

Lenovo P14s Gen 5 AMD

Version: 1.0 | 05/21/2024

Product Name	P14s Gen 5 AMD
Product Display Name	P14s Gen 5 AMD
Information Date	May 14, 2024

SECTION I: Platform Overview

Description	The Lenovo ThinkPad P14s Gen 5 AMD offers on-the-go premium performance in a newly designed 14-inch chassis with an optimized 16:10 display. Powered by AMD Ryzen™ PRO 8000 Series processors, these ultra-advanced and power-efficient processors for elite ultra-thin mobile workstations feature AMD Ryzen™ Artificial Intelligence (AI) built-in, an integrated NPU to provide optimized performance for all your AI workflows.
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CPU

Processor Support	AMD Hawk Point HS-Series Ryzen 5 PRO 8640HS Processor AMD Hawk Point HS-Series Ryzen 7 PRO 8840HS Processor
Socket Type	BGA
Disclaimers	

Operating Systems

Preloaded	Windows 11 Pro 64 (23H2) Windows 10 Pro (preinstalled through downgrade rights in Windows 11 Pro) Windows 11 Home 64 Windows 11 Home Single Language 64 Windows 11 Home Chinese Language Edition 64 CMIT Government Edition Ubuntu (Version22.04) Fedora
Supported	Windows 11 Pro 64 (23H2) Windows 10 Pro (preinstalled through downgrade rights in Windows 11 Pro)

	Windows 11 Home 64 Windows 11 Home Single Language 64 Windows 11 Home Chinese Language Edition 64 CMIT Government Edition Ubuntu (Version22.04) Fedora Redhat
Disclaimers	

Memory

Number of DIMM Slots	2 SoDIMM slot
Channels	Quad 32b channels
Type	DDR5
ECC Support	No
Speed	5600 MHz
Max DIMM Size	48GB
Max System Memory	96GB
Min System Memory	8GB
Soldered Memory	NO
Disclaimers	

Storage

Storage Slots	1 x PCIe Gen 4 M.2 2280
SATA	/
PCIe	Solid State Drive, OPAL2 PCIe-NVMe Gen 4 M.2 2280- TLC
SAS	None
Interface	PCIe Gen 4
Security	PCIE
Optional Hard Disk Drive Controllers	OPAL2 for NVMe SSD
Disclaimers	

Video

Integrated Graphics	AMD Radeon™ 780M (Ryzen 7 PRO 8840HS) AMD Radeon™ 760M (Ryzen 5 PRO 8640HS)
Discrete Graphics	N/A
Adapter	None
Bus Interface	NA
Disclaimers	

Display

Resolutions	FHD+ (1920 x 1200) / 2.8k OLED (2880 x 1800)
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Camera

Resolution	5MP RGB+IR/ 5MP RGB
Frames per Second	30 fps
Focus	Fixed 50cm
Camera Interface	USB 2.0
IR Camera	Yes (optional)

Keyboard

Number of Keys	US : 84 / UK : 85 / JP : 89
Numpad	No
Size	100% ISO
Function Key Features	Yes
Backlit	Yes
Keyboard size	CS24 Top mount Shrunken 14" KBD
Key stroke	1.5mm (normal keys), 1.35mm (Fn keys)
Key pitch	19.05mm
Keyboard backlight	Optional
Keyboard thickness	4.0mm (General)

TrackPad / Fingerprint Reader

TrackPoint Details	COMO TrackPoint module (t5.5mm)
Finger Print Reader Model	Synaprics Metallica 8x8 FPR, MoC
Multi-Touch	Yes
Resolution	1000 ppi
TrackPad/TouchPad thickness	3.3mm
TrackPad/TouchPad type	3 BCP
TrackPad size	115mm x 61 mm
TrackPad material/finish	Mylar surface

I/O – Ports and Connectors

USB	2x USB-A 3.2 (Gen 1) (1 powered)
Thunderbolt	2x USB-C (USB4.0, TBT4, DP2.0)
HDMI	1x HDMI 2.1 TMDS up to 4K/60Hz
Audio Combo Jack	1x Microphone & Headphone Combo Jack (3.5mm)
Media Card Reader	N/A
Smart Card Reader	Yes (optional)
Power Connector	DC-In
Docking Port	2x USB-C
VirtualLink	None
Network adapter	Gigabit Ethernet (RJ45)
Disclaimers	

