



**INFORMATION SYSTEMS DEPARTMENT  
OPERATING SYSTEM ASSIGNMENT  
PC brand Evaluation Report: Samsung**

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## 1, Hardware Quality & Performance

**CPU performance:** Uses Intel (Core i3/i5/i7/i9) or AMD Ryzen processors, mostly recent generations; efficient for everyday tasks, moderate thermal output, thin laptops may throttle under heavy load.

**GPU performance:** Mostly integrated graphics (Intel Iris, AMD Vega); some premium models include dedicated GPUs for light gaming or creative work.

**RAM type & speed:** DDR4 or DDR5, usually 8–16 GB, with limited upgradeability in slim models.

**Storage:** SSD standard, usually PCIe Gen 3 or 4 NVMe; capacity ranges from 256 GB to 1 TB or more; HDDs are rare.

### Thermals & Noise

**Cooling system quality:** Adequate for thin laptops; sufficient for everyday tasks, but limited for sustained heavy workloads.

**Fan noise under load:** Generally quiet for normal use; fans can get noticeable under heavy CPU/GPU stress.

**Thermal throttling:** Slim designs may experience thermal throttling during prolonged intensive tasks (gaming, rendering).

### Build Materials & Durability

**Chassis:** Mix of aluminum (premium models) and plastic (budget models).

**Hinges:** Decent reinforcement; functional but not as rugged as Think Pads or Dell Rugged.

**Certifications:** Samsung laptops do not typically have MIL-STD durability certifications

## 2, Design & Ergonomics

**Weight & portability:** Samsung laptops are generally lightweight and slim, making them highly portable for students and professionals.

**Keyboard quality:** Keyboards are comfortable with decent travel, good layout typing experience is suitable for long sessions.

**Trackpad:** Trackpads are smooth and accurate.

## 3, Display Quality

**Resolution:** Most are Full HD (1080p); premium models offer QHD or 4K panels.

**Panel type:** Mainly IPS for wide viewing angles, OLED is available in high-end Galaxy Books.

**Brightness:** Moderate to high typically 300–400 nits, OLED models can reach up to 600 nits.

**Color coverage:** Good sRGB coverage, decent Adobe RGB suitable for multimedia and light creative work.

**Refresh rate:** Standard 60 Hz, some premium/gaming models reach 120 Hz or 144 Hz.

**Contrast ratio:** IPS panels: standard.

**Touchscreen availability:** Mostly on 2-in-1/convertible Galaxy Books; standard laptops usually no touch

## 4, Reliability & Brand Reputation

Samsung laptops generally hold up comparably to many mainstream brands in terms of user-reported fault rates. In some surveys, Samsung ranks alongside Apple and Microsoft Surface with relatively low fault rates after up to 3–7 years of ownership, indicating decent overall reliability for Windows laptops.

### User reviews & failure rates

User reviews are mixed: some owners report long-lasting performance without issues, while others highlight hardware problems (hinge, battery, display, etc.) and frustrating customer support experiences. This split suggests Samsung reliability can vary significantly by model and usage. (Anecdotal reports from forums reflect both positive and negative experiences.)

### Independent repairability scores (iFixit and similar)

Samsung laptops tend to score lower on repairability compared to more service-friendly brands. Reviews report sealed designs with soldered components and harder access to parts, leading to more difficult (and often more expensive) repairs. iFixit has even ended its repair partnership with Samsung due to poor repair ecosystem support.

### Long-term performance consistency

Long-term reliability is moderate – many users experience solid performance for a few years, but reports of failures rising after ~3 years are common. Combined with limited upgrade/repair options, this means useful lifespan without issues may be shorter than more modular brands.

## 5, Battery & Power Efficiency

### Real-world battery life

(8–15 + hours) on a single charge depending on screen size, settings, and workload. Some premium models even claim up to ~25 hours under light use conditions.

### Fast-charging support

the battery reach a significant percentage (e.g., ~40%+ in ~30 min) and fully charge faster than average laptops. Chargers tend to be compact and lightweight which helps with portability.

### Battery health management features

Samsung offers battery management settings (e.g., limiting max charge to ~85% or smart charging)

## **Power adapter size/weight**

Battery adapters are generally compact and not too heavy, especially on thin, portable models.

## **6, Software & Ecosystem**

### **Preinstalled bloatware:**

Samsung laptops come with minimal preinstalled apps. Most can be uninstalled if not needed, so bloatware is not a major issue.

