



# SHORT FORM CATALOGUE

## Quartz Crystal Oscillators OCXO

### OSCILLOQUARTZ SA

Since its creation in 1949, Oscilloquartz (OSA) is a pioneer in the Time and Frequency field. In its Oscillators and Telecommunications divisions, OSA designs, manufactures and installs the most precise frequency sources and synchronisation systems. It supplies Telecommunication integrators, public and private network operators in more than 90 countries.

Oscilloquartz's success relies on the unrivalled performance and reliability of its quartz oscillators (notably the ultra stable BVA resonator, flagship of the company, or the SC-Cut Oven Controlled Crystal Oscillators OCXO) and its Network Synchronisation solutions (SyncWorld). The products and systems, involving a combination of various technologies and know-how, integrate all standards (ITU-T, ETSI, ANSI), norms (GSM, UMTS, or CDMA) and references (PRC, Cesium and GPS).

Oscilloquartz's strength also lies in the quality of its services to ensure the network reliability, for a total customer satisfaction. As a truly global supplier, OSA ensures a worldwide presence through regional sales offices, agents or distributors.

ISO-9001 and ISO-14001 certifications demonstrate OSA commitments to quality and environmental aspects, as well as certification from the Swiss Federal Office of Metrology as an Accredited Calibration Centre for Time and Frequency.

### Crystal Oscillators

Stable frequency sources are crucial to the effective transmission of digital signals. Since the beginning, Oscilloquartz has specialised in frequency technology and developed quartz crystal oscillators to the highest level of technical achievement.




The result is a wide selection of crystal oscillators for use in switching and transmission systems, test equipment and a host of other applications. The oscillators are also used extensively within Oscilloquartz synchronisation systems. The oscillator portfolio covers a broad range of frequencies and stabilities between 1E-7 and 1E-12 with a very comprehensive range of Oven-Controlled Crystal Oscillators (OCXO) including Ultra-Stable Oscillators (USO).

In addition to specialising in conventional oscillator technology, Oscilloquartz, as an innovator of new technologies, is capable of exploiting novel ideas all the way from the drawing board to commercially available products. The BVA oscillator is just such a product. The stability among other features of the BVA is unequalled by any other quartz crystal device. This oscillator achieves ageing characteristics typically down to 1E-11 per day without use of any mathematical algorithms.

