



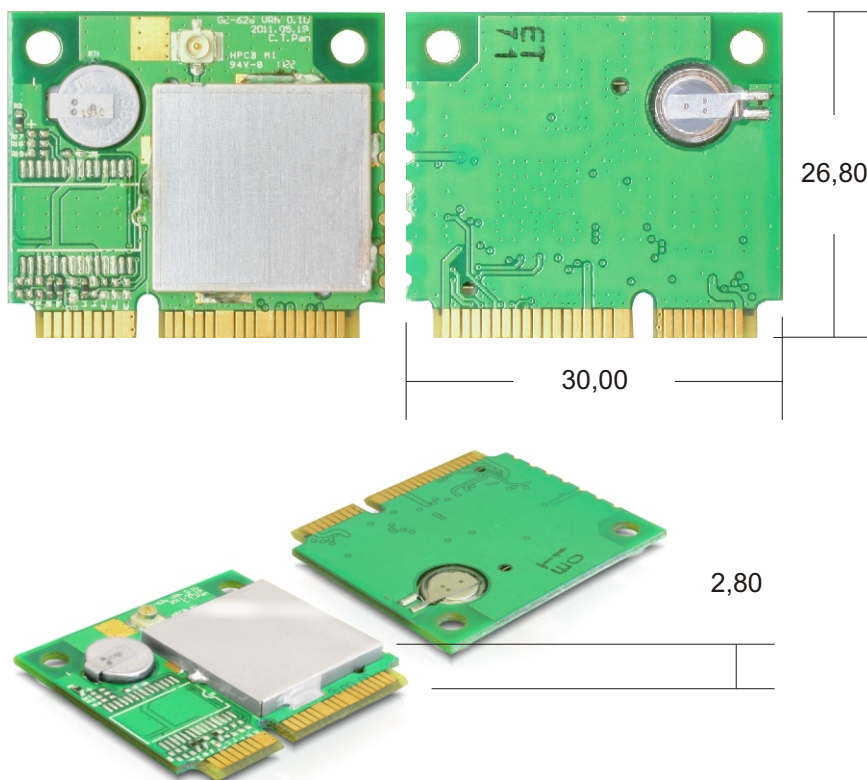
Specification

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95923

Navilock industry MiniPCle GNSS GPS GLONASS USB 1.1 module

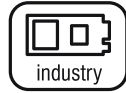
EAN: 4043619959235



Edition: 11/2011



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Navilock industry MiniPCIe GNSS GPS GLONASS USB 1.1 module

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Overview

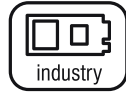
95923 is equipped with the **u-blox 6** high-sensitivity engine, RF connector, and optional backup battery. The Mini PCI Express standard design allows it to be easily applied in devices with PC architecture. The half-length design allows it to be used in dimension demanding environment. In addition to standard USB interface, it also supports optional UART/TTL interface. The backup battery allows faster position fix and it is optional in case extended temperature range is required.

Features

- PCI Express Mini Card standard compliant
- Built-in RF connector, reduce RF tuning efforts
- The tiny I-PEX RF connector allows flexibly placing GPS antenna at a suitable location.
- External active antenna short circuit protection
- Optional backup battery for faster position fix.
- Support USB interface.
- In addition to default u-blox USB driver.
- High sensitivity+/-160dBm tracking/-146dBm



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Technical specifications

Receiver performance data

Receiver Type	u-blox 6 UBX-G6010-ST, 50-channel, L1 frequency, C/A code
Horizontal Position	< 2.5m (Autonomous)
Accuracy	< 2.0m (WAAS) (CEP, 50%, 24-hour static, -130dBm, SEP < 3.5m)
Velocity Accuracy	<0.1 m/s (speed) <0.5° (heading) (50% @ 30 m/s)
Time Pulse	30ns (RMS)
Signal Accuracy	<60 ns (99%)
Time To First Fix	Autonomous (all at -130dBm)
Hot start	1sec
Warm start	32sec
Cold start	32sec
Sensitivity	-146dBm (acquisition)
(Autonomous)	-160dBm (tracking & navigation)
Max. Update Rate	5Hz
Max. Altitude	< 50.000 m
Max. Velocity	< 1.800 km/hr
Protocol Support	NMEA 0183 V2.3 (compatible to V3.0) UART: 4800, 9600, 38400bps N,8,1; GGA, GLL, GSA, GSV, RMC, VTG, TXT
SBAS Support	WAAS, EGNOS, MSAS, GAGAN
Dynamics	< 4g



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Electrical data

Power Supply	3,3 +- 0,3 V
Power Consumption	50 mA / average tracking

RF interface

Connector	I-PEX
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Environmental data