Power Connector

Main	DC-In
USB-C	2x USB-C (USB4.0, TBT4, DP2.0)
Disclaimers	

Ethernet

Vendor	Realtek
Count	x1
EEPROM	SPI ROM (Merge with BIOS/MEFW)
Speeds	10/100/1000 Mbps
Functions	Wake On LAN MAC Address Pass Through PXE Boot Flash Over LAN
Connectors	RJ45
Disclaimers	

WWAN

Model	optional: CAT16/Quectel 5G (RM520N-GL) with physical eSIM optional
Disclaimers	

Near Field Communications

Model	Yes, optional
Disclaimers	

Audio

Vendor	Realtek
Type	High Definition Audio Codec
Internal Speaker	Yes, dual speakers
Connectors	Microphone & Headphone Combo Jack (3.5mm)
Chipset	ALC3287
Number of Channels	4-channel DAC, 4-channel ADC
Number of Bits/Audio Resolution	16/20/24-bit PCM format
Sampling Rate (Recording/Playback)	n
Signal to Noise Ratio	90dB Signal-to-Noise Ratio (A-weighting) for ADC input. 100dB Signal-to-Noise Ratio (A-weighting) for DAC output
Analog Audio	None
Dolby Digital	Yes
Digital Out (S/PDIF)	No
Speaker Power Rating	2W@4ohm/ch
Disclaimers	

Power adapter

Type	65W AC Slim Adapter	65W AC Adapter
Dimensions	88mm x 51mm x 22mm	108.5mm x 46.5mm x 29.5mm
Input Voltage	100-240V	100-240V
Disclaimers		

Security

TPM	Yes, TPM2.0
Asset ID	Yes
Pro	Yes
Disclaimers	

Chassis Information

Format	Ultraslim Notebook
Color	Black
Thermal Solutions	Internal Single FAN, Intelligent Cooling
Dimensions	Length 12.44 inches 315.90 millimeters Width 8.81 inches 223.70 millimeters Height (Marketing Z-height) 0.70 inches 17.71 mm
Weight	Starting weight 1.31kg / 2.89lbs
Disclaimers	

Packaging Parameters

Height (mm)	300
Height (inch)	11.8
Width (mm)	446
Width (inch)	17.6
Depth (mm)	81
Depth (inch)	3.1
Weight (kgs)	0.32kg
Weight (lbs)	0.71lbs
Disclaimers	

Security & Serviceability

Self Healing BIOS	Yes
Access Panel	Removeable bottom cover
Number of Screws	6
Swappable Components	Base cover assembly, TrackPoint pointing stick, Lenovo factory recovery USB key, Power cord, ac power adapter (65W)
Storage Slots	1 storage slot
Memory	two DIMM
System Board	1190 System Board. No self-service CRU.
Restore CD/DVD/USB Set	None. Purchase via Lenovo Customer Support Center
Cable Lock Support	Security-lock slot
Power-On Password	Yes
Hard Disk Password	Yes; User and Master hard disk password

Supervisor Password	Yes
NIC LEDs (integrated)	Yes (if it means the LED for Ethernet)
Security Chip	Yes (for TPM 2.0)
Access Panel Key Lock	Bottom Cover Tamper Detection
Boot Sequence Control	Yes
Disclaimers	

Operating Environment

Operating – Air Temperature	At altitudes up to 2438 m (8000 ft) – Operating: 5°C to 35°C (41°F to 95°F)
Non Operating – Air Temperature	At altitudes up to 2438 m (8000 ft) – Storage: 5°C to 43°C (41°F to 109°F)
Humidity	Operating: 8% to 95% at wet-bulb temperature 23°C (73°F) Storage: 5% to 95% at wet-bulb temperature 27°C (81°F)
Corrosive Gas	G1
Particulates	P1
Disclaimers	

