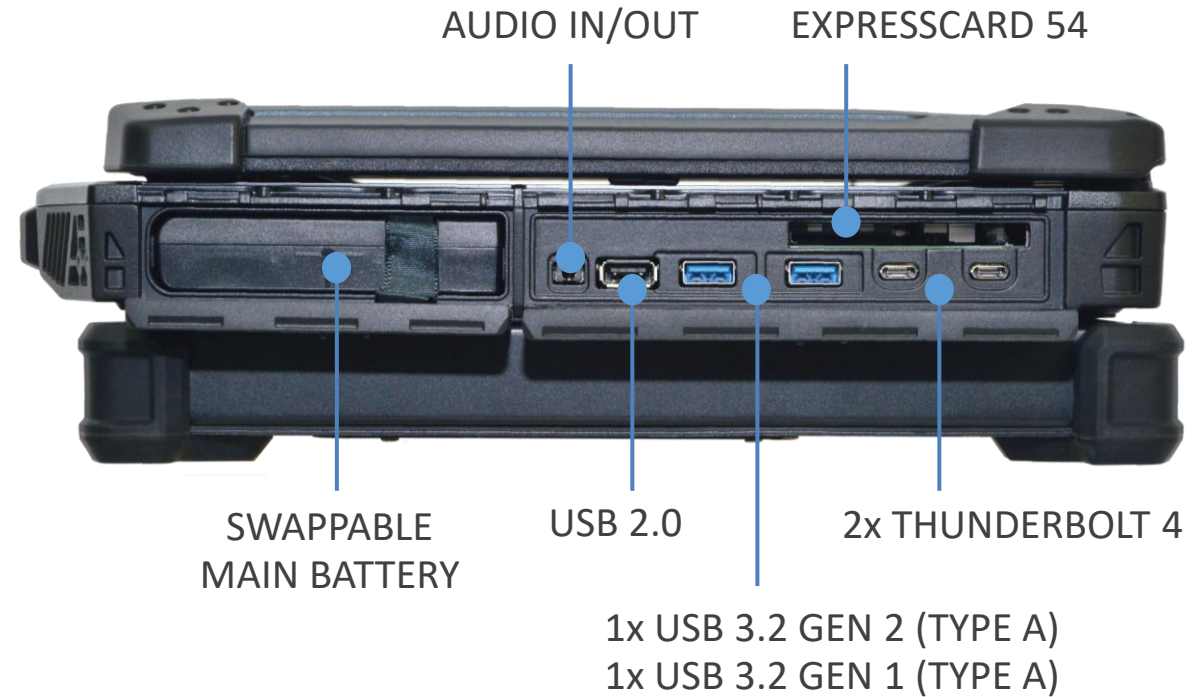
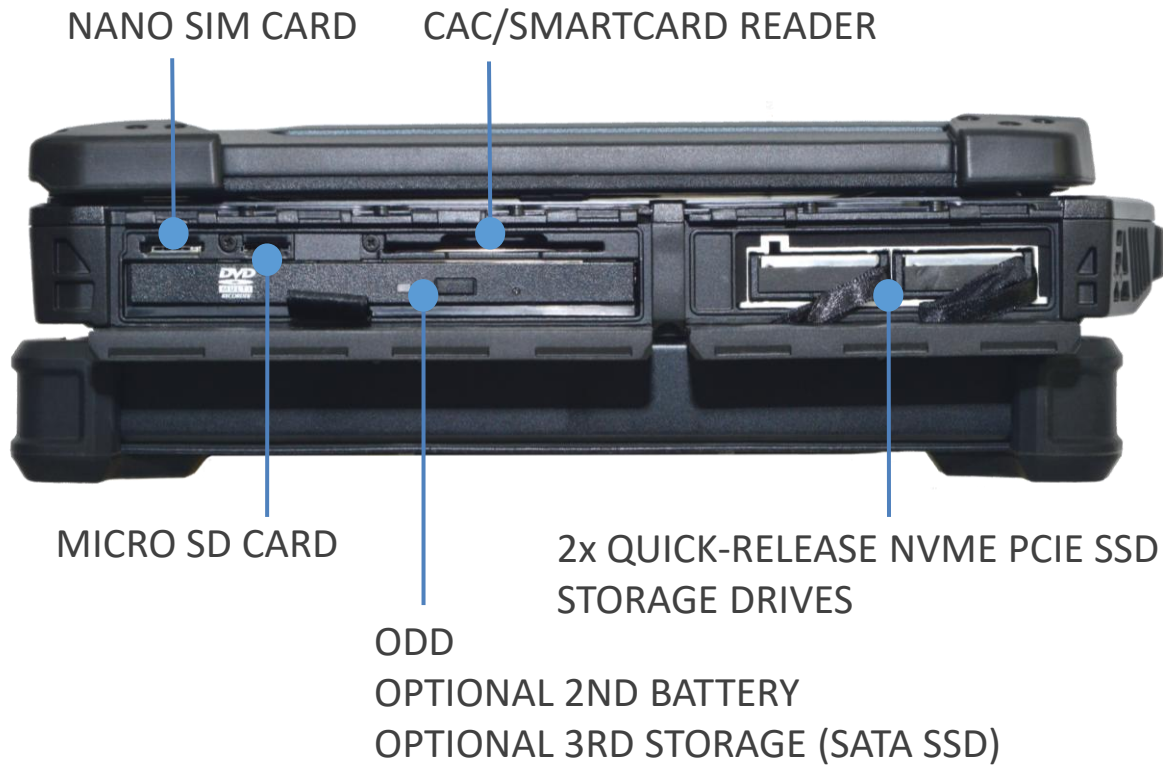
OPTIONAL FINGERPRINT

