



## TUNE IN TO THE FUTURE USING DGR x™ POWER AND ADAPTABILITY

# THE SPARROW with integrated UHF Radio and 3G/4G modem



### SIMPLE and ADVANCED

The Sparrow-GNSS has integrated UHF radio modem and 3G/4G modem allowing the user to connect to all existing reference networks. The Sparrow-GNSS is a flexible and advanced and can communicate by serial com ports, USB and ethernet and delivers standard MNEA output to any end user software.



### IT IS INTELLIGENT

With its onboard computer the Sparrow-GNSS is a smart solution to you machine control, logistics, and marine application. Based on hardware and software tested and approved by US Department of Defence.

### ONBOARD INTERNET SUPPORT

DataGrid's support can reach your Sparrow over the internet anytime you are connected, even in the field.

Built to IP66 and extreme temperatures of -40 C to +85 C (-40 F to +185 F), the same as its DataGrid siblings, the Guider-GNSS modern enclosure and low mass gives it outstanding resilience to harsh environments. Even the shaking and abuse on earth movers or excavators are no match for the Sparrow-GNSS.

DataGrid is a US company in the positioning field with focus on OEM solutions, GIS and data collecting with GNSS equipment. Our products are based on our own patented technology, developed and built in Europe or the USA. They are lightweight easy to operate, ergonomic and programmable. Our answer to obsolescence – get DataGrid.





# SPECIFICATIONS SPARROW

FEATURES	
Search channels	4,000 or more (depending on config.)
Correlation channels	336 or more (depending on config.) Default tracking: 18 L1, 12 L2
SBAS channels (WAAS, EGNOS, MSAS, ...)	2 or more (depending on config.)
Frequency bands	L1/L2
Navigation Signals tracked	GPS L1/L2/L2c, GLONASS L1/L2c, Galileo and COMPASS ready
Sensitivity	45 DbHz carrier (15 DbHz code with H.S. option)
Correction signals	SBAS (WAAS, EGNOS, MSAS, ...), RTCM ver 2.3, 3.0, 3.1, compatible with CMR/CMR+
Operating modes	Rover or base station, RTK, virtual reference, geodetic postprocessing
Base data latency tolerance in RTK	5 seconds
TYPICAL ACCURACY	
Code phase GPS-positioning	Dynamic GPS (EGNOS, WAAS, SBAS, MSAS) +/-1m
Static and fast static GPS measurement	Horizontal +/- 5 mm + 1 ppm RMS; vertical +/- 10 mm + 1 ppm RMS
Kinematic measurement RTK	Horizontal +/- 10 mm + 1 ppm RMS; vertical +/- 20 mm + 1 ppm RMS
Time accuracy	< 35 nanosec
INITIALIZATION TIME	
Cold start	<60 seconds
Warm start	<38 seconds
Hot start	<8 seconds
Re-acquisition	<1 second
OUTPUT	
Update rate	up to 20/sec actual measurements (20 Hz real)
ASCII	NMEA 0183
Binary DGR-format	Raw GNSS data (Code and carrier L1, L2, L2c GPS and L1, L2c GLONASS), ephemerides, status messages, etc..
INPUT	
Reference (base-) data	RTCM ver 2.3, 3.0, 3.1, compatible with CMR/CMR+,
CONNECTION	
to Windows or Windows CE comp.	PC Card (PCMCIA) single slot 3.3 Volt or USB
External antenna connector option	+ 3.3 Volt
POWER	
Power consumption	< 1.8 Watt
PHYSICAL	
Operating temperature (noncondensing)	-40° C to +85° C (-40° F to +185° F)
Storage temperature (noncondensing)	-40° C to +85° C (-40° F to +185° F)
OPTIONS WITH DEV. CONTRACT	
High Sensitivity mode	15 DbHz ("indoors" sensitivity level)
High Precision Timing mode	~20 nanosec
High Altitude / High Dynamics mode	unlimited in altitude, up to 20 g acceleration (for authorized users only)
Space Qualified version	DataGrid and its partners can support all aspects of spacecraft integration
L1c option	expected broadcast start in 2013

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