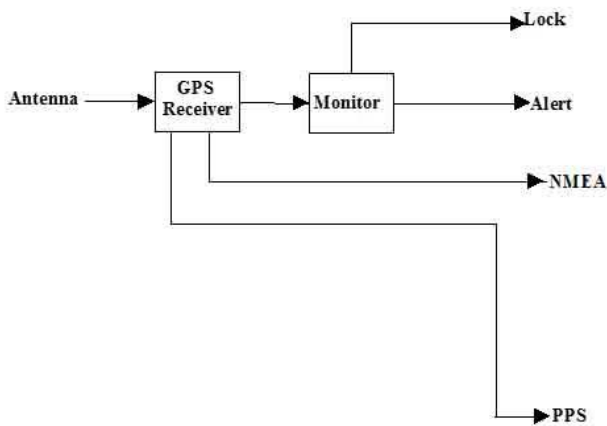


Company Datasheet #	NP6700
Revision #:	C
Date:	05152020

NP6700

GPS Module –NMEA and PPS Source

KEY FEATURES



The NP6700 provides NMEA data and the PPS (one pulse per second) signal derived from the GPS. The 26 channel GPS receiver is a high correlator design that can perform very rapid sky searches for satellite signals even under very poor signal conditions. Maintains timing accuracy with a single satellite in view. All outputs are transient protected. The PPS signal is 3.3v CMOS with a 20ns rms accuracy. The NMEA 0183 data is available via a USB-B port on the front panel. Unit is DC powered from (-60 to +60 vdc in three ranges) or can be USB powered. The lock and self-test status is presented on the front panel with an indicator. GPS lock status is also available on the rear panel connector via solid state relay contacts

The unit is housed in a ~1.5x4x5 aluminum extruded case provides a rugged chassis that easily incorporated as an embedded element providing critical timing information.

Product Highlights



High Sensitivity GPS Receiver

The 26 channel GPS receiver is a high correlator design that can perform very rapid sky searches for satellite signals even under very poor signal conditions.

High Accuracy Timing

15ns @ 1 σ timing signal locked to GPS.

Wide Power Operating Range

Three ranges that allow operation from -60 to +60 Vdc or the can be configured to use the power available on the USB.

Company Datasheet #	NP6700
Revision #:	C
Date:	05152020

Technical specifications

PPS	15 ns @ 1 σ accuracy, 3.3 volt logic
Power Requirements	Three ranges +-(10 to 18, 18 to 36, 36 to 65), AC power adapter or USB
USB Power	225 ma
Position accuracy	< 50 Meters
Connectors	BNC- PPS output
NMEA 0183	
PPS	
Amplitude for 1PPS	3.3 Vdc CMOS (5 Vdc option)
Pulse width for 1PPS	Programmable 1 to 500ms in 1 ms steps
Rise time for 1PPS	<20 ns (faster edge available)
Connector	BNC
Load Impedance	50 Ohm
Location	rear
Remote interface & control	
Protocol	RS232 NMEA-0183
Connector	DB-9
Location	Rear panel
Protocol	Bit plus stop
Standard Baud Rates	Selectable 4800, 9600, 19200, 38400, 57600 or 115200 bps
GNSS receiver	
	GPS L1 C/A, GLONASS L1OF, QZSS L1 C/A, SBAS L1 C/A (Ready): Galileo E1B/E1C, QZSS L1S
Channels	26 channels (GPS, GLONASS, QZSS, SBAS)
Sensitivity	
GPS	Tracking: -161 dBm
	Hot Start: -161 dBm
	Warm Start: -147 dBm
	Cold Start: -147 dBm
	Reacquisition: -161 dBm
GLONASS	
	Tracking: -157 dBm
	Hot Start: -157 dBm
	Warm Start: -143 dBm
	Cold Start: -143 dBm
	Reacquisition: -157 dBm
	With Novus recommended antenna

Company Datasheet #	NP6700
Revision #:	C
Date:	05152020

Antenna with LNA		
Antenna power	3.5 Vdc, < 35 ma (on center conductor) (factory configurable to 5 Vdc)	
Frequency	1574-1607 MHz	
Nominal Gain	2 dBic	
Amplifier gain	26 dB	
Noise Figure	< 2.0 dB	
Out of Band rejection	Fo±50MHz=60 dBc, Fo±60 MHz	
DC current	<25 ma@3.5 Vdc	
Power Requirements	Three ranges ± (9 to 18, 18 to 36, 36 to 65) Vdc (ac adapter available) Power converter can be configured to provide > 500 volts isolation)	
	5-pin Power Con- power in, status relay contacts, GPS lock signal TE Connectivity part#2-1445055-5-	
USB Connector	High Insertion force Connector	

Environmental and Mechanical

Operating temperature	0 to 50C	
Storage temperature	-40 to 70C	
Width	4 inch (exclusive of connectors)	
Depth	5 inch	
Height	1.5 in	
Weight	6 oz	

This document is copyright © May 15, 2020 Novus Power Products LLC. All rights reserved. This document is provided for information purposes only; contents are subject to change without notice. It is not warranted to be error-free, nor subject to any other warranties or conditions including implied warranties and conditions of merchantability or fitness for a particular purpose.