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Synchronisation needs

Technical Specifications	DIL 12V	DIL 5V	DIL NEW 3.3V			
						
Model	8620 / 8625	8621 / 8626	8622 / 8627			
Frequency range	1 to *40 MHz	1 to *40 MHz	1 to 20 MHz			
Temperature range	A: 0° to +60°C B: -20° to +70°C C: -40° to +85°C	A: 0° to +60°C B: -20° to +70°C C: -40° to +85°C	A: 0° to +60°C B: -20° to +70°C C: -40° to +85°C			
Stability vs Temperature Peak to Peak	<b>8620</b> A: < 0.4ppm B: < 0.6ppm C: < 1.0ppm	<b>8625</b> A: < 0.1ppm B: < 0.2ppm C: < 0.4ppm	<b>8621</b> A: < 0.4ppm B: < 0.6ppm C: < 1.0ppm	<b>8626</b> A: < 0.2ppm B: < 0.3ppm C: < 0.4ppm	<b>8622</b> A: < 0.4ppm B: < 0.6ppm C: < 1.0ppm	<b>8627</b> A: < 0.2ppm B: < 0.3ppm C: < 0.5ppm
OPTION Stability vs Temperature	On request		On request		On request	
Long term stability Slope > 0 or < 0	1st Year : <±0.7ppm 10 Years : <±4.0ppm		1st Year : <±0.7ppm 10 Years : <±4.0ppm		1st Year : <±0.7ppm 10 Years : <±4.0ppm	
Warm-up $\Delta f/f$ :	Within spec after 30s @0°C		Within spec after 30s @0°C		Within spec after 60s @0°C	
Short term stability	$\sigma(\tau) < 5 \times 10^{-10}$ ( $\tau=0.1s$ to 30s) Typical $5 \times 10^{-11}$ @ 1s		$\sigma(\tau) < 5 \times 10^{-10}$ ( $\tau=0.1s$ to 30s) Typical $5 \times 10^{-11}$ @ 1s		$\sigma(\tau) < 5 \times 10^{-10}$ ( $\tau=0.1s$ to 30s) Typical $5 \times 10^{-11}$ @ 1s	
Frequency control	R1: > ± 4 ppm (ext pot) V5: > ± 4 ppm (0 to +5V)		R1: > ± 4 ppm (ext pot) V5: > ± 4 ppm (0.5 to +5V)		R1: > ± 4 ppm (ext pot) V3: > ± 4 ppm (0 to +3.3V)	
Output specification	H : HC MOS compatible S : Sine >1Vpp / 1 K $\Omega$ <b>*S: max frequency 20MHz</b>		H : HC MOS compatible S : Sine >1Vpp / 1 K $\Omega$ <b>*S: max frequency 20MHz</b>		H : HC MOS compatible	
Phase noise L (f) BW=1Hz	<b>H</b>	<b>S</b>	<b>H</b>	<b>S</b>	<b>H</b>	<b>S</b>
1 Hz	-60 dBc	- 70 dBc	-70 dBc	- 80 dBc	-80 dBc	on request
10 Hz	-90 dBc	-100 dBc	-100 dBc	-110 dBc	-110 dBc	on request
100 Hz	-120 dBc	-130 dBc	-130 dBc	-135 dBc	-135 dBc	on request
1'000 Hz	-130 dBc	-140 dBc	-140 dBc	-145 dBc	-145 dBc	on request
10'000 Hz	-130 dBc	-140 dBc	-140 dBc	-145 dBc	-145 dBc	on request
typical value @ 10MHz in static conditions						
Power supply						
Input voltage (DC)	+12 V ± 0.5V		+5V ± 0.2V		+3.3V ± 0.15V	
Input current	Warm-up	250mA during 10s	250mA during 10s	250mA during 10s	250mA during 30s	250mA during 30s
	After warm-up	<25mA @ +30°C	<70mA @ +30°C	<70mA @ +30°C	<100mA @ +30°C	<100mA @ +30°C
Size (L x W x H)	20.3 x 13.2 x 8.0 mm 0.8" x 0.52" x 0.31"		20.3 x 13.2 x 8.0 mm 0.8" x 0.52" x 0.31"		20.3 x 13.2 x 8.0 mm 0.8" x 0.52" x 0.31"	

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Technical Specifications	Low profile	Low profile	Low Phase noise
			
