BPM100 SD
Multi-Format Distribution Encoder

Benefits

- **High Video Quality**

Based on two decades of award winning video compression design, the BPM100 encoder delivers Broadcast quality MPEG-2 and H.264 SD video encoding.

- **System Level Features**

Supporting all the common professional audio and VBI/VANC formats as well as multiplexing tables, the BPM100 simplifies encoder design, reducing development and QA effort whilst giving a rapid time to market.

- **Rapid Time to Market**

The BPM100's unique modular design approach enables system vendors and integrators to accelerate encoder designs, whilst achieving a fast time to market.

- **Multiple Applications**

By utilizing the BPM100's flexible architecture, encoder manufacturers can target multiple markets such as Cable, Satellite, Telco, ISDB-T and Terrestrial broadcast with a single design solution.
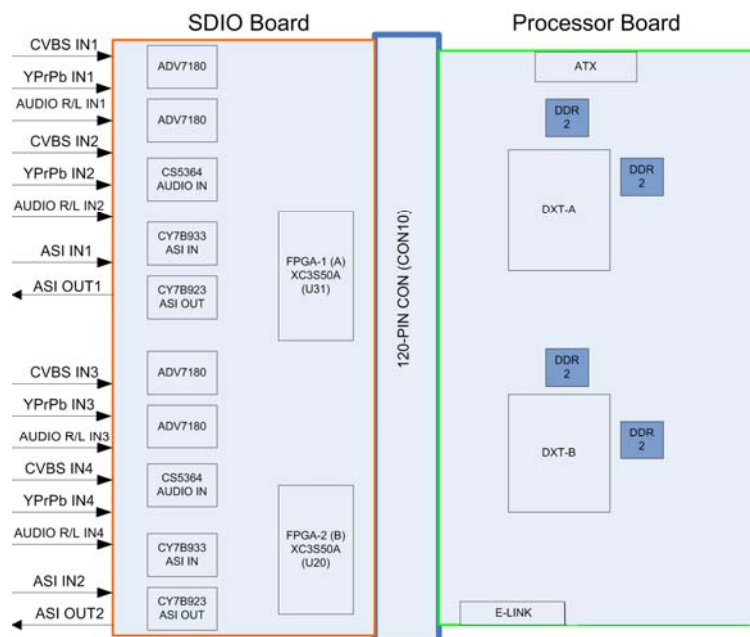
Features

- **Broadcast quality real time SD MPEG-2, H.264 video encoding**
- **Up to 4 channels of encoding per board**
- **Simultaneous SD and 1 Seg mobile resolution support**
- **CBR, capped VBR support**
- **Integrated on board audio encoding**
- **Onboard VBI/VANC data support**
- **PSIP remultiplexing**
- **ASI output**
- **Flexible input options**
- **Modular design**
- **Complete SDK for rapid integration**

Overview

The BPM100 is a family of industry proven multi-standard, multi-resolution encoding modules that deliver unrivalled market leading flexibility. The BPM100's modular design enables encoder developments to be accelerated, producing a fast time to market for SD and low resolution (1SEG) systems. The BPM100 comes complete with advanced system level features such as, integrated on board audio encoding, VBI and PSIP multiplexing.

The design of the BPM100 consists of two industry proven DXT processors mounted on a main processor board, coupled with a flexible interface board. This provides OEMs with the ultimate in design flexibility. System Integrators can use the main processor board as is, or customize the I/O board to fit their specific requirements. Alternatively integrators can modify both the processor and I/O board to meet a specific form factor. Finally system vendors can use boards off-the-shelf to get to market even quicker

The BPM100 includes a rich professional API and source code libraries that support application software development, for silicon only based encoding products. Hardware design is supported through a complete set of schematics, bill of materials and manufacturing files for the processor and I/O board.
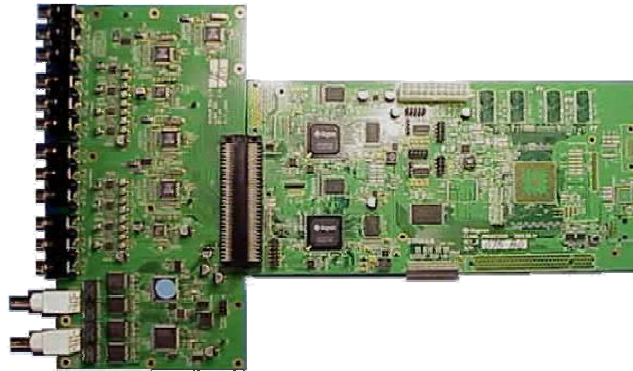
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FEATURE SUMMARY

VIDEO	
Encoding Profiles	MPEG-2 SD: MP@ML, up to 12Mbps
	H.264 SD: HP@L3.1, up to 12Mbps
	H.264 1Seg: Constrained BP@L2.1 up to 4Mbps
Formats	NTSC: 720x480i
	PAL: 720x576i
Low resolution(PiP)	416x240,352x288/240,191x192,128x128,96x96p
Scaling	HD to SD, HD to 1Seg, SD to 1Seg
Channels	4
Bit Rate Control	CBR or Capped VBR
Bit Rate	100Kb -15Mb

AUDIO	
Audio Encoding	2 Ch Dolby Digital AC3 2.0 (per encode)
	4 Ch HE-AAC v1,v2 (per encode)
	4 Ch AAC-LC (per encode)
	4 Ch MPEG-1 Layer II (per encode)
	5.1 channel audio pass-thru (per encode)

VIDEO INPUTS	
3G, HD, SD-SDI	1x BNC (with embedded audio support)

VIDEO INPUTS	
Component	4x YPbPr, RCA (option)
Composite	4x CVBS, RCA (option)

AUDIO INPUTS	
Analog Right	4x, RCA (option)
Analog Left	4x, RCA (option)

TRANSPORT STREAM I/O	
Input	2x DVB-ASI (BNC)
Output	2x DVB-ASI (BNC)

OPERATING CONDITIONS	
Ambient Temperature	0-50° C
Relative Humidity	85% (non condensing)

STORAGE	
Ambient Temperature	-20-80° C
Relative Humidity	85% (non condensing)

DIMENSIONS	
SD Processor Board	230mmx130mm
SD I/O Board	240mmx120mm

MANAGEMENT & CONTROL	
Control	UART

PRODUCT PART NUMBERS

Part Number	Description
MS-BPM100 SDKT	BPM100 SD Evaluation Kit
MS-MD8243ML	BPM100 SD premium license manufacturable reference design kit – I/O board, processor board changes allowed
MS-MD8243ML-S	BPM100 SD standard license manufacturable reference design kit – I/O board schematic changes &, processor board layout changes allowed
MS-MD8243ML-E	BPM100 SD entry license manufacturable reference design kit – I/O board changes allowed
MS-MD8243LSCD-M	BPM100 SD off-the-shelf board integration kit
MS-MD8243PBD	BPM100 SD processor board
MS-MD8243SDIO	BPM100 SD IO board

BPM100 SD Processor board and I/O

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