

NLC-SKII



NAELCOM has produced a new GPS receiver board, the "NLC-SKII", which is based on the Copernicus™ high performance GPS chip set.

This OEM module is designed for use in embedded and industrial applications requiring high accuracy positioning and timing information.

It can also be used as a replacement and upgrade for users of the Trimble Lassen™ SKII receiver module.


The NLC-SKII module is RoHS (lead free) compliant.



ADVANTAGES

- ✓ Ultra-high sensitivity of **-152dBm** (-182dBW), enabling high performance acquisition and tracking in urban canyon and signal obscured environments
- ✓ Cold Start Time to First Fix (TTFF) is quicker than **39s**.
- ✓ Low power consumption: **45mA** @ 5V, with Power-Good LED.
- ✓ The 2 ports that can be configured to suit the customer's requirements such as: input and output protocols and transmission speed.
- ✓ Configuration parameters backed-up to an EEPROM.
- ✓ Pin to pin compatible with Trimble Lassen™ SKII GPS receiver; same form factor, for ease of integration.
- ✓ Communication port outlet in 3V or 5V TTL level, depending on the version.
- ✓ **Protection** against open and/or short circuit on the antenna (60mA), and alarms reported through serial port.
- ✓ Accurate pps (pulse per second signal), better than **100ns**.
- ✓ Optional: Antenna voltage selectable by internal switch: 3V or 5V.
- ✓ Optional: **Back-up** capacitor with an autonomy of 40 hours for hot start-up after a power cut.

EMC COMPATIBILITY

The NLC-SKII module has successfully completed compliance testing in accordance with the  directive.

FACTORY SETTINGS OF THE TWO PORTS

The two communication ports are set as standard as follows :

Port	Protocol	Baud rate	Data bits	Parity	Stop bits
Port1	TSIP	38400	8	None	1
Port2	NMEA	4800	8	None	1

OPTIONS

Options (for any requirement, please contact us)	
Power supply voltage:	3.3VDC
Backup:	battery capacitor
Antenna connector:	SMA, SMB low profile, MCX
Configuration switch:	<ul style="list-style-type: none"> ➤ LED (ON/OFF) ➤ antenna voltage (5V/3V)



NAELCOM – 2, rue Jean Mermoz – 93297 Tremblay-en-France
 Tél. : +33 (0)1 48 61 95 28 – Fax : +33 (0)1 48 61 94 03
<http://www.naelcom.com> - e-mail : contact@naelcom.com

NLC-SKII TECHNICAL DATA

PERFORMANCE SPECIFICATIONS

General:	L1 (1575.42 MHz) frequency, C/A code, 12-channel, continuous tracking receiver
Update rate:	TSIP @ 1 Hz; NMEA @ 1 Hz; TAIP @ 1 Hz
Accuracy:	Horizontal: <3 meters (50%), <8 meters (90%) Altitude: <10 meters (50%), <16 meters (90%) Velocity: 0.06 m/sec PPS: ± 50 nanoseconds
Acquisition:	Hot start: <9 seconds Warm start: <35 seconds Cold start: <39 seconds
Reacquisition:	<2 seconds (after signal loss)
Sensitivity:	Tracking: -152 dBm Acquisition: -142 dBm

ENVIRONMENTAL SPECIFICATIONS

Operating temp:	-40°C to $+85^{\circ}\text{C}$
Storage temp:	-55°C to $+100^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

Prime power:	+4.5VDC to 5.5VDC Power consumption: 45mA
Back-up power:	+3.2VDC to 5.5VDC Power consumption: 8 μ A typical

INTERFACE CHARACTERISTICS

Serial ports:	2 serial ports
PPS:	3.0 V CMOS-compatible, TTL-level pulse, once per second
Supported Protocols:	TSIP, TAIP, NMEA 0183 v3.0 Bi-directional NMEA messages Messages selectable by NMEA commands Selection stored in flash memory

PHYSICAL CHARACTERISTICS