Model	<b>8711 / 8712</b>	<b>8743</b>	<b>8788 / 8789</b>
Frequency range	4.096 to 40 MHz	6.480 to 30 MHz	5 / 10 MHz
Temperature range	A: -20° to +70°C B: 0° to +70°C C: 0° to +60°C D: -10° to +70°C E: -40° to +70°C	A: -20° to +70°C B: 0° to +70°C C: 0° to +60°C	A: -20° to +70°C B: 0° to +70°C C: 0° to +60°C D: -10° to +70°C E: -40° to +70°C
Stability vs temperature	Std: <math>2 \times 10^{-8}</math> pp 1: <math>1 \times 10^{-8}</math> pp	Std: <math>2 \times 10^{-8}</math> pp 1: <math>1 \times 10^{-8}</math> pp 6: <math>6 \times 10^{-9}</math> pp	Std: <math>2 \times 10^{-8}</math> pp 2: <math>1 \times 10^{-8}</math> pp
Long term stability Slope > 0 or < 0	<math>\pm 5 \times 10^{-10}</math> /day <math>\pm 1 \times 10^{-7}</math> /year	<math>\pm 5 \times 10^{-10}</math> /day <math>\pm 1 \times 10^{-7}</math> /year	<math>\pm 5 \times 10^{-10}</math> /day <math>\pm 7 \times 10^{-8}</math> /year
Low aging option (day/year)	G: <math>\pm 2 \times 10^{-10}</math> /day <math>\pm 5 \times 10^{-8}</math> /year H: <math>\pm 1 \times 10^{-10}</math> /day <math>\pm 3 \times 10^{-8}</math> /year J: <math>\pm 7 \times 10^{-11}</math> /day <math>\pm 2 \times 10^{-8}</math> /year	G: <math>\pm 2 \times 10^{-10}</math> /day <math>\pm 5 \times 10^{-8}</math> /year H: <math>\pm 1 \times 10^{-10}</math> /day <math>\pm 3 \times 10^{-8}</math> /year J: <math>\pm 7 \times 10^{-11}</math> /day <math>\pm 2 \times 10^{-8}</math> /year	G: <math>\pm 2 \times 10^{-10}</math> /day <math>\pm 3 \times 10^{-8}</math> /year H: <math>\pm 1 \times 10^{-10}</math> /day <math>\pm 2 \times 10^{-8}</math> /year
Short term stability	$\sigma(\tau) < 1 \times 10^{-11}$ ( $\tau=0.2s$ to $10s$ )	$\sigma(\tau) < 1 \times 10^{-11}$ ( $\tau=0.2s$ to $10s$ )	$\sigma(\tau) < 1 \times 10^{-12}$ ( $\tau=1s$ )
Frequency control (Electrical)	> $\pm 0.6$ ppm (0 to +5V)	> $\pm 0.6$ ppm (0 to +10V)	> $\pm 0.8$ ppm (0 to +10V)
Output specification	<b>8711</b> <b>8712</b> S:Sine >4dBm   S:Sine >-1.5dBm T:HCMOS/TTL compatible U:LV CMOS compatible	S:Sine >0dBm/50Ω T:HC MOS/TTL compatible	S :Sine >6dBm/50Ω
Phase noise L (f) BW=1Hz	<b>T</b> <b>S</b> 1 Hz - 90 dBc      - 90 dBc 10 Hz -120 dBc      -120 dBc 100 Hz -135 dBc      -135 dBc 1'000 Hz -140 dBc      -140 dBc 10'000 Hz -145 dBc      -150 dBc	<b>Std</b> <b>10MHz</b> <b>Opt.L</b> - 95 dBc      -100 dBc -125 dBc      -130 dBc -135 dBc      -140 dBc -145 dBc      -150 dBc -145 dBc      -150 dBc	<b>5MHz</b> <b>10MHz</b> -115 dBc      -100 dBc -135 dBc      -130 dBc -150 dBc      -150 dBc -157 dBc      -157 dBc -162 dBc      -162 dBc
Power supply	<b>8711</b> <b>8712</b>		
Input voltage (DC)	+12V $\pm$ 10%      +5V $\pm$ 5%	+12 V $\pm$ 5%	+12 V $\pm$ 5%
Consumption (Warm-up @ +25° C)	<1.4W (5.0W)      <1.4W (4.0W)	<2W (7.5W)	<2.5W (8W)
Size (L x W x H)	C08C 36 x 27 x 19.4 mm 1.42" x 1.07" x 0.76"	40 x 30 x 19 mm 1.57" x 1.18" x 0.748"	<b>8788:</b> 51 x 41 x 19 mm <b>8789:</b> 2" x 2" x 0.748"

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Technical Specifications	3rd overtone crystal	3rd overtone crystal	Low profile 19 mm
			
