**HD AEC STM32F746xx ARM® 32-bit Cortex®-M7**

**High Definition Acoustic Echo Canceller**

HD AEC product provides superior voice clarity and true full duplex performance under a wide set of challenging acoustic environments. It is capable of eliminating the acoustic echo in difficult conditions such as unbalanced speech levels, close speaker to mic proximity, indoor/outdoor environments, background noise, reflective room surface, double talk, and echo path changes.

Programmable sampling rate, supporting narrowband (8 kHz), wideband (16 kHz), super-wideband (32 kHz), and full-band (44.1, 48 kHz).

**FEATURES:**

- Handles echo tails up to 400 msec. and greater
- Automatically adjusts for unknown bulk delay
- Integrated Automatic Gain Control
- Adaptive nonlinear processor
- Integrated Next Gen Noise reduction
- Integrated Transmit Equalization
- Anti Howling

**ADT HD AEC DEMONSTRATION SOFTWARE**

runs on ST Micro STM32F7 Discovery kit for STM32F746 MCU

**ADT HD AEC - CORTEX- M7**

**CPU UTILIZATION & MEMORY REQUIREMENTS**

<table>
<thead>
<tr>
<th>Function</th>
<th>MIPS Average</th>
<th>MIPS Max</th>
<th>Program Memory</th>
<th>Data Memory</th>
<th>Scratch Memory</th>
<th>Per Channel Data Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encode</td>
<td>33.4</td>
<td>36.8</td>
<td>--</td>
<td>--</td>
<td>4960</td>
<td>1960</td>
</tr>
<tr>
<td>Decode</td>
<td>6.9</td>
<td>7.5</td>
<td>--</td>
<td>--</td>
<td>1024</td>
<td>1400</td>
</tr>
<tr>
<td>Encode/Decode</td>
<td>40.3</td>
<td>44.3</td>
<td>49 kbytes</td>
<td>6100</td>
<td>5984</td>
<td>3360</td>
</tr>
</tbody>
</table>

All Memory usage is given in units of kbyte.