

Precise Positioning Management





## THE RIGHT MEASURE

SENSOR SERIES

Configure your series 20xx unit the way you need it. Nothing less and nothing more. Of course, you can share your requirements with us and we will create your personal system for you.

Make your choice from the two basic models in the 20xx GNSS Sensor series:

- **20xx-L** models are the lean variant: no memory, no integrated GSM.
- **Source S** 20xx-S models are expandable and programmable units with internal memory and a processor running the PPM-OS.



### GNSS/GPS BOARDS AND CONFIGURATIONS

Please chose the GNSS configuration you want to use with your 20xx GNSS Sensor: ▶ GPS L1 + SBAS ▶ GPS L1 + L-Band (OmniSTAR) + SBAS ▶ GPS L1 + Glonass L1 + SBAS > GPS L1/L2 + SBAS > GPS L1/L2 + Glonass L1/L2 + SBAS > GPS L1/L2 + Glonass L1/L2 + L-Band (OmniSTAR) + SBAS ► GPS L1/L2/L2C/L5 + Glonass L1/ L2 + Galileo E1/E5a/E5b/E5Alt-BOC + Compass + SBAS. (See reverse for a clear tabular overview of the available configurations.)



## ACCURACY

Select the accuracy level you need, using SBAS, DGPS or RTK. Achievable accuracies are 1-3 meters, sub-meter, 30-50 cms, 10-20 cms or 1-3 cms.



## INTERNAL MEMORY

Each 20xx-S Sensor offers 2 GB of internal memory. It is available with an 8 GB memory, too. The memory allows logging raw data or saving configuration files.



## **GSM/GPRS RADIO**

You can fit your 20xx-S Sensor with an internal GSM/GPRS radio. This is required to receive corrections from a reference station network. In addition, it can be used to transmit data in certain intervals or in realtime. If you want to control your system remotely using text messages, you will need this option as well.



## **BFACON RECEIVER**

You can fit your 20xx-S Sensor with an internal beacon receiver. This receiver offers two channels to receive corrections, so the stronger of two available beacon signals can be used.





 $\bigcirc$ 

S

## EVENT CONTROL

Your 20xx-S GNSS Sensor has up to 5 digital inputs and outputs. These allow external events to trigger functions in the sensor. For example, the sensor can monitor for increases or drops in the supply voltage. Depending on the change you trigger a certain function to automate specific tasks. For example: Once a machine is started the receiver is powered up. If a certain speed is exceeded the receiver will send its position to an FTP server. If an attachment (a mower, a conveyor, a drill, etc.) is powered the sensor will establish a connection to receive corrections from a reference network. The receiver will log coordinates and transfer the data every 30 minutes to an FTP server.



Using the internal NTRIP client, the 20xx-S Sensor can process corrections received from reference station providers. Use the service that offers the position accuracy you require!



## **APPLICATION AREAS**

▶ machine control ▶ structural monitoring ▶ geo monitoring ▶ logistics/fleet management ▶ surveying/GIS ▶ hydrography ▶ avionics

REMOTE CONTROL

Configure your 20xx-S GNSS Sensor with integrated GSM/GPRS remotely by sending text messages. The available commands allow running a configuration file from the sensor's memory. Or simply send any configuration command supported by ppm-OS. To protect your configuration and system from SPAM messages, the receiver will accept commands from a pre-defined phone number only.



The 20xx-S GNSS Sensor can run individual tasks at specific times. You can define a specific time or dependent time intervals. For example: On August, 15th 2014 the receiver will start and log data for 30 minutes. After 15 minutes the logging will pause, while data is being transmitted to an FTP server using GPRS. This allows a very flexible combination of times of day and tasks.

## **SCHEDULING**

## NTRIP CLIENT



# 20xx configurations

		2011	2022								
	S -Version: programmable	-S11 -S13	-S01 -S02	-S03	-S04	-S11	-S12	-S13	-S14		
	L -Version: not programmable	-L11 -L13	-L01 -L02	-L03	-L04	-L11	-L12	-L13	-L14	-L24	
	Board	: NovAtel	<u> </u>			NovAtel			Septentrio		
	GPS L1	•	•			•				•	
ດື	GPS L2		•	0	•	0	•	0	•	•	
SSN	Glonass L1	•	0	•	0		0		•	•	
s,	Glonass L2			•	0		0	•	•	•	
ste	Galileo E1				0		0		•		
SW	Galileo E5				0						
	SBAS	•		•		•				•	
	Channels	14	45		120		120			136	
Upda	1 Hz	•	•			•				•	
	5 Hz	•		•				•		•	
	10 Hz	0	0		•			•		•	
ate	20 Hz			0	•		(	С		•	
rat	25 Hz									•	
S	50 Hz						(	С			
	100 Hz										
	Raw Data Output	•		•		•			•		
	DGPS Base	0		•		•			•		
FW option	DGPS Rover	•	•		0	•			•		
	RTK Base			0		0			0		
	RTK Rover (Flying RTK or RT20)		0			0					
	RTK Rover (Fixed)		0			0			0		
s -	RAIM		0			0				•	
-	x-PPS	•	•			•				•	
	Event Marker	•	•			•			0		
-	GSM/GPRS		Hard	rsions				n.V.			
	Beacon		Hardware option for S-vers				rsions				
_	L-Band		HW Option								
Hg _	Memory		S-version with 2GB as standard, 8 GB as an option							n.V.	
<u>e</u> .	COM Ports	2	2			2				3	
tio -	USB Ports	1	1			1 USB or 3 <sup>rd</sup> COM (DIP switch)				1	
ns -	Event in		1x with system cable 3,3V LVTTL								
-	PPS out		1x with system cable 3,3V LVTTL								
-	GPS antenna	TNC female (5V – 50mA max)									
	GSM antenna	SMA female									
⊳ -	GNSS only (m)	1,5	1,2			1,2				1,3	
<u>,                                    </u>	SBAS (m)	0,7	0,5			0,6				0,6	
Irac -	DGPS (m)	0,7	0,3			0,6				0,5	
Y2	RTK (Flying oder RT20)(m)		0,1			0,2					
	RTK Fixed (m)		0		0,	01		0,01			
S -	Input voltage (Volt DC)		9 – 32								
Jec -	Power consumption (W) <sup>1</sup>	0,7	1					1		1,5	
ific -	Operating temperature (°C)	-40 bis +55									
atio	Environmental	IP 65									
- su	Size (mm)	106 x 49 x 187 (WxHxD) <sup>3</sup>									
	Weight (g) 8504										
<ul> <li>Star</li> <li>Pow and</li> <li>Accu sphe</li> </ul>	eard configuration / Optional / r er consumption without optional features. Beacon will increase the power consump iracy specification may be affected by a pric conditions, signal multipath, and sa metry. Position accuracy specifications	GSM minimum otion. recommen path areas atmo- atmospher tellite e for 3 20vy-S04/-	of five satellites, follo ided in the product , high PDOP values a ric conditions may d	wing the p manual. Hi ind periods egrade peri	rocedures igh multi- of severe formance. x 220 mm	Auth	iorizea Parti	ner			
horiz	zontal positioning. Vertical error is typica s horizontal error. Performance values as	l < 2 sume 4 20xx-S04/-	L04 with different wei	ght: 1.500 g	5						

PPM follows a policy of continuous product improvement; specifications and descriptions are thus subject to change without notice.

All product and brand names are trademarks of their respective holders.