Model	<b>8663</b>	<b>8683</b>	<b>8863</b>
Frequency range	4.096 to 40 MHz	4.096 to 40 MHz	4.096 to 40 MHz
Temperature range	A: -20° to +70°C B: 0° to +70°C C: 0° to +60°C	A: -20° to +70°C B: 0° to +70°C C: 0° to +60°C	A: -20° to +70°C B: 0° to +70°C C: 0° to +60°C
Stability vs temperature	Std: < 4 x 10 <sup>-9</sup> pp 1: < 1 x 10 <sup>-9</sup> pp 6: < 6 x 10 <sup>-10</sup> pp 2: < 2 x 10 <sup>-10</sup> pp	Std: < 4 x 10 <sup>-9</sup> pp 1: < 1 x 10 <sup>-9</sup> pp 6: < 6 x 10 <sup>-10</sup> pp 2: < 2 x 10 <sup>-10</sup> pp	Std: < 1 x 10 <sup>-9</sup> pp 2: < 2 x 10 <sup>-10</sup> pp 6: < 6 x 10 <sup>-10</sup> pp
Long term stability Slope > 0 or < 0	< ± 2x10 <sup>-10</sup> /day < ± 3x10 <sup>-8</sup> /year	< ± 2x10 <sup>-10</sup> /day < ± 3x10 <sup>-8</sup> /year	< ± 2x10 <sup>-10</sup> /day < ± 3x10 <sup>-8</sup> /year
Low aging option (day/year)	G: <±1x10 <sup>-10</sup> /day <±2x10 <sup>-8</sup> /year H: <±5x10 <sup>-11</sup> /day <±1.5x10 <sup>-8</sup> /year J: <±3x10 <sup>-11</sup> /day <±1x10 <sup>-8</sup> /year	G: <±1x10 <sup>-10</sup> /day <±2x10 <sup>-8</sup> /year H: <±5x10 <sup>-11</sup> /day <±1.5x10 <sup>-8</sup> /year J: <±3x10 <sup>-11</sup> /day <±1x10 <sup>-8</sup> /year	G: <±1x10 <sup>-10</sup> /day <±2x10 <sup>-8</sup> /year H: <±5x10 <sup>-11</sup> /day <±1.5x10 <sup>-8</sup> /year J: <±3x10 <sup>-11</sup> /day <±1x10 <sup>-8</sup> /year
Short term stability	σ(τ) < 1x10 <sup>-11</sup> (τ=0.2s to 10s)	σ(τ) < 1x10 <sup>-11</sup> (τ=0.2s to 10s)	σ(τ) < 1x10 <sup>-11</sup> (τ=0.2s to 10s)
Frequency control (Electrical)	> ± 0.3 ppm (0 to +10V)	> ± 0.3 ppm (0 to +10V)	> ± 0.3 ppm (0 to +10V)
Output specification	S: Sine >4 dBm/50Ω T:HCMOS/TTL compatible	S: Sine >4 dBm/50Ω T:HCMOS/TTL compatible	S: Sine >4 dBm/50Ω T:LVC MOS/HC MOS/TTL
Phase noise L (f) BW=1Hz	<b>10MHz</b> 1 Hz -90 dBc 10 Hz -120 dBc 100 Hz -135 dBc 1'000 Hz -145 dBc 10'000 Hz -145 dBc	<b>10MHz</b> 1 Hz -90 dBc 10 Hz -120 dBc 100 Hz -135 dBc 1'000 Hz -145 dBc 10'000 Hz -145 dBc	<b>10MHz</b> 1 Hz -95 dBc 10 Hz -130 dBc 100 Hz -140 dBc 1'000 Hz -155 dBc 10'000 Hz -155 dBc
Power supply			
Input voltage (DC)	+12V (24V on request)	+12V (24V on request)	+12V ± 10%
Consumption (Warm-up@+25 °C)	<2,5W (8W)	<2,5W (8W)	<2,5W (9W)
Size (LxWxH)	51,1 x 41,1 x 25 mm 2.01" x 1.62" x 0.98"	50,8 x 50,8 x 25 mm 2" x 2" x 0.98"	51,1 x 41,1 x 19.05 mm 2.01" x 1.62" x 0.75"

