



India's Only MANUFACTURER of DRONE NAVIGATION UNIT with NAVIC



Launched during Drone Mela 2022 in New Delhi, **Elena NavIC Drone Navigation Unit (NDNU)** is used by more than 30+ major drone manufacturing companies and startups. It has a small form factor; a lightweight device made especially for drones. Concurrent reception of L1 and L5 band signals mitigates the multipath delay and achieves sub-meter position accuracy.

NDNU Anti-Jamming Capability (under development):

Designed to support advanced anti-jamming functionality and to mitigate the impact of jamming signals on GNSS systems, it ensures reliable navigation and communication even in interference-prone environments. It employs specialized techniques to block or filter out unwanted signals while enhancing the reception of authentic satellite signals. This significantly improves the accuracy of Positioning and Navigation data.

In addition to improving performance, this capability provides a vital layer of protection against both jamming and spoofing attacks. It is particularly valuable in sectors where precise navigation is critical, including Defence and Civil Aviation.

Features:

- Multi-GNSS: NavIC (IRNSS), GPS, GLONASS
- Uses SBAS: GAGAN
- Has more than 128 channels
- Ultra-low power consumption
- Faster TTFF and Cold Start
- No loss of fix due to momentary loss of power
- Tiny form factor and weighs less than 70 grams

Note: This specification applies to Industrial-grade product. MIL-grade product can also be provided.



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TECHNICAL SPECIFICATIONS of NAVIC DRONE NAVIGATION UNIT

Ser No	PARAMETERS	SPECIFICATIONS
1.	GNSS	- NavIC (IRNSS) L5 - GPS L1 - GLONASS L1
2.	SBAS	GAGAN
3.	Channels	Supports more than 128 channels
4.	Update Rate	1 Hz default, up to 10 Hz
5.	Sensitivity	
	Cold Start	-153 dBm
	Tracking	-163 dBm
6.	Acquisition Time	
	TTFB (Time to First Fix)	< 40 s
	Cold Start (open sky)	< 25 s
	Hot Start (open sky)	1 to 2 s
7.	Position Accuracy	
	Horizontal	1 m CEP
	Vertical	3 m CEP
8.	Baud Rate	115200 (default) Can be configured to any baud rate
9.	Max. Altitude	< 18,000 m
10.	Max. Velocity	< 500 m/s
11.	Protocol Support	NMEA 0183 ver: 4.1
12.	Supply Input Voltage	5.0 V DC
13.	Temperature	
	Operating	-10 °C to +50 °C
	Storage	-20 °C to +60 °C
14.	Form Factor	Tiny form factor compared to existing navigation units
15.	Dimension	L x W x H: 64.2 mm x 64.2 mm x 19.6 mm
16.	Weight	68 grams
17.	PCB Specifications	Double-sided, 1.6 mm thickness
18.	EMI/EMC Protection	Core circuit is shielded

COMPARISON

Parameter	ELNDNU _{xxx}	Others
GNSS	All GNSS Open Services: NavIC (IRNSS), GPS, GLONASS	GPS, GLONASS
Channels	More than 128 channels	40 to 60 channels
Time to First Fix	Less than 40 s	More than 60 s
Position Accuracy	CEP: Less than 1 m	CEP: More than 5 m
Supports all satellite augmentation systems	Yes	No
Easy to integrate	Yes	No