OPTIONAL RFID/NFC READER



Z14I-HG ANATOMY

◀ LEFT RIGHT ▶



Accessories



ACCESSORIES FOR Z14I-HG



2-Bay Battery Charging Station



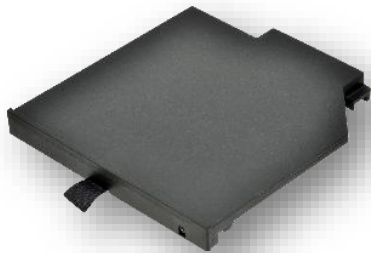
8-Bay Battery Charging Station



Spare Main Battery



Spare PCIE SSD with canister



Removable 2nd Battery for media bay



3rd SSD for media bay



Removable Super Multi DVD for media bay



USB-C Docking Station

	DURABOOK Z141-HG	Market Solution G (B360 Pro)	Market Solution P (40)	Market Solution G (X600 Pro)
IP rating	IP 66	IP 66	IP 66	IP 66
Display	14" FHD (1920 x1080) 1200 nits sunlight readable display with capacitive multi-touch screen	13.3" FHD (1920 x 1080) with 1400 nits LumiBond® display with multi-touch screen	14" FHD (1920 x 1080) with 1200 nits capacitive gloved touch	15.6" TFT LCD FHD (1920 x 1080) Protection film 1,000 nits LumiBond display with multi-touch screen
CPU	Intel® Core™ Ultra Series 1; Support vPro - Intel® Core™ Ultra 7 165U - Intel® Core™ Ultra 7 155U	Intel® Core™ Ultra 5 225H / Ultra 5 235H Ultra 7 255H / Ultra 7 265H	- Intel® Core™ i5-1145G7 vPro™ (up to 4.4GHz) - Intel® Core™ i7-1185G7 vPro™ (up to 4.8GHz)	- Intel® Core™ i5-11500H vPro Max. 4.6 GHz, - Intel® Core™ i7-11850H vPro Max. 4.8 GHz, - Intel® Xeon® W-11865MRE vPro® Processor Max. 4.7GHz
Graphic	Intel® Graphics NVIDIA® RTX™ 3500 Ada - Optional NVIDIA® RTX™ 5000 Ada	Intel® Iris® Arc Graphics Optional: NVIDIA® Quadro® RTX A500	- Intel® Iris® Xe Graphics - Intel® UHD Graphics - AMD Dedicated Graphics	Intel® UHD Graphics - NVIDIA® Quadro® RTX3000 6GB discrete graphics - NVIDIA® GeForce® GTX1650 4GB discrete graphics - NVIDIA® RTX™ A4500 16GB discrete graphics
Storage	512GB/1TB/2TB NVMe PCIe SSD - Optional 2nd NVME - Optional OPAL 2.0 SSD - Optional 3rd media-bay storage (2.5" SATA SSD)	Main Storage: 256GB/512GB/1TB/2TB NVMe SSD 2nd Storage: 256GB/512GB/1TB/2TB NVMe SSD Optional multimedia bay storage : 1TB / 2TB SATA SSD	512GB, 1TB or 2TB quick-release OPAL NVMe SSD - Optional 2nd storage 512GB or 1TB SATA SSD	PCIe SSD 512GB ; Optional PCIe SSD 1TB / 2TB Optional 2nd storage: 512GB / 1TB / 2TB PCIe SSD Optional 3rd storage: 512GB / 1TB / 2TB PCIe SSD