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Technical Specifications	BVA very low noise version																								
Model	<b>8607</b>																								
Frequency range	5 / 10 MHz																								
Temperature range	<b>B:</b> -30° to +60° C <b>C:</b> -15° to +60° C																								
Stability vs temperature	<b>B:</b> < 2 x 10 <sup>-10</sup> pp <b>B1:</b> < 1 x 10 <sup>-10</sup> pp <b>C5:</b> < 5 x 10 <sup>-11</sup> pp																								
Long term stability Slope > 0 or < 0	< ± 2 x 10 <sup>-11</sup> /day < ± 5 x 10 <sup>-10</sup> /month < ± 4 x 10 <sup>-9</sup> /year																								
Low aging option (day/year)	<b>G:</b> <±1 x 10 <sup>-11</sup> /day <±4 x 10 <sup>-9</sup> /year <b>H:</b> <±5 x 10 <sup>-12</sup> /day <±2 x 10 <sup>-9</sup> /year <b>J:</b> <±3 x 10 <sup>-12</sup> /day <±1 x 10 <sup>-9</sup> /year																								
Short term stability	<b>8607-B</b> σ(τ) < 5x10 <sup>-13</sup> (t=0.2s to 30s) <b>8607-__</b> σ(τ) < 8x10 <sup>-14</sup> (t=3s to 30s)																								
Frequency control (Electrical)	Mechanical: > ± 0.1 ppm Electrical: > ± 0.02 ppm(0 to+10V)																								
Output specification	S: Sine 7dBm ± 1dBm/50Ω																								
Phase noise L (f) BW=1Hz	<table border="1"> <thead> <tr> <th></th> <th>Std B</th> <th>5 MHz</th> <th>Opt.L</th> </tr> </thead> <tbody> <tr> <td>1 Hz</td> <td>-125 dBc</td> <td></td> <td>-130 dBc</td> </tr> <tr> <td>10 Hz</td> <td>-145 dBc</td> <td></td> <td>-145 dBc</td> </tr> <tr> <td>100 Hz</td> <td>-153 dBc</td> <td></td> <td>-153 dBc</td> </tr> <tr> <td>1'000 Hz</td> <td>-156 dBc</td> <td></td> <td>-156 dBc</td> </tr> <tr> <td>10'000 Hz</td> <td>-156 dBc</td> <td></td> <td>-156 dBc</td> </tr> </tbody> </table>		Std B	5 MHz	Opt.L	1 Hz	-125 dBc		-130 dBc	10 Hz	-145 dBc		-145 dBc	100 Hz	-153 dBc		-153 dBc	1'000 Hz	-156 dBc		-156 dBc	10'000 Hz	-156 dBc		-156 dBc
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1'000 Hz	-156 dBc		-156 dBc																						
10'000 Hz	-156 dBc		-156 dBc																						
Power supply																									
Input voltage (DC)	+24V																								
Consumption (Warm-up @+25 °C)	<3W (10W)																								
Size (LxWxH)	138 x 73 x 88 mm 5.43" x 2.87" x 3.46"																								






