

## Wireless Recording System W4-, W8-, W16-, W32-System

### Technical Specifications



**Warning:** The headstage may only be used together with the receiver and the control interface from Multi Channel Systems MCS GmbH, and only for the specified purpose. Damage of the devices and even fatal injuries can result from improper use. Do not open the receiver or interface box and do not change hardware configuration as it could lead to improper behavior of the system.

<b>General characteristics</b>																																											
Operating temperature		10 °C to 50 °C																																									
Storage temperature		0 °C to 70 °C																																									
Relative humidity		10 % to 85 %, non condensing																																									
<b>Headstage</b>																																											
Dimensions (W x D x H)		4 channels: 13 (+ antennae) x 13 x 5 mm (+ battery) 8 channels: 16 (+ antennae) x 16 x 5 mm (+ battery) 16 channels: 16 (+ antennae) x 16 x 6.5 mm (+ battery) 32 channels: 16 (+ antennae) x 16 x 7.5 mm (+ battery)																																									
Weight		4 channels: approx. 2.2 g (+ battery) 8 channels: approx. 2.9 g (+ battery) 16 channels: approx. 3.6 g (+ battery) 32 channels: approx. 3.7 g (+ battery)																																									
Number of channels		4, 8, 16 or 32																																									
<b>Amplifier</b> integrated in the headstage																																											
Bandwidth		1 Hz to 5 kHz (0.1 Hz on request)																																									
Resolution		16 bit																																									
Sampling rate		<table><tr><th colspan="2" rowspan="2">Sampling rate (kHz/ch)</th><th colspan="5">Number of selected channels</th></tr><tr><th>2</th><th>4</th><th>8</th><th>16</th><th>32</th></tr><tr><th rowspan="4">Type of headstage</th><th>W4-HS</th><td>40</td><td>20</td><td>-</td><td>-</td><td>-</td></tr><tr><th>W8-HS</th><td>40</td><td>40</td><td>20</td><td>-</td><td>-</td></tr><tr><th>W16-HS</th><td>20</td><td>20</td><td>20</td><td>10</td><td>-</td></tr><tr><th>W32-HS</th><td>10</td><td>10</td><td>10</td><td>10</td><td>5</td></tr></table>					Sampling rate (kHz/ch)		Number of selected channels					2	4	8	16	32	Type of headstage	W4-HS	40	20	-	-	-	W8-HS	40	40	20	-	-	W16-HS	20	20	20	10	-	W32-HS	10	10	10	10	5
Sampling rate (kHz/ch)		Number of selected channels																																									
		2	4	8	16	32																																					
Type of headstage	W4-HS	40	20	-	-	-																																					
	W8-HS	40	40	20	-	-																																					
	W16-HS	20	20	20	10	-																																					
	W32-HS	10	10	10	10	5																																					
Input voltage range		+ / - 12.4 mV																																									
Distance for wireless link		5 m guaranteed																																									

<b>Storage battery</b>	
Storage battery	Lithium polymer, rechargeable
Storage battery life (100 mAh) until recharge	4 channels: 3.5 hours (recording @ 20 kHz) 8 channels: 2 hours (recording @ 20 kHz) 16 channels: 2 hours (recording @ 10 kHz) 32 channels: 1.3 hours (recording @ 5 kHz) for all channels: 80 days (in stand-by mode)
Dimensions (W x D x H) of battery	17 x 11 x 3 mm (30 mAh battery) 26 x 19.5 x 2.3 mm (100 mAh battery) 26 x 20 x 4.5 mm (200 mAh battery) 27.5 x 19.5 x 5 mm (300 mAh battery)
Weight of battery	Approx. 1.5 g (30 mAh battery) Approx. 3.1 g (100 mAh battery) Approx. 4.6 g (200 mAh battery) Approx. 6.8 g (300 mAh battery)
<b>Receiver</b>	
Dimensions (W x D x H)	126 mm x 84 mm x 35 mm w/o antennae
Dimension of antenna	110 mm x 10 mm (length x diameter)
Frequency band	2.4 GHz frequency band
Impedance of antenna	50 Ohm antennae
<b>Interface Board</b>	
Dimensions (W x D x H)	115 mm x 84 mm x 35 mm
Interface connection	USB 2.0 High Speed
<b>Recharging Device</b>	
Dimensions (W x D x H)	55 mm x 20 mm x 10 mm
Period of charging	1 to 2 hours
Power	USB powered
<b>Software</b>	
Operating system	Microsoft Windows ® 7, XP or Vista with NTFS, English and German version supported
MC_Rack program Data acquisition and analysis software	Version 4.3.0 and higher
MC_DataTool program Data export software	Version 2.6.2 and higher Axon binary file (*.abf), ASCII file (*.txt), binary file (*.raw)