About QSound® Audio Processors

As a global supplier of audio software technology, QSound software is delivered for a wide range of devices and applications including stereos, televisions, speakers, home theater, computers, video games, headphones, Bluetooth headsets and other consumer electronics. QSound's proprietary audio algorithms truly deliver a fuller, more natural and immersive audio experience - users hear the difference!!

QSound's sonic technologies, algorithms and special effects include: 3D (three dimensional) audio, multi-speaker system surround synthesis, virtual surround, and 3D sound stage expansion among others. QSound's family of audio enhancement ICs deliver a variety of analog device solutions for OEMs to incorporate for their device needs. The summary table below and further detail overleaf provide additional information on the analog chips offered by QSound Labs.

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>QX2020</td>
<td>Stereo Enhancement Processor</td>
<td>![Stereo, TV, Speakers, Home Theater, Computers, Video Games]</td>
</tr>
<tr>
<td></td>
<td>Spatial / Widened Stereo Image</td>
<td></td>
</tr>
<tr>
<td>QS7779CM</td>
<td>QSurround Matrix Surround Decoder/Virtualizer</td>
<td>![Car Stereo, Speakers, Home Theater]</td>
</tr>
<tr>
<td>QS7779PM</td>
<td>QSurround Multi-Speaker System</td>
<td>![Car Stereo, TV, Speakers, Home Theater]</td>
</tr>
<tr>
<td>QS7785CF</td>
<td>QSurround 3D Virtual Audio Processor for Multi-Channel Surround</td>
<td>![Car Stereo, TV, Speakers, Home Theater]</td>
</tr>
<tr>
<td>QS7785PF</td>
<td>QSurround 3D Virtual Audio Processor for Multi-Channel Surround</td>
<td>![Car Stereo, TV, Speakers, Home Theater]</td>
</tr>
<tr>
<td>QS7777CF</td>
<td>QSurround Multi-Speaker System</td>
<td>![Car Stereo, TV, Speakers, Home Theater]</td>
</tr>
<tr>
<td>QS7777PF</td>
<td>QSurround 3D Virtual Audio Processor for Multi-Channel Surround</td>
<td>![Car Stereo, TV, Speakers, Home Theater]</td>
</tr>
</tbody>
</table>

Contact Us
QSound Labs, Inc.
400 - 3115 - 12th Street NE
Calgary Alberta Canada T2E 7J2
Tel: +1-403-291-2492  Fax: +1-403-250-1521
Email: info@qsound.com  www.qsound.com
Visit our website for a complete list of regional sales representatives in Europe and Asia
Analog Audio Processors

**QS7777**

**QSurround 3D Virtual Audio Processor for Multi-Channel Surround**

The QS7777 is a 3D audio processor IC using QSound’s patented QSurround® technology for multi-channel surround. This chip processes decoded Dolby Digital (AC-3), Dolby Surround or other multi-channel formats and produces virtualized 3D sound for two speaker systems. In addition, various combinations of virtualization and sound field enhancement are employed to provide 3, 4 and 5 speaker systems with maximum spatial rendering effectiveness.

**Features**

- Enhanced playback with two enhancement levels and improved separation and better surround 3D
- Virtualize surround speakers for flexible speaker systems:
  - Audio signals will be processed to 5, 4, 3 & 2 speaker systems for Dolby Digital (AC-3)
  - Audio signals will be processed to 4, 3 & 2 speaker systems for Dolby Surround (Pro Logic)
- Monaural to stereo conversion for Pro Logic surround signal
- Satisfies certification requirements of Dolby Laboratories Licensing Corporation
- Parallel and serial digital interface for mode control:
  - QS7777CF for I2C 2-pin serial control interface
  - QS7777PF for 3-pin serial control interface (Data, Clock)
- DC 5 to 13 volt supply & 48-pin QFP packaging

**QS7785**

**QSurround Multi-Speaker System**

The QS7785 is a 3D audio processor that creates 5 speaker surround sound from 2 channel stereo source using QSound’s proprietary QSurround® technology. This chip synthesizes and outputs surround sounds from 2 channel stereo signal for surround speakers as well as an enhanced stereo sound for front speakers.

**Features**

- 3D synthesized surround sound for left & right surround speakers
- 3D stereo sound enhancement for left & right front speakers
- Center speaker output
- Parallel and serial digital interface for mode control:
  - QS7785CF for I2C 2-pin serial control interface
  - QS7785PF for 3-pin serial control interface (Data, Clock and Strobe)
- DC 5 to 13 volt supply & 48-pin QFP packaging