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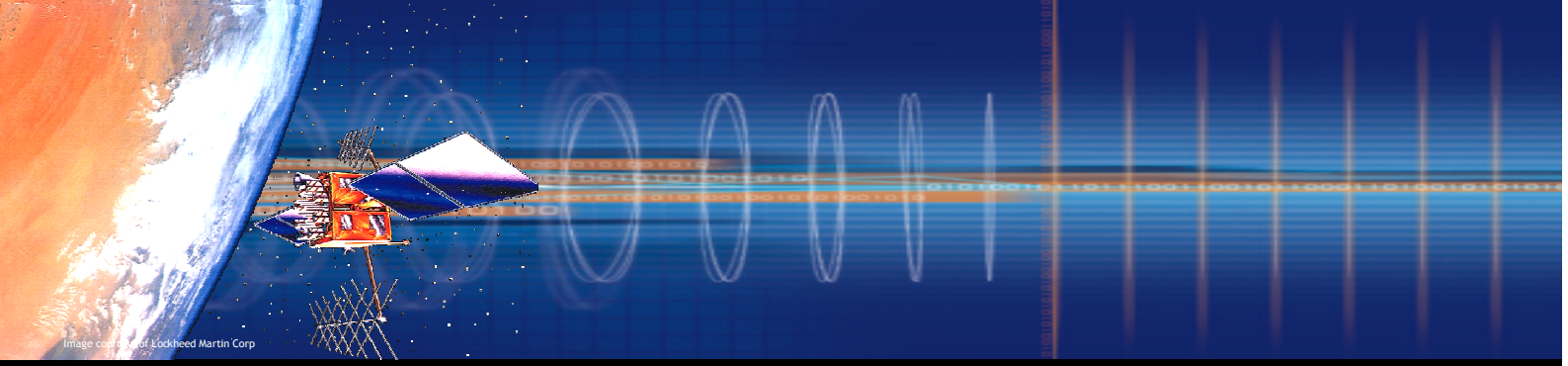
Technical Specifications	Board level higher grade GPS Clock	Compact GPS & GPS-less Synchronisation Receivers and Re-Timers	Compact 19" 1U GPS-based Clock
Model	4500 GPS Core	4530-Low Phase Noise	5208 OEM Series
Performance when locked to GPS-signal <i>At constant temperature :</i>	<ul style="list-style-type: none"> <li>➤ 1 pps accuracy : &lt; 100ns peak-to-peak</li> <li>➤ ADEV : &lt; <math>1 \times 10^{-12}</math> (10'000s)</li> </ul>	<ul style="list-style-type: none"> <li>➤ 1 pps accuracy : &lt; 100ns peak-to-peak</li> <li>➤ ADEV : &lt; <math>1 \times 10^{-12}</math> (10'000s)</li> </ul>	<ul style="list-style-type: none"> <li>➤ 1 pps accuracy : &lt; 100ns peak-to-peak</li> <li>➤ ADEV : &lt; <math>1 \times 10^{-12}</math> (10'000s)</li> </ul>
Outputs	<ul style="list-style-type: none"> <li>➤ 1x 10 MHz, 1Vrms // 50Ω</li> <li>➤ 1x 1 PPS</li> </ul>	<ul style="list-style-type: none"> <li>➤ 1 x 10 MHz, 1Vrms // 50Ω</li> <li>➤ 1 x 1 PPS, 2.5Vpp // 50Ω</li> </ul>	<ul style="list-style-type: none"> <li>➤ 1 to 4 10 MHz sine wave 50Ω</li> <li>➤ 1 to 4 1PPS 50Ω</li> </ul>
OPTION Low Phase noise L (f) BW=1Hz (10MHz output)	Contact Factory	1 Hz : -95 dBc 10 Hz : -125 dBc 100 Hz : -145 dBc 1'000 Hz : -150 dBc 10'000 Hz : -150 dBc	Contact Factory
Management interface	RS-232C	RS-232C	RS-232C
Power Supply (*required external adaptor)	Contact Factory	<ul style="list-style-type: none"> <li>➤ 9-18 VDC</li> <li>➤ 18-60 VDC</li> <li>➤ Optional 96-260 VAC external power supply</li> </ul>	<ul style="list-style-type: none"> <li>➤ 9-10 VDC</li> <li>➤ 20-60 VDC</li> <li>➤ 40-60 VDC</li> </ul>
Hold-Over performances			
Long term stability	$< \pm 1 \times 10^{-10}$ /day $< \pm 2 \times 10^{-8}$ /year	$< \pm 1 \times 10^{-10}$ /day $< \pm 2 \times 10^{-8}$ /year	$< \pm 1 \times 10^{-10}$ /day $< \pm 2 \times 10^{-8}$ /year
Frequency stability	$6 \times 10^{-10}$ pp (0°C to +70°C)	$6 \times 10^{-10}$ pp (-5°C to +55°C)	$6 \times 10^{-10}$ pp (-5°C to +55°C)
Typical applications	Synchronisation of Base Stations (WiMax, 3G, DVB)	<ul style="list-style-type: none"> <li>➤ Lab reference source</li> <li>➤ Satellite ground stations equipment</li> <li>➤ Synchronisation of DAB &amp; DVB equipment</li> <li>➤ Cellular network like: UMTS, GPRS, CDMA, WiMax</li> </ul>	<ul style="list-style-type: none"> <li>➤ Frequency and Phase reference for Base Stations (2G, 3G, WiMax, DVB)</li> </ul>
Size (HxWxD)	123,5x98x27mm 5.66"x2.47"x10.97" Other : Contact Factory	50,8x101,6x127mm 2"x4"x5"	44,5x482,6x220mm (1.75"x19"x8.7")
<b>HIGHLIGHTS :</b>	<ul style="list-style-type: none"> <li>➤ Reliable, low cost and compact GPS receiver for board level integration</li> </ul>	<ul style="list-style-type: none"> <li>➤ Low Phase Noise output signal at 10MHz</li> <li>➤ Economic, reliable and compact.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Economic, reliable and compact 1U GPS Clock</li> <li>➤ Multiple Frequency outputs</li> </ul>

