Leica CR50
Communication Unit
Datasheet

The Leica CR50 communication unit supports an internal cellular modem and a dual-frequency radio. The Leica CR50 can be connected to the iCON gps 100 on-machine GNSS receiver to perform high-accuracy RTK GNSS positioning.

Features

- Bluetooth®
- 2 x M12 automotive ethernet communication ports
- Optional integrated dual-frequency UHF radio (400 MHz and 900 MHz)[1)]
- Integrated worldwide cellular modem (UTMS/LTE)
- Diversity modem antenna support

Benefits

- Simple and clean installation with a minimal number of parts and cables, thanks to the automotive Ethernet support.
- Customers can easily change between 400 MHz and 900 MHz with the integrated dual frequency radio [1)].
- Web interface for convenient access for software configuration.

Leica CR50 Communication Unit

HARDWARE SPECIFICATIONS	
Weight	842 g (1.86 lbs)
Dimensions	150 mm x 150 mm x 40 mm (5.90 x 5.90 x 1.57 in)
ENVIRONMENTAL SPECIFICATIONS	
Operating temperature	–40 °C to + 65 °C (–40 °F to + 149 °F)
Storage temperature	–40 °C to + 85 °C (–40 °F to + 185 °F)
Humidity	IEC60068-2-78, +65 °C; 92%, IEC60068-2-30; Test Db; Variant 1 +55 °C; 95%; +25 °C; 95%
Water/dust rating	IP6K8/6K9K according to ISO 20653
Vibration	IEC 60068-2-6; Test Fc, 5-500 Hz; 5 g; ±15 mm MIL-STD-810G, Fig. 514.6E-1; Category 24
Shock	IEC 60068-2-27, 60 g; 6 ms
Drops	Withstands 1.0 m drop onto hard surfaces
POWER & ELECTRICAL	
Supply voltage	Range 9 – 36 V DC
Power consumption	NTRIP Rover, radio excluded: 7.2 W typically, 24 V @ 300 mA
Certifications	Compliance to: FCC/IC, CE
COMMUNICATION	
Communication ports	• 1 x USB M8, 1 x automotive Ethernet M12 T male power-in/data • 1 x automotive Ethernet M12 T female power-out/data • 1 x TNC for external radio antenna • 2 × SMA for external modem antenna
BUILT-IN DATA LINKS	
UHF radio	• Optional integrated radio • Dual frequency[1] • SATEL TR489: 403–473 MHz; PacCrest 4FSK, GMSK & FST, Trimtalk 450s T & P, Satel 3AS, 8FSK & 16FSK; 902–928 MHz (license-free in North America)
UHF radio antenna	External antenna connector (Type TNC)
4G LTE / 3G HSPA / HSPA+ / WCDMA / TD-SCDMA / UMTS / Cellular modem	Built-in cellular modem as default User-exchangeable SIM card 18-Band LTE: Band 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 18, 19, 20, 26, 28, 29, 30, 41 8-Band UMTS (WCDMA / HSPA+): Band 1, 2, 4, 5, 6, 8, 9, 19 Up to 600 Mbps downlink speed, up to 150 Mbps uplink speed
Cellular modem antenna	2x external antenna connector (Type SMA)
Bluetooth®	Bluetooth v5.0 class 2
COMMUNICATION PROTOCOLS	
Real-time data formats	Leica, Leica 4G, CMR, CMR+, RTCM2.3, RTCM 3.1, RTCM 3.2 MSM 1-7
Web based protocol	NTRIP and TCP Client
INTERFACE	
LED status indicator	3 x LED for power, Internet and UHF radio status (if applicable)

[1] Only valid for USA & Canada

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- when it has to be **right**

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