**Features**

- Comprehensive audio development suite based on proprietary technology from STMicroelectronics
- Integrated Launch-Wizard with sub-family and product selector
- Intuitive and user-friendly multi-tab interface with grouped device controls
- Virtual scopes and FFT analyzer for real-time visualization of acquired signals (MEMS microphone kit required)
- Specialized graphical controls to intuitively configure complex audio IPs:
  - Crossover filtering computation
  - Multi-band DRC / Limiters
  - Automated speaker compensation
- Full access to the I²C register map of the selected product
- Point-and-click programmable equalizer offering various types of filters:
  - Peak, low/high-pass, low/high-shelf, notch, all-pass, band-pass
- Convenient preset memories to quickly store/recall user configurations
- Logger window exposing all I/O transactions (I²C operations) and RAM operations, for both registers and coefficients
- Scripting language to instruct configuration commands from either the integrated console or archived text files
- Seamless connection with the device under test (DUT) via proprietary USB interfaces:
  - APWLink (STEVAL-CCA035V1)
  - STAudioHub (STEVAL-MKI138V1)

**Applications**

- TVs
- Home entertainment systems
- Docking stations
- Smartphones
- Tablets
- Portable devices
- Audio accessories

**Description**

The APWorkbench software suite provides a comprehensive environment for the customer to explore, evaluate and configure devices within ST’s product portfolio for audio applications, including stereo and multi-channel amplifiers, DSP and digital MEMS microphones. The tool represents a unique solution enabling the user to conveniently evaluate, configure and tune advanced audio IPs embedded in ST’s Sound Terminal® products. Custom controls and a user-friendly graphical interface expose the complexity of today’s audio devices in a simple and intuitive manner, guiding the novice through the basic configuration steps and providing acoustic expertise to tune the devices for optimal performance.
The Sound Terminal® demonstration boards can be thoroughly controlled by APWorkbench through a USB-connected interface (APWLink, STEVAL-CCA035V1).

Digital MEMS microphones can be evaluated using a specific demonstration kit, based on the STA321MP microphone processor (STSmartVoice demonstration board, STEVAL-MKI126V1 or STEVAL-MKI126V3), and connected to the PC via a USB interface (STAudioHub interface, STEVAL-MKI138V1). The STSmartVoice kit is digitally controlled by APWorkbench and the sound recorded from the microphones can be analyzed and visually represented by means of real-time virtual instrumentation (oscilloscopes, spectrum analyzers, etc.). Up to six digitally connected microphones can be processed. This comprehensive microphone kit, enhanced by the APWorkbench suite, represents a unique solution on the market and enables a digital MEMS microphone offering for the mass market.

<table>
<thead>
<tr>
<th>Product portfolio</th>
<th>Demonstration board</th>
<th>USB interface board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound Terminal® amplifiers</td>
<td>Product demonstration boards: Refer to <a href="http://www.st.com/soundterminal">www.st.com/soundterminal</a> for more information</td>
<td>APWLink interface: STEVAL-CCA035V1</td>
</tr>
<tr>
<td>Digital MEMS microphones</td>
<td>STSmartVoice boards: STEVAL-MKI126V1 (based on the MP45DT02) STEVAL-MKI126V3 (based on the MP34DT01) Optional MEMS microphone coupon boards: STEVAL-MKI129V1 (based on the MP45DT02) STEVAL-MKI129V2 (based on the MP34DB01) STEVAL-MKI129V3 (based on the MP34DT01)</td>
<td>STAudioHub interface: STEVAL-MKI138V1</td>
</tr>
</tbody>
</table>

Note: Demonstration kits are also available through electronic components distributors.
1 Revision history

Table 2. Document revision history

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-Jun-2013</td>
<td>1</td>
<td>Initial release.</td>
</tr>
<tr>
<td>27-Aug-2013</td>
<td>2</td>
<td>Modified note on page 2.</td>
</tr>
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</table>
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