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Technical Specifications	Compact, Cost efficient, high quality GPS-based synchronisation solution for OEM & integrators 	Compact, Cost efficient, high quality GPS-based synchronisation solution for OEM & integrators 	Compact, Cost efficient, high quality solution for OEM & integrators 																																				
Model	5230 GPS Receiver Option: SC-BVA 10MHz	5230 GPS Receiver Option: SC-BVA 5MHz	5020 Freq. Distribution 500 KHz to 50MHz																																				
Performance when locked to GPS-signal <i>At constant temperature</i>	➤ 1 pps accuracy : < 50ns peak-to-peak ➤ ADEV : < $1 \times 10^{-12}$ (10'000s)	➤ 1 pps accuracy : < 100ns peak-to-peak ➤ ADEV : < $1 \times 10^{-12}$ (10'000s)	BNC Input Signal ➤ 1 x 1Vrms // 50Ω																																				
Outputs ( BNC )	➤ 8x10 MHz, 1Vrms // 50Ω ➤ 1x10 MHz, 7dBm ±1// 50Ω Harmonics: -40 dB Spurious : -70 dB	➤ 8x5 MHz, 1Vrms // 50Ω ➤ 1x5 MHz, 7dBm ±1// 50Ω Harmonics: -40 dB Spurious : -70 dB	➤ 12 x 1Vrms // 50Ω ➤ Harmonics: -40 dB ➤ Spurious : -80 dB ➤ Isolation : -90 dB																																				
Phase noise L (f) BW=1Hz ( Low Noise Output )	<table border="0"> <tr> <td></td> <td><b>Std</b></td> <td><b>Opt</b></td> </tr> <tr> <td>1 Hz</td> <td>-118 dBc</td> <td>-122 dBc</td> </tr> <tr> <td>10 Hz</td> <td>-137 dBc</td> <td>-137 dBc</td> </tr> <tr> <td>100 Hz</td> <td>-143 dBc</td> <td>-143 dBc</td> </tr> <tr> <td>1'000 Hz</td> <td>-145 dBc</td> <td>-145 dBc</td> </tr> <tr> <td>10'000 Hz</td> <td>-145 dBc</td> <td>-145 dBc</td> </tr> </table>		<b>Std</b>	<b>Opt</b>	1 Hz	-118 dBc	-122 dBc	10 Hz	-137 dBc	-137 dBc	100 Hz	-143 dBc	-143 dBc	1'000 Hz	-145 dBc	-145 dBc	10'000 Hz	-145 dBc	-145 dBc	<table border="0"> <tr> <td></td> <td><b>Std</b></td> <td><b>Opt</b></td> </tr> <tr> <td>1 Hz</td> <td>-125 dBc</td> <td>-130 dBc</td> </tr> <tr> <td>10 Hz</td> <td>-145 dBc</td> <td>-145 dBc</td> </tr> <tr> <td>100 Hz</td> <td>-153 dBc</td> <td>-153 dBc</td> </tr> <tr> <td>1'000 Hz</td> <td>-156 dBc</td> <td>-156 dBc</td> </tr> <tr> <td>10'000 Hz</td> <td>-156 dBc</td> <td>-156 dBc</td> </tr> </table>		<b>Std</b>	<b>Opt</b>	1 Hz	-125 dBc	-130 dBc	10 Hz	-145 dBc	-145 dBc	100 Hz	-153 dBc	-153 dBc	1'000 Hz	-156 dBc	-156 dBc	10'000 Hz	-156 dBc	-156 dBc	<b>500 KHz to 50 MHz</b> 1 Hz : -120 dBc 10 Hz : -135 dBc 100 Hz : -145 dBc 1'000 Hz : -155 dBc 10'000 Hz : -160 dBc
	<b>Std</b>	<b>Opt</b>																																					
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Management interface	➤ RS-232C connector ➤ 1xRelay contact ➤ TOD (Time-Of-Day) NMEA0183, on RS-232C	➤ RS-232C connector ➤ 1xRelay contact ➤ TOD (Time-Of-Day) NMEA0183, on RS-232C	➤ Monitoring : Alarm contact on Sub-D 9p connector																																				
Power Supply	➤ 18-60 VDC ➤ Consumption: <11W during warm up <7W steady state @ 25°C	➤ 18-60 VDC ➤ Consumption: <11W during warm up <7W steady state @ 25°C	➤ 100 to 240 VAC (46-63Hz) ➤ Consumption: 10W																																				
Hold-Over performances																																							
Long term stability	< $\pm 2 \times 10^{-11}$ /day < $\pm 4 \times 10^{-9}$ /year	< $\pm 2 \times 10^{-11}$ /day < $\pm 4 \times 10^{-9}$ /year	NA																																				
Frequency stability	< $2 \times 10^{-10}$ pp (-5°C to +55°C)	< $2 \times 10^{-10}$ pp (-5°C to +55°C)	NA																																				
Typical applications	➤ Lab reference source ➤ Satellite ground stations Equipment ➤ Any Systems requesting Low Phase Noise ➤ Accurate Time & Frequency ➤ DAB & DVB broad casting systems	➤ Lab reference source ➤ Satellite ground stations Equipment ➤ Any Systems requesting Low Phase Noise ➤ Accurate Time & Frequency ➤ DAB & DVB broad casting systems	➤ Time and frequency distribution unit ➤ Satellite ground stations Equipment ➤ Any Systems requesting Low Phase Noise																																				
Size (HxWxD)	Sub-rack 19", 2U	Sub-rack 19", 2U	Sub-rack 19", 1U																																				
<b>HIGHLIGHTS :</b>	➤ The ideal Short term and Long term Frequency Reference. ➤ High stability in holdover	➤ The ideal Short term and Long term Frequency Reference. ➤ High stability in holdover	➤ The ideal Low Noise distribution unit.																																				