SECTION II: Platform Detail

Supported Components

Processor	AMD Hawk Point HS-Series Ryzen 5 PRO 8640HS Processor AMD Hawk Point HS-Series Ryzen 7 PRO 8840HS Processor
Memory Support	DDR5 5600MHz
Chipset (PCH)	Integrated Soc
Size of BIOS Flash	64 MB
Super I/O	N/A
Clock	Crystal
Audio	Realtek High Definition Audio
Ethernet	Realtek RTL8111EPV
Notes	
Disclaimers	

Memory

System Capacity Options	Upto 96GB
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non-ECC	Yes
Brand of non-ECC Memory	Samsung/Ramaxel/Sk Hynix/Micron
ECC	None
Brand of ECC Memory	N/A
Memory clock frequency(MHz)	DDR5 5600 MHz
Disclaimers	

Storage

2.5" SAS Hard Disk Drive (HDD)	None
2.5" SATA Hard Disk Drive (HDD)	None
2.5" SATA Solid State Drive (SSD)	None
M.2 (NGFF) PCIe Solid State Drive (SSD)	256GB Opal 2 PCIe G4 NVMe M.2 2280 512GB Opal 2 PCIe G4 NVMe M.2 2280 512GB Opal 2 PCIe G4 NVMe Performance M.2 2280 1TB Opal 2 PCIe G4 NVMe M.2 2280 1TB Opal 2 PCIe G4 NVMe Performance M.2 2280 2TB Opal 2 PCIe Gen4 Performance NVMe M.2 2280
2.5" PCIe Solid State Drive (SSD)	None
Brand of Drive	Samsung UnionMem WD Hynix Kioxia Micron
Intel Optane Storage Technology	Yes
RAID	Not Supported
RAID Level and Requirements	
Disclaimers	

Removeable Media

Media Card Reader Specifications	N/A
Disclaimers	

SECTION III: Supported Component Detail

CPU Specifications

CPU	AMD Hawk Point HS-Series Ryzen 5 PRO 8640HS Processor	AMD Hawk Point HS-Series Ryzen 7 PRO 8840HS Processor
Integrated Graphics	AMD Radeon™ 760M	AMD Radeon™ 780M
# of Cores	6 cores	8 cores
# of Threads	12	16
Processor Base Frequency	3.5GHz	3.3GHz
Max Turbo Frequency	4.9GHz	5.1GHz
Cache	22MB	24MB
TDP	28W	28W
AMD Spec Link	https://www.amd.com/en/products/apu/amd-ryzen-5-8640hs	https://www.amd.com/en/products/apu/amd-ryzen-7-8840hs
Disclaimers		

Display Specifications

Model	WUXGA	WUXGA oncell touch	WUXGA low power	WUXGA ePrivacy	2.8k
Resolution	1920 x 1200	1920 x 1200	1920 x 1200	1920 x 1200	2880 x 1800
Diagonal	14"	14"	14"	14"	14"
Aspect Ratio	Ratio 16:10	Ratio 16:10	Ratio 16:10	Ratio 16:10	Ratio 16:10
Backlight	LED	LED	LED	LED	None
PPI	162	162	162	162	243
Active Area	302 x 188	302 x 188	302 x 188	302 x 188	302 x 188
Refresh Rate	60 Hz	60 Hz	60 Hz	60Hz	60 Hz
Contrast Ratio	800:1 (TYP)	800:1 (TYP)	1000:1 (TYP)	1500:1 (TYP)	100000:1 (TYP)
Viewing Angle	85/85/85/85 degree	85/85/85/85 degree	85/85/85/85 degree	85/85/85/85 degree	85/85/85/85 degree
Color gamut	45% NTSC	45% NTSC	100% sRGB	100% sRGB	100% DCI-P3
Brightness	400nit	400nit	400nit	500nit	400nit
Contrast	Ratio 800:1	Ratio 800:1	Ratio 1000:1	Ratio 1500:1	Ratio 100000:1
Color Depth	16M	16M	16M	16M	1074M
Interface	eDP 1.2	eDP 1.2	eDP 1.4	eDP 1.4	eDP 1.4
Panel ID Recognition	EDID in BIOS Table	EDID in BIOS Table	EDID in BIOS Table	EDID in BIOS Table	EDID in BIOS Table
Weight	305g max	310g max	245g max	270g max	180g max

