Elena NavIC Clock

The NavIC (IRNSS) satellite system uses a very high-accuracy atomic clock maintained by ISRO in its navigation control center at Bangalore. The reference of this atomic clock is taken to synchronise the atomic clocks onboard the NavIC (IRNSS) satellites. The time information from this atomic clock is transmitted for use in timing and synchronisation circuits.

The Elena NavIC Clock is an indigenously developed product of Elena Geo Systems to give highly reliable, high precision, and synchronized time reference to the users. It is built around Elena's ELNMC1A module and is based on the IST format.

Since the availability of NavIC (IRNSS) signals is stable, continuous, and available without any break, the clock can be used in most indoor applications also.

The Clock is customizable in a Master-Slave configuration. The time can be given in Network Time Protocol and Precision Time Protocol formats for transmission over the network.

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Technical Specifications of NavIC Clock

Ser No	Parameters	Specifications
1.	**GNSS**	
(a)	Satellite Signal	NavIC (IRNSS)
(b)	Frequency Bands	L1 and L5
2.	**Specifications**	
(a)	Atomic Clock	Rubidium clocks are used in NavIC (IRNSS) satellites
(b)	Accuracy of Atomic Clock on Satellite	10 nanoseconds per year
(c)	Clock Resolution	01 second
(d)	Display	LED 7-segment display
(e)	Time Format	Indian Standard Time (IST)
(f)	Synchronization	Possible throughout India
(g)	Pulse Per Second (PPS)	Well-tested PPS
(h)	Operating Voltage	5 V and 12 V DC
(i)	Weight	156 g
(j)	Dimension	L x W x H: 153.1 mm x 17.5 mm x 63.5 mm
(k)	Mounting	Wall & Table Mount

The clock comes in different sizes and configurations to cater to different applications. Some of them are listed below:

- Use in Railway Platforms, Railway Control Centers, and synchronisation of signals in railways.
- Use in Airports for time synchronisation and coordination.
- Synchronisation of Telephone networks.
- In Mobile Telephony, especially in 4G and 5G networks.
- Electricity networks - Synchronisation of high-tension power transmission.
- Coordination of maritime movement in ports and beyond.
- Easily integrable across various applications.
- Customizable in Master-Slave configuration.

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