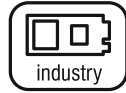
Operating temperature	-20 ~ 60°C (without battery -40 ~ 85°C)
Storage temperature	-20 ~ 60°C (without battery -40 ~ 85°C)

Mechanical data

Dimension	30 (W) x 26,8 (L) x 2,8 (H) mm
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Pin Interface

Pin	Pins	Function	I/O
VCC	2, 24, 39, 41, 52	3,0 ~ 3,6 V	Input
GND	4, 9, 15, 18, 21, 26, 27, 29, 34, 35, 37, 40, 43, 50	Ground	Input
USB_DM	36	USB data signal minus	I/O
USB-DP	38	USB data signal plus	I/O
LED	42	GPS fix indication	Output
nRESET	5	RESET pin	Input
NC	Remaining pins	No connection	-



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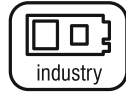
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Pin assignment

1	NC	VCC	2	1	NC	VCC	2
3	NC	GND	4	3	NC	GND	4
5	nRESET	NC	6	5	nRESET	NC	6
7	NC	NC	8	7	NC	NC	8
9	GND	NC	10	9	GND	NC	10
11	NC	NC	12	11	NC	NC	12
13	NC	NC	14	13	NC	NC	14
15	GND	NC	16	15	GND	NC	16
17	NC	GND	18	17	NC	GND	18
19	NC	NC	20	19	NC	NC	20
21	GND	NC	22	21	GND	NC	22
23	NC	VCC	24	23	NC	VCC	24
25	NC	GND	26	25	NC	GND	26
27	GND	NC	28	27	GND	NC	28
29	GND	NC	30	29	GND	NC	30
31	NC	NC	32	31	NC	NC	32
33	NC	GND	34	33	NC	GND	34
35	GND	USB_DM	36	35	GND	NC	36
37	GND	USB_DP	38	37	GND	NC	38
39	VCC	GND	40	39	VCC	GND	40
41	VCC	LED	42	41	VCC	LED	42
43	GND	NC	44	43	GND	NC	44
45	NC	NC	46	45	RXD	NC	46
47	NC	NC	48	47	TXD	NC	48
49	NC	GND	50	49	NC	GND	50
51	NC	VCC	52	51	NC	VCC	52

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Top Side

Dimensions and Component Locations:

- Overall width: 30.00 $\pm 0.00/-0.30$
- Overall height: 26.80 $\pm 0.00/-0.30$
- Top edge components: 0.10 M A B C
- Internal width dimension: 24.20
- Internal height dimension: 2x $\varnothing 2.50 \pm 0.10$
- Internal component locations: 0.10 A B C
- Distance from top edge to internal components: 8.25
- Distance from center to Pin 1: 1.65
- Distance from center to Pin 51: 3.85
- Internal width dimension: 23.90
- Pin 1 and Pin 51 locations are marked.
- Reference to Detail A is shown.
- Dimension \varnothing of Card Width is indicated.

Bottom Side

26.90 REF

Pin 52

13.60 Both Sides

2.05

8.25

Both Sides

5.60

Pin 2

2x 2.15 REF

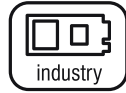
2x R 0.80 MAX

2x 3.20 MIN

See Detail B

25.70

0.10 (M) A B C



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Support Navilock

If you have further questions, please contact our customer support
support@navilock.de.

You can find current product information on our homepage: www.navilock.com.

Final clause

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WEEE note

The WEEE (Waste Electrical and Electronic Equipment) directive, which came into force on 13 February 2003, lead to a comprehensive change in the disposal of used electric products. It is the main purpose of this directive to avoid electric waste products (WEEE), while simultaneously promoting the re-usage, recycling and other forms of reconditioning in order to reduce the amount of waste. The WEEE logo on the product and the package shows that the product should not be disposed of with regular garbage. You are responsible for disposing all used electric and electronic devices at the corresponding collection sites. The separate collection and meaningful re-usage of electronic waste helps to deal with natural resources more economically. In addition, re-using electronic waste contributes to the preservation of the environment and human health. Additional information regarding the disposal of electric and electronic devices, their re-usage and the collection sites can be found at your local authorities, disposal companies, specialist shops and the manufacturer of the product.

RoHS conformity

This product meets the requirements of directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003, concerning the limited usage of dangerous substances in electric and electronic devices (RoHS) and its amendments. This product complies with the directive 2011/65/EU from January 3rd 2013.

EU Import:

Tragant Handels- und Beteiligungs GmbH, 14167 Berlin, Beeskowdamm 13-15