RAM	16GB up to 64GB DDR5	16GB up to 64GB DDR5	16GB up to 64GB DDR4	16GB up to 128GB DDR4
I/O Interface	Thunderbolt 4 (type C) x 2, USB 3.2 Gen2 (type A) x 2, USB 2.0 (type A) x 1, Audio in/out (combo jack) x 1, microSD card (microSDXC) x 1, 10/100/1000 Ethernet (RJ-45) x 2, VGA port (D-sub,15-pin) x 1, HDMI 2.1 port (type A) x 5, Serial port (RS232/RS422/RS485: D-sub, 9-pin) x 2, Docking connector (41-pin Pogo) x 1, Dual SIM (Nano SIM & eSIM), Smart card reader x 1, ExpressCard 54 x 1,DC-In jack x 1, Optional RF antenna pass-through for GPS, WWAN, and WLAN	Audio in/out Combo x 1, DC in x 1, USB 3.2 Gen 2 Type-A x 1, PowerShare USB 3.2 x 1, Thunderbolt 4 x 1, RJ45 x 1, RJ45 x 1, HDMI x 1, Docking connector x 1, - Optional: SIM card slot - Optional RF antenna pass-through - Optional: Serial port x1 + VGA or Serial port x1 + Display port x 1 or Serial port x1 + VGA x1 + RJ45 or Serial port x1 + DP + RJ45 or Serial port x2 + VGA or Serial port x2 + DP or Serial port x2 +VGA + RJ45 or Serial port x2 + DP + RJ45	- Thunderbolt 4 x1, USB A x2, Micro SDXC, HDMI, RJ45, Audio in/out, dual SIM - Optional USB A x2 - Optional VGA - Optional 2nd RJ45 - Optional Serial D-sub 9-pin - Optional Smart card	Thunderbolt™ 4 Type-C x 1 USB 3.2 Gen 2 Type-A x 4 LAN (RJ-45) x 2 Audio in/out combo x 1 DC in Jack x 1 HDMI 2.0 x 1 Display port x 1 Docking connector x 1 Serial port (9-pin; D-sub) x 2 External VGA x1 or 3rd serial port x 1 Optional: SIM card slot x 1 Optional: RF antenna pass-through for GPS, WWAN and WLAN x 1
Media Bay	Optional ODD / 2nd battery / 3rd SSD (2.5" SATA)	Optional: DVD super multi drive, or Blu-Ray super multi drive, or 3rd storage Optional: 3rd battery	Optional DVD Drive/ Barcode Reader/ 512GB/1TB 2nd SSD	Multimedia bay battery DVD super multi drive Optional: Multimedia bay 2nd battery or Blu-Ray super multi drive
Wireless	- Intel® Wi-Fi 7 BE200 - Bluetooth v5.4 - Optional 4G LTE & 5G - Optional: Dedicated GPS	- Intel® W-Fi BE200 - Bluetooth v5.3 - Optional 4G LTE & 5G	- Intel® Wi-Fi 6 AX201 - Bluetooth v5.1 - Optional 4G LTE & 5G	2.5GBASE-T Ethernet Intel® Wi-Fi 6E AX210, 802.11ax, Bluetooth (v5.2) Optional: Dedicated GPS Optional: 4G LTE

Prepared
for
the Unexpected

DURANBOOK