Oscilloquartz SA reserves the right to change all specifications contained herein at any time without prior notice.



# SHORT FORM CATALOGUE

## GPS Receiver / Frequency Distribution

**Reliable and affordable GPS receivers for mobile networks, E911 location services, edge/access/office/CPE synchronisation in NGNs, DVB-T synchronisation.**

### Main applications:

- Mobile network synchronisation, 2G to 3G, WiMax
- Lab reference source
- Satellite ground stations equipment .
- Synchronisation of DAB and DVB equipment
- Any Systems requesting :  
Low Phase Noise, Accurate Time & Frequency
- Any Systems requesting Low Phase Noise
- Edge and access synchronisation in NGNs

### Features:

- OCXO 8663  $<\pm 1e-10$ /day
- OCXO BVA 860x  $<\pm 2e-11$ /day
- 8 x (E1 or 2.048 MHz or 10 MHz or PPS) outputs, selectable by switches.
- RS-232 time output
- Local management
- Several choice of power supply

### Highlights:

- Reliable, low cost and compact GPS receiver.
- Simultaneous tracking of up to 8 satellites.
- Low Phase Noise output signal at 10MHz
- The ideal short term and long term Frequency reference.
- High stability in holdover

### Examples of customisations:

- Very low Phase Jump during channel switch over in redundant configuration
- Additional outputs
- Re-timing channels
- NTP or IRIG-B time-code output

**4500 GPS Core** is a GPS receiver that includes a hold-over function provided by a higher grade double oven Oscillator OSA 8663 OCXO. OSA GPS Core provides 1PPS and 10 MHz output signals which are disciplined to the GPS (or UTC) Time signal.

### 4530 GPS Low Phase Noise

Oscilloquartz has built the engine of its highly successful OSA 5581C GPS-SR into a single casing format complete with an integrated power supply (12v, 24V or 48V), so as to provide a flexible Time and Frequency solution to customers requesting low noise performance.

### 5208 OEM Series

The OSA 5208 GPS Clock provides an accurate frequency derived from the Coarse Acquisition Link 1 signals transmitted by the Navstar Global Positioning System (GPS) satellites.

The GPS input is used as the reference for the tracking function. When locked, the 5208 regenerates the reference and attenuates jitter and wander on this reference.

**5230 BVA GPS receiver** is specifically designed for the synchronisation of 2G, 2.5G and 3G mobile telecommunications networks, NGN access network (LAN, MAN), as well as SDH/SONET and ATM transport networks.

The BVA version (Low Phase Noise) is dedicated to application where Short term stability and Low Phase noise is a must.

**5020 Low Noise Distribution** is specifically designed for applications where the phase noise characteristic is extremely important such as satellite tracking stations or time and frequency laboratories.

[www.oscilloquartz.com](http://www.oscilloquartz.com)

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**The Leading partner for your Synchronisation needs**

