Decoder: MPEG-1 and MPEG-2

With the knowledge of algorithms and many years of experience in firmware development, SEDA Solutions® has unique insight into many multimedia digital algorithm applications and their transformations onto floating and fixed-point processor platforms. Among many audio coding implementations, such as WMA and AAC codecs, SEDA Solutions® has achieved considerable success with its MPEG-1 and MPEG-2 decoder (commonly known as MP3) fixed-point implementation.

SEDA Solutions® has implemented the MPEG-1 Layers I, II and III plus MPEG-2 Lower Sampling Frequency (LSF) extension as well as the Multi Channel extension audio decoding standards onto several 16 bit, 24 bit and 32 bit fixed data path processors. The implementations have focused on maintaining high quality and lowering computational complexity while keeping the data precision to a minimum of required fixed-point bits.

■ **Features**

SEDA Solutions'® MP3 Decoding implementation services will support all or a selection of the following options:

- MPEG-1
- MPEG2 (LSFE) or (MCE)
- Layers: I, II and III
- MPEG-1 Sampling Rates: 32kHz, 44.1kHz, 48kHz
- MPEG-1 Bit Rates: 32, 40, 48, 56, 64, 80, 96, 112, 128, 160, 192, 224, 256, 288, 320, 352, 384, 416, 448 kbit/s
- MPEG-2 Sampling Rates: 16kHz, 22.05 kHz, 24 kHz
- MPEG-2 Bit Rates: 8, 16, 24, 32, 40, 48, 56, 64, 80, 96, 112, 128, 144, 160, 176, 192, 224, 256 kbit/s
- Modes: Mono, Dual Channel, Stereo, Joint Stereo
- Variable and constant bit rates
- CRC check
- De-emphasis filtering
- Fast forward and reverse speed play

■ **Quality**

Years of firmware services and multiple porting opportunities make SEDA Solutions® one of the leaders in providing high quality MP3 decoder functionality on your system. Our rigorously tested implementations have been shipped out on several audio consumer products. No matter what the final target platform, SEDA Solutions'® MP3 firmware services deliver not only high quality decoding but also efficient implementation resulting in optimum usage of memory and clock cycles. Savings in resource utilization ultimately reduce cost and power consumption.

Our fixed-point implementations have met all the ISO standard test vectors. Depending on the choice of precision and resource availability, the decoder can be implemented to be either in partial or full compliance with respect to the stand-ards requirements. As well as precision quality and optimum resource utilizations, SEDA Solutions® offers post-filtering options to enhance the quality of perceived signal. Other service options provided are technical system assistance and assurance in safeguarding against lost bit stream data in over usage of system resources.

For more information on Audio related products and services please visit our web site at **www.sedasolutions.com** or contact us by email at **info@sedasolutions.com**.

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