

ส.น.

SingMai Electronics Co. Ltd

Company Introduction

January 2011



Daniel Ogilvie is company director and hardware architect. Daniel has worked for both large and small companies as well as owning and running his own U.K. based company for eleven years. He has worked for companies in such diverse fields as university physics research support, high-end broadcast video, DVD recorder front end semiconductors, video decoder IC design and high volume consumer electronics in countries as diverse as Canada, USA, UK, Thailand and Singapore. Products that Daniel has been involved in include forensic glass refractive index measurement equipment, (occasionally featured on the US TV program CSI), very low-light photon counting video processors, broadcast quality FPGA based video decoders, very high resolution real-time video processors, IC design of video input processors and very low noise amplifiers. Daniel is a senior member of the IEEE and also has a Masters degree in Art History.

Established in September 2007.

SingMai (สิ่งใหม่) means 'new idea' in Thai.

6 fulltime employees and 1 consultant.

Registered office and R&D in Thailand. Sales office in Singapore.

Manufacturing sub-contracted to Glendale Electronics in Singapore.

Working relationships with Osprey Electronics, Tangram Technologies and Design Gateway.

Design and manufacture of IP cores and standalone products for the audio, video, imaging and multimedia markets.



William Wendin is our software consultant. William has extensive experience of real time embedded solutions for networking, telecommunications and audio and visual applications. William's projects have involved standard and high definition MPEG decoders and encoders, AV decoders, digital television, cable modems, set-top boxes and an intelligent GPS tracking system for Steve Wozniak's start-up, Wheels of Zeus. William has expertise in C, C++, TCL/TK, SPARC, MIPS, PowerPC, Motorola, Unix, VXWorks as well as experience of GPS, QAM, QPSK and MPEG2.



Phuttachad Thiencharoenwong is our managing director. She has been involved in the management and sales of a number of companies across the Far East and has run companies in industries as diverse as silver jewelry manufacture, civil engineering, electronic component distribution and catering. A number of these successful companies she started from the ground up. Phuttachad is fluent in English, Thai and Mandarin languages as well as having some knowledge of Japanese and Laos.

Device Independent IP cores.

Available as Xilinx FPGA netlist, Altera encrypted netlist or source code Verilog (RTL compliant).

3 year update/bug fix guarantee.

6 month e-mail/telephone design in support.

Member of the SignOnce Alliance.



Intellectual Property Cores

PT8/9 NTSC/PAL video encoders.

PT4 NTSC/PAL video decoder with 2D/3D comb filter.

PT2 Video character generator.

PT6 Video pattern generator.

PT10 Histogram equaliser.

PT11 Median filter.

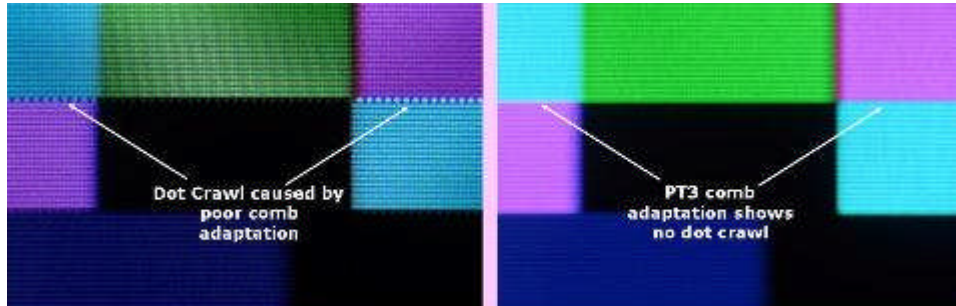
PT12 3D motion adaptive noise reducer.

PT13 Very compact microprocessor.

PT14 QVGA LCD display controller.

PT15 Colour space converter

PT29 PDC decoder



PT4: Video Decoder

Support for PAL/NTSC/PAL-M/PAL-N decoding.

Seamless interface to AD9981 with support for other AFEs.

2D and 3D comb support.

