



 www.niccomp.com/series/NGCL

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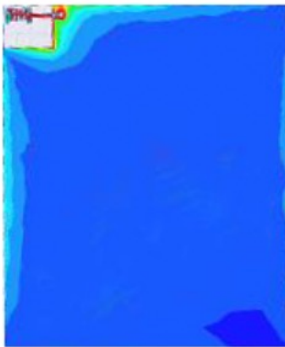
NGCL Series

Ceramic Loop Chip Antennas

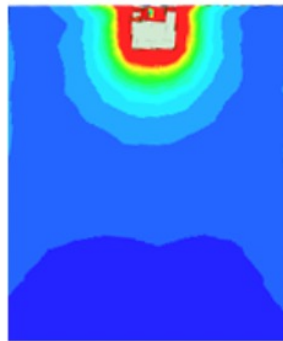
When it comes to embedded antenna solutions, there are crucial considerations like grounding and body interference, size, and ease of design. NIC's NGCL chip antennas revolutionize these aspects with cutting-edge loop antenna technology, generating a stronger magnetic field portion. As a result, the impact of the human body on the antenna's reactive near field behavior is significantly reduced, ensuring seamless connectivity. In addition to their enhanced design, NGCL antennas offer smaller ground plane requirements compared to traditional monopole and PIFA designs. This size advantage is a major benefit when compared to LDS and PFC antennas, providing greater flexibility in product integration.

To cater to diverse technical requirements, the NGCL series supports multiple protocols, including DECT, GNSS, and Wifi/Bluetooth (including Wifi 6E). Whether it's single-band or combination protocols, our NGCL antennas deliver outstanding performance and reliability.

Antenna Characteristic Comparison



Monopole Antennas



NGCL Antennas

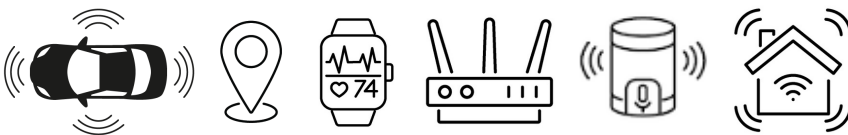
Monopole Antennas

- $\frac{1}{4}$ Wavelength antenna together with a metal ground to form the radiator
- Electric field dominating

NGCL Antennas

- Metal ground around the antenna to form a one-wavelength loop antenna
- Magnetic field dominating

For Use In IoT (Internet of Things) Applications, Wearable, Gateways, Smart Homes, Meters, Tracking, Navigation and Automotive Sensors.



Scan for more info!



NGCL Standard Part Numbers

Size (mm)	Part Number	Protocol	Frequency Range (MHz)	Peak Gain (dBi)	Efficiency (%)	VSWR
1.6 x 0.8	NGCL0603UB2R442G1TRF	WiFi / Bluetooth	2400 ~ 2500	-0.3	60	2.5
2.0 x 1.2	NGCL2012UW2R450G1TRF	WiFi / Bluetooth	2400 ~ 2484	2	62	2
3.2 x 1.6	NGCL1206UD1R905G1TRF	DECT	1880 ~ 1930	1.5	74	2
	NGCL1206UG1R575G1TRF	GNSS	1560 ~ 1606	1.8	77	2
	NGCL1206UV1R575G2TRF	GNSS	1575.42	1.3	61	2
		WiFi / Bluetooth	2400 ~ 2500	1.8	68	2
	NGCL1206UV1R575G3TRF	GPS / WIFI	1575.42	1.5	61	2
		WiFi / Bluetooth	2400 ~ 2500	0.4	50	2
		WiFi	5150 ~ 5850	2.3	62	3
	NGCL1206UW2R440G3TRF	WiFi 6E / Bluetooth	2400 ~ 2500	2	68	-
			5150 ~ 5850	2.8	61	-
			5925 ~ 7125	3	62	-
	NGCL1206UW2R442G1TRF	WiFi / Bluetooth	2400 ~ 2500	1.8	76.3	2
	NGCL1206UW2R442G2TRF	WiFi / Bluetooth	2400 ~ 2500	1.4	76	2
5150 ~ 5850			2.3	67	2	
5.0 x 3.0	NGCL5030UG1R575G4TRF	GNSS (L1, L2, L5, E6)	1575.42	3.3	68	2
			1227.6	3	66	3
			1176.45	3	70	2
			1278.75	2.1	48	5
	NGCL5030US0R433G1TRF	ISM/LoRa	433.05 ~ 434.79	0.2	62	2
	NGCL5030US0R868G1TRF		863 ~ 870	0	47	2
NGCL5030US0R915G1TRF	902 ~ 928		0.8	52	2	
10 x 3.2	NGCL1032US0R868G1TRF	ISM/LoRa	863 ~ 870	0.34	58	2
	NGCL1032US0R915G1TRF		902 ~ 928	0.9	69	2

Polarity: Linear. Above part numbers are based on standard evaluation board and setup.
 For full specifications please visit www.niccomp.com/. For values not listed please contact NIC.