Boston Scientific

HiResolution® Sound Processing
HiRes®-S

Capture	
Microphone Frequency Range	150 Hz–8000 Hz
Effective Audio Sampling Rate	17.4 kHz
Mapping Input Dynamic Range	20 dB–80 dB programmable (60 dB default)
Pre-Emphasis Filtering	**Platinum Series™ Processor & HiRes® Auria® BTE**: cascade of highpass Butterworth filters **Auria® Harmony™ BTE**: second order BiQuad filter
Automatic Gain Control (AGC) (Enabled, default)	Cambridge dual loop AGC (AGC II)

Compose	
Filter Bands	16 maximum
Spectrum Filtering	Sixth order Butterworth bandpass
Acoustic Equalization (Gain)	+/-10 dB (0 dB default)

Detail	
Envelop Extraction	Bin averaging
Rectification	Half wave

Deliver	
Telemetry	1.0 Mbps bandwidth Continuous bi-directional
Output Circuits (Channels)	16 independent current sources to16 channels
Electrodes	16 maximum programmable
Spectral Bands	16 maximum programmable, logarithmically spaced bands
Spectrum Mapping	Full capture range
Output Current	0 µA–2040 µA (0.25 µA resolution), 0-6000 CU scale
Coupling	Monopolar
Pulse Width	10.7 µs–229 µs, automatically or manually programmable
Firing Order	Apex to base
Simultaneity	Sequential
Rate	2900 pps per channel/46,400 pps maximum programmable (136 pps minimum)

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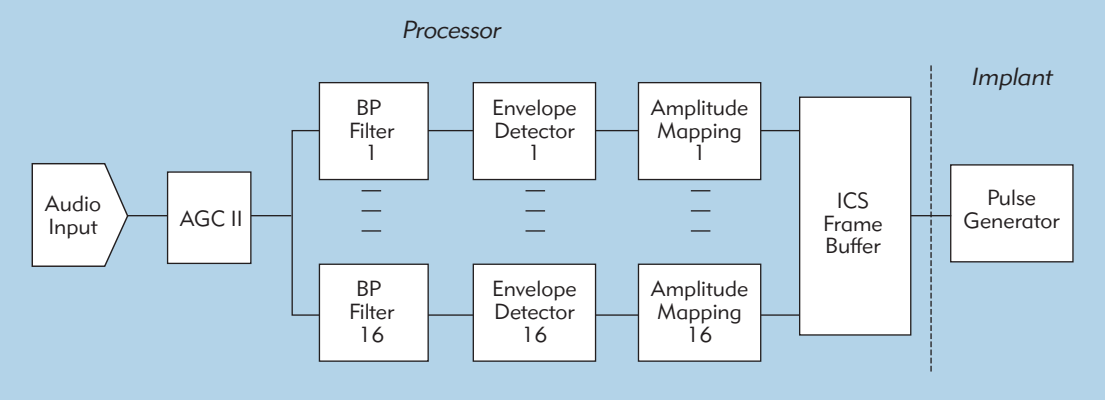

HiRes Signal Processing Path

Boston Scientific

www.BionicEar.com
www.BostonScientific.com

Auditory Business

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