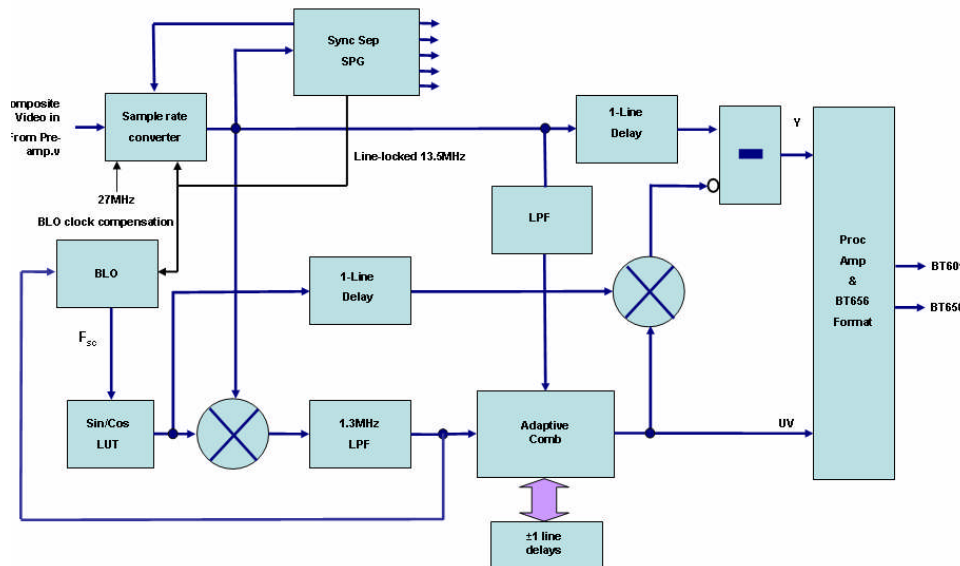
Simultaneous notch/line/field/frame comb switched on a pixel basis.

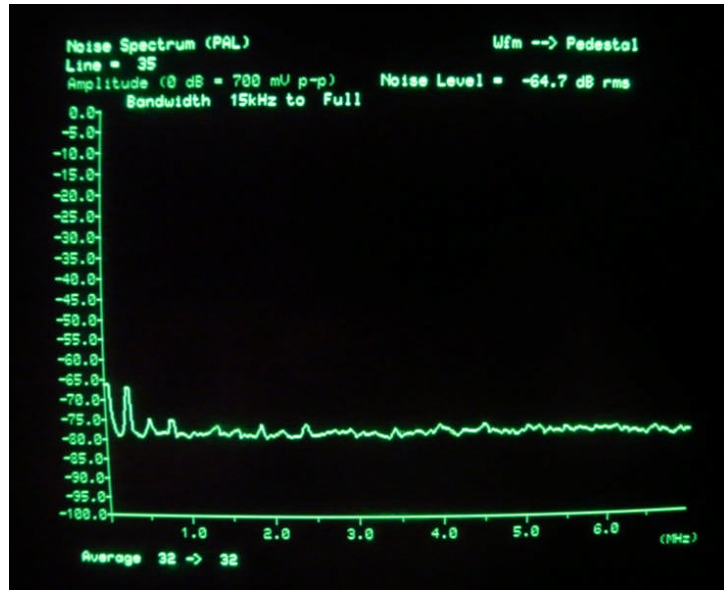
Proprietary VCR mode for extended bandwidth from any tape source.

Sensitive comb adaptation for few artifacts.

10/12 bit data paths.

<http://www.singmai.com/PT4.htm>





PT8/9: Video Encoder

Support for PAL/NTSC/PAL-M/PAL-N encoding.

Fully programmable for non-standard inputs/outputs.

BT656 input and 10 bit, 27MHz output composite video (PT8/9) and YPbPr outputs (PT9).

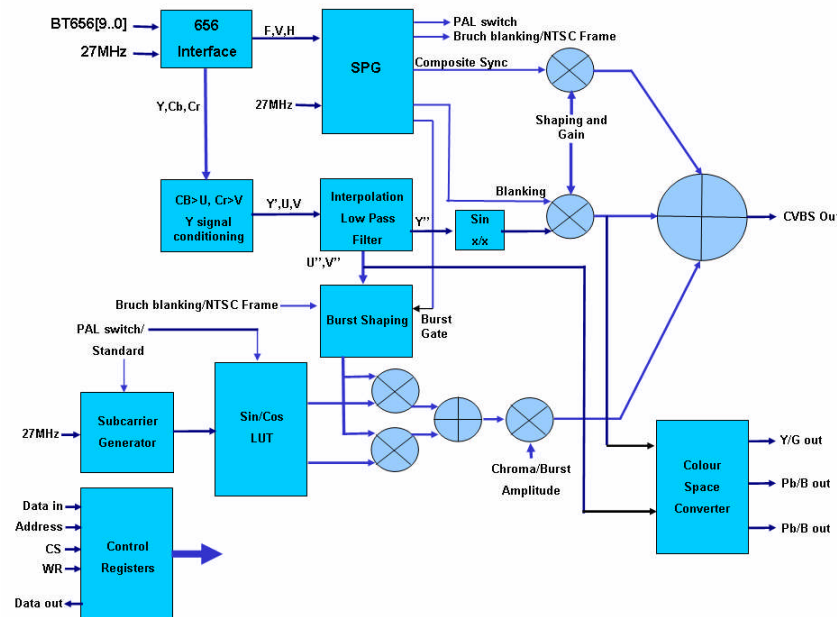
Very high quality outputs.

