

Category	Criteria	Evaluation (GIGABYTE)
Hardware Quality & Performance	CPU Performance	Latest Intel/AMD CPUs, strong multi-core performance, good thermal efficiency
	GPU Performance	Dedicated NVIDIA RTX GPUs available; excellent for gaming and creative work
	RAM Type & Speed	DDR4/DDR5 support, user-upgradable in most models
	Storage	PCIe Gen 4 SSDs, fast boot and load times
Thermals & Noise	Cooling System	Advanced cooling with multiple heat pipes and fans
	Fan Noise	Audible under heavy load but acceptable
	Thermal Throttling	Minimal throttling with proper ventilation
Build Materials & Durability	Chassis Material	Combination of aluminum and high-quality plastic
	Hinge Quality	Reinforced hinges, stable design
	Durability Certification	No official MIL-STD on most consumer models
Design & Ergonomics	Weight & Portability	Moderate weight; gaming models are heavier
	Keyboard Quality	Good travel, RGB backlight on gaming models
	Trackpad Quality	Smooth and accurate
	Hinge Design	Traditional hinge
	Aesthetic Design	Performance-focused, gamer-oriented styling
	Resolution	Full HD to 4K options

Display Quality	Panel Type	IPS / Mini-LED
	Brightness	300–500 nits
	Color Coverage	Up to 100% sRGB, good for creators
	Refresh Rate	60Hz–240Hz
	Touchscreen	Not common
Reliability & Reputation	Brand Reputation	Strong reputation in gaming hardware
	Long-term Reliability	Generally reliable with good thermal design
	Repairability Score	Average
Battery & Power	Battery Life	Average; gaming laptops prioritize performance
	Fast Charging	Supported on some models
	Power Adapter	Large but powerful
Software & Ecosystem	Preinstalled Software	Minimal bloatware
	OS Support	Windows, limited Linux support
	Driver Stability	Stable drivers with regular updates
Security Features	TPM	Supported
	Fingerprint Reader	Available on select models
	IR Camera	Rare
	Privacy Shutter	Limited availability
Upgradeability & Repairability	RAM Upgrade	Accessible slots
	Storage Expansion	Extra SSD slots available
	Battery Replacement	Possible but not tool-free
	Repair Restrictions	Standard manufacturer limitations
Connectivity & Ports	USB Ports	USB-A, USB-C, Thunderbolt 4
	Video Output	HDMI, DisplayPort
	Card Reader	SD card reader on some models
	Ethernet	Available on gaming models
	Wi-Fi	Wi-Fi 6 / 6E
	Bluetooth	Bluetooth 5.2+

Price & Value	Price-to-Performance	Very competitive
	Lifespan Value	Good for high-performance users
	Upgrade Path	Cost-effective upgrades
Customer Service & Warranty	Warranty Length	1 year standard
	Repair Type	Depot repair
	Support Quality	Average to good
Special Use – Gaming	Gaming Performance	Excellent GPU and cooling
Special Use – Business	Business Suitability	Moderate; gaming-focused
Special Use – Creative	Creative Work	Strong GPU and color-accurate displays
Special Use – Students	Student Use	Good but battery life may be limiting