### **OS options:**

Almost all Samsung PCs run Windows 11/10. No macOS support (Apple exclusive).

### **Brand software ecosystem:**

Samsung provides a small but useful ecosystem

### **Driver stability & updates:**

Drivers are generally stable, with updates released periodically.

## **7, Security Features**

**BIOS/UEFI security:** Standard, with password and boot options.

**TPM availability:** Most supporting Windows security features like BitLocker.

**Fingerprint reader:** Common on premium Galaxy Book models.

**IR camera / Windows Hello:** Available on select high-end models for facial recognition.

**Privacy shutter:** Rare; only on some premium laptops.

**Encryption support:** Supported through Windows BitLocker.

## **8, Upgradeability & Repairability**

**RAM slots accessible:** a few high-end models allow RAM upgrades.

**Storage expansion:** NVMe SSD slots are sometimes accessible; limited in ultrabooks.

**Battery replaceability:** Mostly non-removable

**Manufacturer restrictions:** Repairs are often restricted.

**Screw accessibility & modularity:** Low; laptops are not very modular.

## **9, Connectivity & Ports**

**USB & Thunderbolt:** Most have USB-A and USB-C; high-end Galaxy Books may include Thunderbolt 4/USB4.

**HDMI/DisplayPort:** HDMI is common; DisplayPort via USB-C/Thunderbolt on premium models.

**Card slots:** microSD slots available on some models; full SD less common.

**Ethernet:** Rare on slim laptops; mostly relies on Wi-Fi.

**Wi-Fi & Bluetooth:** Wi-Fi 6 common; Wi-Fi 6E on newer models. Bluetooth 5.0 or higher standard.

## 10, Price & Value

### Price-to-performance ratio

mid models (Core i3/i5 with 8-16 GB RAM and SSD) often sell from  $\approx$  ETB 50,000–85,000, while higher-end Galaxy Books (i7, larger SSD, 2-in-1) can go  $\approx$  ETB 100,000–150,000+ or more.

### Lifespan value

Samsung units generally have good build and screens, but long-term value varies by model and care; premium models hold value better, while cheaper variants may feel under-powered over time.

Resale demand exists.

### Configuration options

There's a wide range locally from basic 4–8 GB laptops to 16 GB premium Ultrabooks, convertible Galaxy Books, and occasional gaming-ready models.

### Upgrade path vs. cost

Many Samsung laptops (especially thin Galaxy Books) limit upgrades (RAM soldered, SSD sometimes fixed), so upgrading later can be expensive or impossible.

### Discounts, bundles, student/business pricing

Official discounts are limited in Ethiopia, but negotiable pricing is common in local markets.

## 11, Customer Service & Warranty

**Warranty length:** most standards is 1 year but some premium models may offer up to 2–3 years depending on region or purchase plan.

**On-site vs. depot repair:** you need to take the laptop to an authorized service center; on-site repair is limited in most regions, including Ethiopia.

**Responsiveness & reliability of support:** Mixed experiences reported some users find support helpful and timely, while others experience delays or difficulty reaching service.

**Extended warranty cost:** Optional extended warranty plans are available for additional coverage, including longer term and limited accidental protection.

**Accidental damage protection:** Not included by default; can be added via paid protection plans.

## **12. Special Use-Cases**

### **For Gaming**

Mostly limited few models with dedicated GPUs.

Cooling is adequate for light gaming, but high-end gaming may cause throttling.

**Refresh rates:** standard 60 Hz; some premium models 120–144 Hz.

**RGB/customization:** rare; not a focus.

**In Ethiopia:** Gaming-focused Samsung laptops are expensive and scarce; more affordable gaming options come from Lenovo, HP.

### **For Business**

Good security features (TPM, fingerprint, encryption).

Durable and portable for office/school use.

Long battery life and quiet operation.

**In Ethiopia:** Popular among professionals for office tasks; widely available Galaxy Book models suit remote work and student/business use.

### **For Creative Work**

Premium models have high-resolution panels for color accuracy.

CPU/GPU performance adequate for photo/video editing, but limited for heavy 3D rendering.

**Thunderbolt:** available only in high-end Galaxy Books.

**In Ethiopia:** Creative-focused models are rare and costly, often imported; standard models suffice for lighter multimedia tasks.

### **For Students**

Lightweight, portable, good battery life.

Budget models exist, covering general study, office apps, and media.

**In Ethiopia:** Samsung is a popular student choice for portability and durability, but more affordable alternatives (HP, Lenovo) are often preferred for strict budgets.