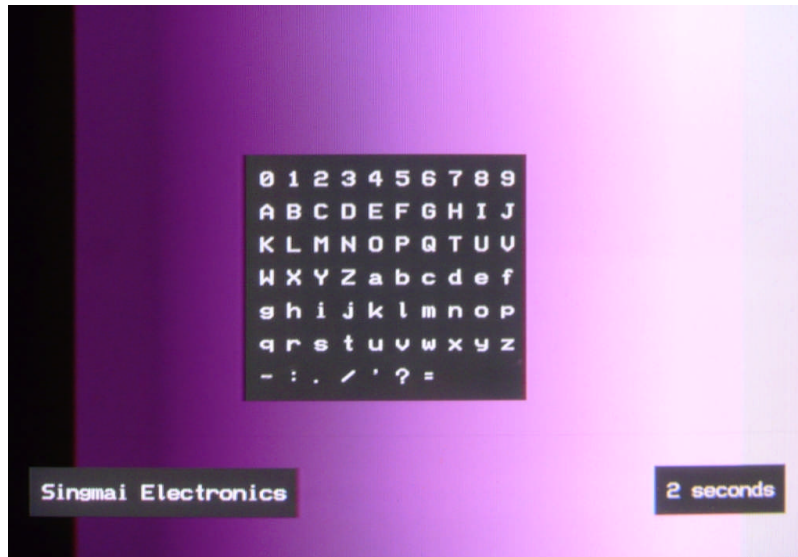
12 bit chroma modulator.

<1% DG and <1deg DP, <1% K-factor and <-65dB SNR

Small footprint.

<http://www.singmai.com/PT8.htm>





PT2 Video Character Generator

60x32 (30 for 525 line) character display.

12x16 pixel characters.

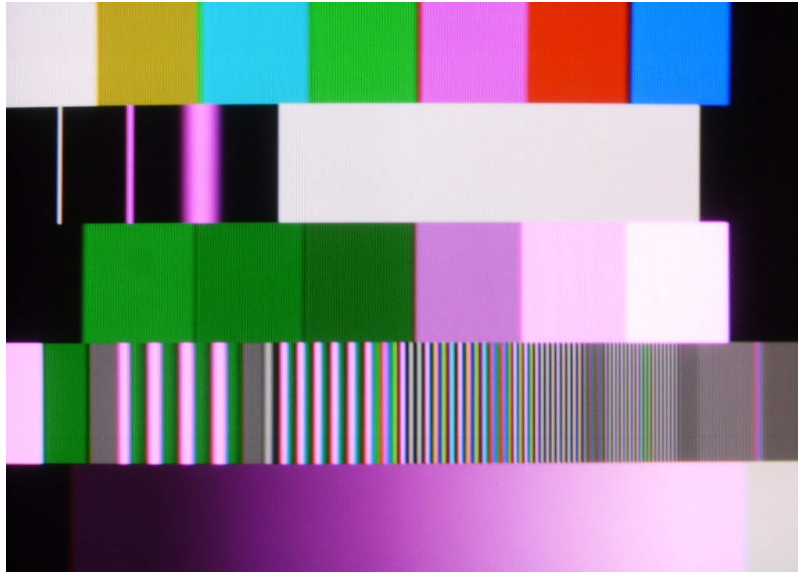
70 pre-programmed characters.

128 available characters, user programmable.

Background and luminance level programmable.

BT656 inputs and outputs.

<http://www.singmai.com/PT2.htm>



PT6 Video pattern generator

16 available patterns for both 625 and 525 line.

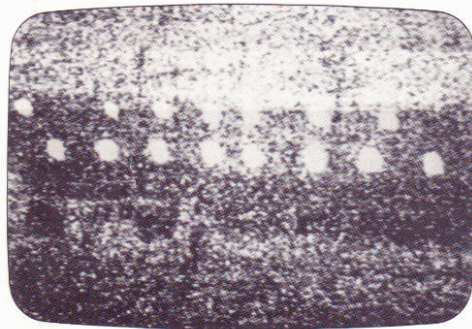
BT656 output.