Color Calibrator	None	None	Adaptive ICC profile	None	X-Rite Factory Color Calibration, Dolby Vision
Panel Technology	IPS, Anti-Glare	IPS, Anti-Glare	IPS, Anti-Glare, LBL, Eyesafe certified	IPS, Anti-Glare	OLED, Anti-Glare/Anti-reflection/Anti-fingerprint, LBL, Eyesafe certified
Touch Panel	None	YES	None	YES	None
Disclaimers					

HDD Specifications

2.5" SAS Hard Disk Drive (HDD)	N/A
2.5" SATA Hard Disk Drive (HDD)	N/A
Disclaimers	

HDD Storage Device Specifications

Connector	N/A
Transfer Rate (Gb/sec)	N/A
Disclaimers	

HDD Performance

Spindle Speed(RPM)	N/A
Power off to Spindle Stop(sec)	N/A
DC Power to Drive Ready(sec)	N/A
Receipt of Start Unit Command to Drive Ready(sec)	N/A
Average Latency(msec)	N/A
Disclaimers	

HDD Power Management

Input (VDC)	N/A
Typical (Watts)	N/A

Idle (Watts)	N/A
Disclaimers	

HDD Dimensions

Height (mm – Max)	N/A
Width (mm)	N/A
Depth (mm – Max)	N/A
Weight (grams)	N/A
Disclaimers	

HDD Temperature

Operating(C) Ambient	N/A
Operating(C) Base Casting	N/A
Non-Operating(C) Ambient	N/A
Gradient(C per Hour)	N/A
Disclaimers	

HDD Shock

Operating(Gs @ 2ms)	N/A
Non-Operating(Gs @ 2ms)	N/A
Disclaimers	

SSD Specifications

2.5" SATA Solid State Drive (SSD)	N/A
M.2 (NGFF) PCIe Solid State Drive (SSD)	1x M.2 2280 PCIe Gen4
2.5" PCIe Solid State Drive (SSD)	N/A
Intel Optane Storage Technology	N/A
Disclaimers	

Solid State Storage Devices

Supported Types	M.2
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Dimensions inches/centimeters (W x D x H)	22.0 (+-0.15) x 80.0 (+-0.15) x 2.3 (max)
Size	M.2 2280S3
Interface Type	PCIe NVMe Gen4
Read/Write IOPS Specifications	Performance PCIe Gen4 Read: 700k (2TB), 600k (1TB) Write: 600k (2TB, 1TB) Value PCIe Gen4 Read: 300k (1TB), 250k (512GB), 200k (256GB) Write: 240k (1TB, 512GB), 190k (256GB)
Bandwidth Performance	PCIe Gen4 x 4 (16Gbps)
Power Consumption (Max)	3.0A (10us average)
Active(AVG)	5W
Idle	5mW (L1.2)
Min MTBF	2'000'000
Min Sequential Read	Performance PCIe Gen4 6400MB/s (2TB, 1TB) Value PCIe Gen4 3500MB/s (1TB, 512GB), 3200MB/s (256GB)
Min Sequential Write	Performance PCIe Gen4 5000MB/s (2TB), 4400MB/s (1TB) Value PCIe Gen4 2900MB/s (1TB), 2500MB/s (512GB), 1800MB/s (256GB)
Hardware Encryption	Yes
Disclaimers	

Discrete Graphics Adapter

GPU Name	N/A
CUDA Processing Cores	N/A
GPU Memory	N/A
Memory Bandwidth	N/A
Memory Type	N/A
Memory Interface	N/A
TGP Max Power Consumption	N/A
Display Port	N/A
OpenGL	N/A
Shader Model	N/A
DirectX	N/A
PCIe Generation	N/A
Floating-Point Performance	N/A
VR Ready	N/A
Simultaneous Multi-Projection	N/A

NVIDIA FXAA/TXAA Antialiasing	N/A
NVIDIA nView Display Management Technology	N/A
GPU Direct for Video	N/A
Vulkan Support	N/A
NVIDIA Optimus	N/A
Disclaimers	

