Leica
GEOSYSTEMS



Leica CS50

The backbone of field performance

The Leica CS50 gives professional surveyors the speed, stability, and field-ready design needed to keep demanding work moving. Built for Leica Captivate workflows, it handles large datasets, connects instruments and data, and supports reliable operation throughout the working day.

Fast

Work smoothly with large CAD and IFC files, measurements, control data, and imaging workflows. A powerful processor and stable Linux platform keep the controller responsive as project data becomes more complex, while controlled updates help prevent interruptions during fieldwork.

Built for the field

A bright multi-touch display, tactile backlit keypad, and IP66/IP68 protection support dependable operation in rain, dust, bright sunlight, low light, and glove use. An optional integrated DISTO helps measure remote or inaccessible points with less repositioning.

Connected

Bring Leica Captivate, total stations, GNSS rovers, and project data together in one field interface. 4G/5G, WLAN, SIM flexibility, and long-range Bluetooth help crews stay connected to instruments, data, and services across different sites and working conditions.

HEXAGON

Leica CS50





System specifications	CS50 Basic	CS50 4G/5G	CS50 4G/5G DISTO
Operating system	Linux®		
CPU platform	NXP I.MX 8M Plus		
RAM / Data storage	4GB / 64GB	8GB / 128GB	8GB / 128GB
Removable memory (SD card)	Micro SD/SDHC/SDXC card		
Removable memory (USB)	USB-C stick		
Display	5" WVGA colour display with multi-touch		
Keypad	67 keys, QWERTY keypad, backlit		
I/O ports	1x USB-C DRP (dual role port – host and device)		
Weight (including battery)	1.145kg (2.52lb)	1.173kg (2.59lb)	1.196kg (2.64lb)
Size	284 × 157 × 45mm (11.2" × 6.2" × 1.8")		
Power management			
Battery	GEB334, exchangeable lithium-ion battery, 3.45Ah		
Battery LED	Yes		
Onboard charging	Yes (using USB-C port)		
Battery life	8 hours		
Communications			
Modem	No	5G NR Rel 17 RedCap (SA) + 4G LTE Cat 4, physical micro-sim and e-SIM	
Bluetooth®	Dual-mode Bluetooth® classic and Bluetooth low energy 5.4		
WLAN	Wi-Fi 6 dual-band 2.4 and 5 GHz		
Software and cloud compatibility			
Field software	Leica Captivate		
Cloud data management and sharing	Hexagon GeoCloud		
Cloud-based fleet management	Hexagon GeoCloud Fleet		
Integrated peripherals			
DISTO	No		Yes (with integrated 1MP camera)
Camera	8MP with autofocus, rear facing		
Flash	Yes (can also be used as torch)		
Speaker	Yes		
Microphone	Yes (dual microphone system)		
Ambient light sensor	Yes (adjusts screen brightness)		
GNSS	No	L1 + L5 (GPS, BeiDou, GLONASS, Galileo)	
Environmental			
Dust / water resistance	IP66 / IP68		
Drop	1.2m (4ft)		
Vibration	MIL-STD-810H Method 507.6-7		
Humidity	MIL-STD-810H Method 514.8		
Operating temperature	-30°C to 60°C (-20°F to 140°F)		
Storage temperature	-40°C to 80°C (-40°F to 176°F)		
Military standard	MIL-STD-810H		
Certification			
Regulatory	CE, FCC, ISED, KC, PSE, RCM, SRRC, TELEC, UKCA	CE, KC, FCC, ISED, JATE, NAL, PSE, PTCRB, RCM, SRRC, TELEC, UKCA	
Sustainability	ACEPIP, J-Moss, RoHS, WEEE		
Sustainability info			
Recyclability at end of life	75%		
Carbon footprint	Materials 39 kg CO_2e Distribution 0.5 kg CO_2e Use stage 1.8 – 21.4 kg CO_2e		

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Class 2 laser product in accordance with IEC 60825-1 (2014-05).