

# Hardware Coverage Matrix (7-source stack, no DRM)

Legend: P = Primary source (green), S = Secondary source (yellow), blank = not provided.

Sources: lshw, lsblk, smartctl, upower, edid, lspci, lsusb.

System identity, chassis, motherboard, firmware							
Attribute	lshw	lsblk	smartctl	upower	edid	lspci	lsusb
System manufacturer	P						
System product / model string	P						
Machine class (Notebook)	P						
System version / family	P						
System serial number	P						
SKU / MTM string	P						
System UUID	P						
Admin password state	P						
Power-on password state	P						
SMBIOS / DMI versions	P						
Motherboard product	P						
Motherboard version	P						
Motherboard serial	P						
BIOS vendor	P						
BIOS version	P						
BIOS date	P						
UEFI support (explicit)	P						
BIOS capability list (boot, ACPI, upgradeable, etc.)	P						

CPU and caches							
Attribute	lshw	lsblk	smartctl	upower	edid	lspci	lsusb
CPU model string	P						
CPU vendor	P						
CPU socket/slot field	P						
Core count	P						
Thread count	P						
Microcode revision	P						
CPU capability flags (vmx, avx, aes, etc.)	P						
L1 cache size	P						
L2 cache size	P						
L3 cache size	P						
Chipset / host bridge identification	S					P	

Memory (RAM)							
Attribute	lshw	lsblk	smartctl	upower	edid	lspci	lsusb
Total installed RAM (bytes)	P						
DIMM slot names	P						
DIMM size per slot	P						
DIMM type/description (DDR4 SODIMM...)	P						
DIMM speed/clock	P						
DIMM vendor per slot	P						
DIMM product/part number	P						
DIMM serial per slot (when present)	P						

Internal storage identity, topology, partitions, filesystems							
Attribute	lshw	lsblk	smartctl	upower	edid	lspci	lsusb
Disk device inventory (/dev/sdX)	S	P	S				
Disk model	S	P	S				
Disk vendor string	S	P	S				
Disk serial number	S	P	S				
Disk capacity (bytes)	S	P	S				
Transport type (SATA/USB)	S	P	S				
Rotational vs SSD flag	S	P	S				
WWN identifier		P	S				
Disk firmware revision (rev)		P	S				
Partition table type (GPT/MBR)	S	P					
Partition table UUID		P					
Partition list (sda1, sda2, ...)	S	P					
Partition labels (e.g., EFI System Partition)		P					
Partition type GUID / partuuid		P					
Filesystem type (vfat/ext4/...)	S	P					
Filesystem UUID	S	P					
Mountpoints	S	P					
FS used/free/percent (where available)		P					
External/removable disks attached during scan	S	P					S

Drive condition / wear / health (SMART)							
Attribute	lshw	lsblk	smartctl	upower	edid	lspci	lsusb
SMART supported/enabled			P				
SMART overall health result			P				
Model family (from drive DB)			P				
Drive form factor			P				
TRIM support status			P				
ATA/SATA version and link speed			P				
Sector sizes (logical/physical)		S	P				
Power-on hours			P				
Power cycle count			P				
Temperature and min/max			P				
Reallocated sector count			P				
Current pending sectors			P				
Vendor SMART attributes (as present)			P				

Graphics and display (GPU + internal panel provenance)							
Attribute	lshw	lsblk	smartctl	upower	edid	lspci	lsusb
GPU model name	S					P	
GPU PCI vendor/device IDs						P	
Graphics driver and kernel module	S					P	
Framebuffer / device node (e.g., /dev/fb0)	P					S	
Current mode / resolution (as configured)	P				S		
Panel manufacturer (from EDID)					P		
Panel model string (from EDID)					P		
Panel manufacture week/year					P		
Panel physical size (cm)					P		
Panel interface type (eDP/DisplayPort)					P		
Bits per color channel					P		
Gamma value					P		
Native timing + preferred refresh					P		
Additional supported timing modes					P		
Color primaries/whitepoint coordinates					P		

Battery, AC, lid state, power draw							
Attribute	lshw	lsblk	smartctl	upower	edid	lspci	lsusb
Battery present	S			P			
Battery vendor	S			P			
Battery model	S			P			
Battery serial				P			
Design capacity (Wh)				P			
Current full capacity (Wh)				P			
Current charge level (Wh and %)				P			
Battery health percent (capacity)				P			
Charge cycle count				P			
Battery voltage	S			P			
Discharge rate (W)				P			
Estimated time to empty				P			
AC adapter online state				P			
On-battery state				P			
Lid present / lid closed				P			
UPower daemon version				P			

Networking and high-value controllers (Ethernet, Wi-Fi, Thunderbolt, USB controllers)							
Attribute	lshw	lsblk	smartctl	upower	edid	lspci	lsusb
Ethernet controller model	S					P	
Ethernet driver/module	S					P	
Ethernet interface name (if present in lshw)	P					S	
Wi-Fi controller model (if present in lspci)	S					P	
Wi-Fi driver/module (if present in lspci)	S					P	
Wi-Fi interface name (if present in lshw)	P					S	
Thunderbolt controller presence (if present)	S					P	
Intel chipset USB xHCI controller entry	S					P	
SATA controller entry	S					P	
IOMMU group identifiers (power-user detail)						P	



USB-attached peripherals (camera, fingerprint, Bluetooth, card readers) and human-interface devices							
Attribute	lshw	lsblk	smartctl	upower	edid	lspci	lsusb
Bluetooth device present	S						P
Bluetooth driver details (if present in lshw)	P						S
Webcam device present	S						P
Webcam driver details (if present in lshw)	P						S
Fingerprint reader present	S						P
Fingerprint reader product string / serial (if present in lshw)	P						S
microSD card reader present	S						P
Other card reader present (Realtek)	S						P
USB root hubs / topology							P
USB device power/speed (if present in lshw)	P						S
Touchpad present (if present)	P						
TrackPoint present (if present)	P						
Audio endpoints enumerated (if present)	P						