WLAN

Model	Qualcomm NFA-725A onboard
Connector: Main, Aux/GNSS, GNSS	ANT1:AUX WiFi + BT; ANT2: Main WiFi
Antenna Diversity	Supported
MIMO	Not supported
GNSS Bian	N/A
Radio ON/OFF Control	Supported
Connector interface	PCIE
Operating Temperature (Adapter Shield)	0c to +80c
Humidity Non-Operating	50%~90% Rh non condensing (at temperatures of 25c to 35c)
Operating Systems	Microsoft Windows 7*, Microsoft Windows 8.1*, Microsoft Windows 10*, Linux* (limited feature support), Android
Wi-Fi Alliance	Wi-Fi CERTIFIED* a/b/g/n/ac, WMM*, WMM-PS*, WPA*, WPA2*, WPS2*, Protected Management Frames, Wi-Fi Direct* for peer to peer device connections, Wi-Fi Miracast* as Source.
IEEE WLAN Standard	IEEE 802.11a/b/g/n/ac, 802.11d, 802.11e, 802.11h, 802.11i, 802.11w; 802.11r, 802.11k, 802.11v pending OS support; Fine Timing Measurement based on 802.11REVmc
Roaming	Support seamless roaming between access points
Bluetooth*	Dual Mode Bluetooth® 5.0, BLE
Authentication	WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA, EAP-AKA
Authentication Protocols	PAP, CHAP, TLS, MS-CHAP*, MS-CHAPv2
Encryption	64-bit and 128-bit WEP, 128-bit AES-CCMP
Regulatory	For a list of country approvals, please contact your local Intel representatives.
US Government	FIPS10, FISMA
Product Safety	UL,C-UL,CB (IEC 60950-1)
Disclaimers	

Battery

Dimension	270 mm x 68.5 mm x 6.16 mm	270 mm x 68.5 mm x 6.16 mm
Weight	173g	212g
Type (Chemistry and Cell)	Li-ion Polymer	Li-ion Polymer
Voltage	11.58V ~ 11.61V	15.44V ~ 15.48V
Battery Capacity	Integrated 3-cell 39.3Wh battery	Integrated 4-cell 52.5Wh battery
Charging Time	0% to 100% 0% to 80% Battery Charging Time (in-operation) 2.06 hr Battery Charging Time (off) 1.89 hr 0.92 hr	0% to 100% 0% to 80% Battery Charging Time (in-operation) 2.39hr Battery Charging Time (off) 1.98 hr 0.99 hr
Operating Temperature Range	between 10°C (50°F) and 35°C (95°F)	between 10°C (50°F) and 35°C (95°F)
Warranty	1 Year / 3 Year Available	1 Year / 3 Year Available
Coin Cell Battery (Model)	CR2016	CR2016
Disclaimers		

SECTION IV: BIOS / Certifications / Standards / Environmental

BIOS Specifications

WMI Support	Yes, if it is BIOS Setup change by WMI.
ROM-Based Setup Utility (F1)	Yes
Bootblock Recovery	N/A
Replicated Setup	Yes, it supported with SRSETUP tool.
Boot Control	Yes, it means Boot order change.
Memory Change Alert	N/A
Thermal Alert	N/A
Asset Tag	Yes
System/Emergency ROM Flash Recovery with Video	N/A
Remote Wakeup/Remote Shutdown	Yes, if Remote wakeup is Wake on LAN from S4/S5.
Keyboard-less Operation	N/A
Per-port Control	Yes, if it is I/O port enable/disable by BIOS Setup.
Adaptive Cooling	Yes, if it is thermal & fan control.
Security	Yes, BIOS password / Hard disk password / Finger print
Intel(R) AMT (includes ASF 2.0)	Yes. If you select vPro model
Intel(R) TXT	Yes. If you select vPro model

