

# Quanta Series

## Product Change Notice

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PCN: New generation of Quanta series

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This notice is to inform you of a major update to the Quanta series, providing improved performance and new features to the Quanta high-performance OEM product range.

The new products in the Quanta series are:

- Quanta Plus, replacing Quanta RTK
- Quanta Extra v2 replacing Quanta Extra RTK v1

## 1. Description of change

### 1.1. New tactical grade IMU for Quanta Plus

Quanta Plus product features the new Pulse-40 SBG Systems tactical grade IMU.

The stellar performances of the PULSE-40 significantly improves the performance of the Quanta Plus compared to Quanta RTK (that was using Ellipse 2 Micro IMU).

This major change is performed with no functional impact nor any impact on the interfaces; and only a minimal size increase.

Quanta Extra keeps the state of the art Apogee-I IMU boasting the highest accuracy of MEMS IMUs.

### 1.2. New Triple-frequency GNSS receiver

The GNSS receiver used on Quanta Plus and Quanta Extra is the latest generation and most advanced survey grade GNSS receiver.

This new model is triple band enabled (L1/L2/L5) and tracks most constellations and signals.

It also brings enhanced resilience to harsh GNSS environments making the Quanta Plus and Quanta Extra perfect choices for usage next to vertical surfaces, buildings or urban canyons.

Both products are also compatible with Marinestar™ (requires additional third party subscription to the correction service).

## 2. Hardware revision 1 EOL announcement

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**Note:** This EOL has a short notice, as the new hardware is fully compatible with the previous one and therefore does not require specific re-qualification.

<b>End of Life</b>	February 1 <sup>st</sup> 2023	The Quanta RTK and Quanta Extra RTK first generation products are end of lifed with immediate effect.
<b>Last Buy Order</b>	February 28 <sup>th</sup> 2023	Rev. 1 hardware can not be ordered after 28 <sup>th</sup> February 2023. Note that despite SBG Systems best efforts, rev 1. part numbers may be in shortage before that date.
<b>End of support</b>	February 28 <sup>th</sup> 2025	End of support for rev. 1 hardware (Quanta RTK and Quanta Extra RTK) will be February 28 <sup>th</sup> 2025

## 3. Impact of change

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SBG Systems has taken all actions to ensure a smooth transition for all users.

- Quanta Plus is a higher performance device that shares fit and functions with Quanta RTK. It shares the form factor (connector, mounting points, width and length) of v1 hardware. Only the height of the board is slightly higher than with 22.6 mm against 21.9 mm for the Quanta v1.
- Quanta Extra second generation is 100% form, fit and function compatible with Quanta Extra RTK first generation.

First generation development kits remains compatible with the new products.

Quanta Micro development kit is also compatible with the new products.

### 3.1. New receiver specifications

	Specification		Remark
Channels	544		
Signal tracking	<b>GPS:</b> L1 C/1, L2, L2C, L5 <b>GLONASS:</b> L1 C/A, L2 C/A, L2P, L3 <b>GALILEO:</b> E1, E5a, E5b <b>Beidou:</b> B1I, B1C, B2a, B2I, B3I	<b>QZSS:</b> L1 C/A, L2C, L5 <b>SBAS</b> <b>L-band</b>	All constellations & signals enabled by default
Horizontal position accuracy	Single Point L1/L2/L5	1.2 m	RTK enabled by default
	SBAS / DGNSS	0.6 m / 0.4 m	
	RTK	0.6 cm + 0.5 ppm	PPP (MARINESTAR™) requires third party subscription to correction service
	PPP (MARINESTAR™)	10 cm	
Velocity Accuracy	0.03 m/s RMS		
True Heading Accuracy	0.15°		1 m baseline
	0.03°		5 m baseline
Velocity limit	515 m/s	Due to export licenses	
Time to First Fix	Cold start	< 45 s	
	Hot start	< 20 s	
Signal reacquisition	L1/L2/L5	< 1 s	
Output frequency	PVT: 5 Hz (Max 20 Hz) RAW data: 1 Hz (Max 100 Hz)		
Diff. Corrections	RTCM V2.x, V3.x CMR V2.0, CMR+		

### 3.2. Antennas requirements

- The allowed antenna gain at QUANTA Extra v2 and QUANTA Plus v2 input is reduced from 15-50 dB to 15-45 dB.
- The requirement of max current that QUANTA Extra v2 and QUANTA Plus can provide to LNA changes from 100 mA to 150 mA per antenna.
- Full benefit of new band plan requires adapted antennas matching the new constellations and signal bands. Antenna models recommended by SBG Systems for the previous hardware revision remains fully compatible.

## 4. New commercial offer

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### 4.1. Old product code & part numbers equivalence table

The product part numbers are replaced as described in the following table.

P/N	Product Name	Hardware rev.	New P/N	New Product Name	Hardware rev.
100-2177	QUANTA RTK	1	100-2925	QUANTA Micro (not 100% form fit compatible)	1
			100-2890	QUANTA Plus	2
100-2179	QUANTA Extra RTK	1	100-2889	QUANTA Extra	2

Quanta Micro can be ordered immediately.

Quanta Plus and Quanta Extra v2 can be ordered starting from February 13<sup>th</sup> 2023 with standard delivery times.

## 5. Sales contact

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If you need any further information after reading this document, please contact us by email or phone.

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