	Digital Baseband ASIC for NavIC User Receiver (11 Channels)	
SCL Part No.	**SC1121-0**	-

PRODUCT DESCRIPTION:

The SC1121-0 is a compact 11-channel configurable digital baseband ASIC for Navigation Indian Constellation, NavIC, SPS/RS-SHORT, GPS & GAGAN User Receivers.

Designed in 180nm (TS18SL) CMOS technology, the ASIC contains Acquisition and tracking modules along with interfaces like UART. The device can operate over a large temperature range -55°C to +125°C and it is packaged in a hermetic sealed 144 pin ceramic quad flat package.

The receiver capable of receiving signals at L1, L5 and S band frequencies, down-convert them to baseband, and then process them to calculate the Position, Velocity and Time solution.

FEATURES:

- 3.3V I/O power supply and 1.8 V for core
- Processor Clock 70 MHz
- ADC Sampling clock-SPS 16.368 MHz
- Power dissipation < 800 mW
- Operating Temperature: -55ºC to 125ºC
- Hermetic sealed 144-pin CQFP
- Capable of receiving signals at L1, L5 and S band frequencies
- 11 IRNSS Channels
- Time to First Fix (TTFF): Cold Start < 120 sec
- Acquisition Sensitivity :36 dB-Hz
- Tracking Sensitivity: 28 dB-Hz
- Navigation data rate on all signals is 25 bps
- User interface: NMEA
- ESD Sensitivity Level 2 KV HBM

Parameter	Specification
ASIC type	Digital ASIC
Process	180nm CMOS
Clock frequency	70 MHz
Types of I/Os	3.3V CMOS I/Os
Package	Standard Ceramic Quad Flat Pack (CQFP-144)
Power Dissipation	800 mW (maximum) at 70 MHz
Junction Temp	-40°C to +125°C
ESD sensitivity level	2KV HBM