Memory Modes

N/A

EMC & Safety

EMC	<p>Published, Certified Existing Reports</p> <p>EMC – Australia EMC – Belarus EMC – Canada EMC – China EMC – EU/EFTA EMC – Japan EMC – Kazakhstan EMC – New Zealand EMC – Russia EMC – South Korea EMC – Taiwan EMC – USA/Territories Not Applicable / Not Required EMC – Israel EMC – Moldova EMC – Serbia EMC – Turkey EMC – Uzbekistan EMC – Vietnam</p>
Safety	<p>To access the latest User Guide and Safety and Warranty Guide, go to: https://support.lenovo.com Low Halogen Declaration of Conformance TNOT-2017-0040 Section 9 – Low Halogen Scorecard Izod Test – EPEAT Compliant Homologation PCRB Compliant In the following countries: Albania, Algeria, Andorra, Angola, Antigua and Barbuda, Argentina, Armenia, Aruba, Australia, Azerbaijan, Bahamas, Bahrain, Bangladesh, Barbados, Belarus, Belize, Benin, Bermuda, Bolivia, Botswana, Burkina Faso, Burundi, Cambodia, Cameroon, Canada, Cape Verde, Cayman Islands, Central African Republic, Chad, China, Colombia, Comoros, Congo, Costa Rica, Djibouti, Dominican Republic, Egypt, El Salvador, Eritrea, Ethiopia, EU/EFTA, Fiji, Gabon, Gambia, Georgia, Ghana, Grenada, Guatemala, Guinea, Haiti, Honduras, Hong Kong, India, Indonesia, Israel, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Laos, Lebanon, Liberia, Macau, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mexico, Moldova, Mongolia, Morocco, Mozambique, Namibia, Nepal, New Zealand, Nicaragua, Niger, Nigeria, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Qatar, Russia, Saudi Arabia, Senegal, Serbia, Seychelles, Sierra Leone, Singapore, South Africa, South Korea, Sri Lanka, Swaziland, Taiwan, Tajikistan, Tanzania, Thailand, Togo, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, United Arab Emirates, Uruguay, USA/Territories, Uzbekistan, Venezuela, Vietnam, Zambia, Zimbabwe, Brazil – Inmetro 170 Govt Bids, Guinea-Bissau, Lesotho</p>

Environmentals

Energy Star	<p>ENERGY STAR® Version 8.0 For more information about ENERGY STAR, go to: https://www.energystar.gov</p>
EPEAT	EPEAT Declaration of Conformance For Machine Types: 20S4, 20S5
IT ECO declaration	<p>The latest environmental information about Lenovo products is available at: https://www.lenovo.com/ecodeclaration</p>
Hazardous Substances	<p>The latest environmental information about Lenovo products is available at: https://www.lenovo.com/ecodeclaration</p>

	<p>European Union RoHS This Lenovo product, with included parts (cables, cords, and so on) meets the requirements of Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("RoHS recast" or "RoHS 2"). For more information about Lenovo worldwide compliance on RoHS, go to: https://www.lenovo.com/rohs-communication</p>
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Manageability

Industry Standard Specifications	This product meets the following industry standard specifications for manageability functionality: Intel LAN with AMT
Remote Manageability Software Solutions	Lenovo ThinkManagement Console Microsoft System Center Configuration Manager LANDesk Management Suite for ThinkVantage Technologies (www.landesk.com/lenovo)
System Software Manager	Lenovo ThinkPad supports software management tools from the Lenovo Vantage System Update suite: System Update Update Retriever
Service, Support, and Warranty	On-site Warranty and Service: Three-years, limited warranty and service offering delivers on-site, next business-day service for parts and labor and includes free telephone support 8am to 5pm. Global coverage ensures that any product purchased in one country and transferred to another, non-restricted country will remain fully covered under the original warranty and service offering.

Environmentals

Energy Star	ENERGY STAR® 8.0
EPEAT	EPEAT® Gold
RoHS Compliant	RoHS Compliant
TCO	TCO 9.0
Sustainability	97% PCC recycled plastic: Speaker enclosure 97% recycled plastic: 52.5Whr Battery 95% PCC recycled plastic: 65W PSU 90% recycled/sustainable packaging Low-temperature solder
Disclaimers	Product packaging shall contain, on average, a minimum total percentage of 90% by weight of any combination of the following materials: Recycled content, biobased plastic, non-wood biobased fiber material, and/or sustainably forested material.