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| |  | | --- | |  | | **Release Notes for PDM audio software decoding Library** Copyright 2013 STMicroelectronics |      |  | | --- | | The ***PDM audio software decoding Library*** is an optimized software implementation for PDM signal decoding and audio signal reconstruction when connecting an ***ST MEMS microphone*** (MP45Dxxx, MP34Dxxx) with an ***STM32 microcontroller***. It can directly take the Pulse Density Modulated (PDM) data output from the microphone and convert it to 16-bit pulse-code modulation (PCM) format.  This Library includes one header file *pdm\_filter.h* and binary/object codes running on all STM32 devices based on CortexM0, CortexM3 or CortexM4F cores. The naming format is **libPDMFilter\_*CMx*\_*C*.a/.lib**, where:   * x: CortexMx core class (CM0, CM3, CM4 and CM4F) * C: compiler (IAR, Keil and GCC)   For more information about this Library, please refer to the document ***"AN3998 PDM audio software decoding on STM32 microcontrollers"*** available for download from STMicroelectronics website at [www.st.com](http://www.st.com/internet/mcu/family/141.jsp). ***Update History*****V2.0.1 / 17-December-2013** **Main Changes**   * In *HTONS()* macro, change *u16* type by *uint16\_t*  **V2.0.0 / 07-August-2013** **Main Changes**   * Update Library binary name format * Add Library version optimized for CM0, CM3 and CM4F cores * Add functions for decimation factor 128  **V1.1.2 / 17-April-2012** **Main Changes**   * All source files: license disclaimer text update and add link to the License file on ST Internet.  **V1.1.1 / 30-December-2011** **Main Changes**   * PDM Library moved from *Utilities\STM32F4-Discovery* to *Utilities\STM32\_Audio\Addons\PDM* folder * Add new license agreement *"MCD-ST Image SW License Agreement V2.pdf"*  **V1.1.0 / 28-October-2011** **Main Changes**   * Add ***PDM audio software decoding Library*** drivers, used to decode and reconstruct the audio signal produced by MP45DT02 MEMS microphone from STMicroelectronics. For more details about this Library, please refer to document ***"PDM audio software decoding on STM32 microcontrollers (AN3998)".*** * stm32f4\_discovery\_audio\_codec.c/.h: update to use DMA instead of Interrupt in I2S communication with the external codec.  **V1.0.0 / 19-September-2011** **Main Changes**   * First official version of the ***STM32F4-Discovery Board Drivers***  ***License*** Licensed under MCD-ST Image SW License Agreement V2, (the "License"); You may not use this package except in compliance with the License. You may obtain a copy of the License at:  <http://www.st.com/software_license_agreement_image_v2>  Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS,  WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.  For complete documentation on STM32 Microcontrollers visit [www.st.com/STM32](http://www.st.com/internet/mcu/family/141.jsp) | |