User selects which patterns he requires to reduce footprint.

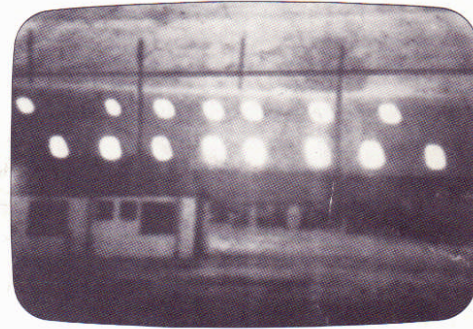
Line based switching of patterns for SMPTE or Bowtie patterns.

Field based switching for field bounce tests.

<http://www.singmai.com/PT6.htm>



BEFORE



AFTER

PT12 3D Video Noise reducer

BT656 input and output.

Motion adaptive recursive noise reducer.

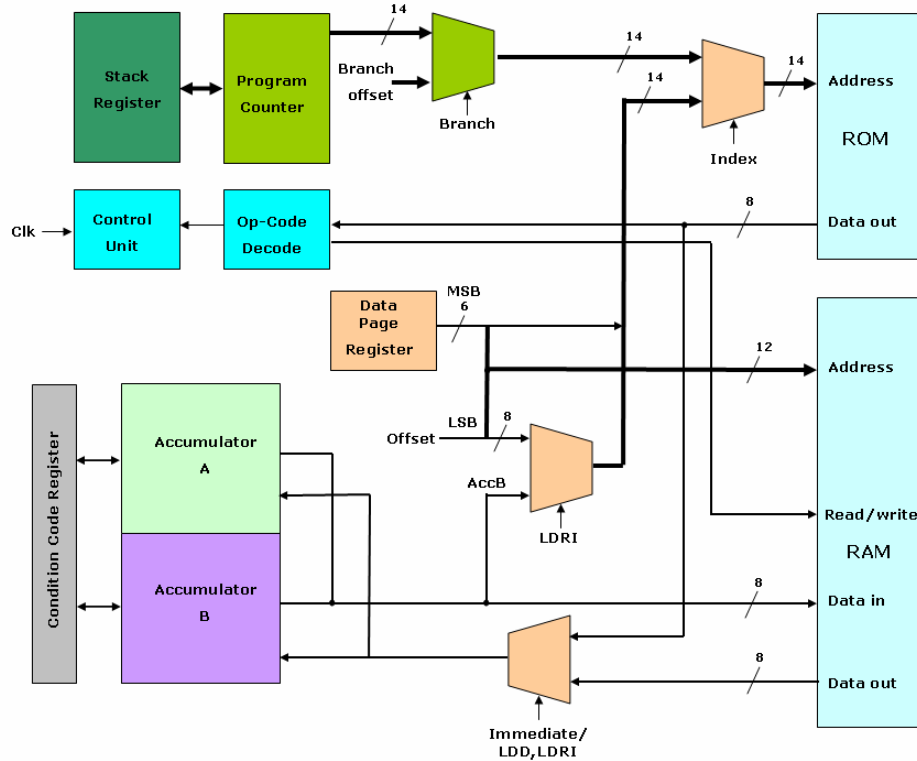
Requires a single frame of memory.

10 bit processing.

Separate chroma and luma processing.

Auto mode using measured noise figure.

Skin tone compensation.



PT13: Microprocessor

Extremely small footprint (397 logic elements).

Can use internal FPGA ROM and RAM.

Small enough to be used in CPLDs or for multiple instantiations.

Memory mapped I/O.

Over 45 instructions.

Available with editor and assembler.

Ideal for embedded applications.

Innovative and cost effective.

Assembled by ISO9001 registered Glendale Electronic Components in Singapore.

48 hour, full load soak test for every product.

3 year guarantee.

Available through on-line shop.

Standalone Products

SM01 Video pattern generator and encoder.

SM02 Audio Test generator.

SM03 Composite video processor.

SM04 Digital phono pre-amplifier and processor.



SM01 Video pattern generator and video encoder.

Generates 16 programmable patterns for both 525 line and 625 line standards.

Line and field based switching of patterns.

SDI, CVBS (PAL, PAL-M/N and NTSC-M/J), and YPbPr outputs.

Noise generator.

Caption generator.

SDI input to SDI/CVBS and YPbPr output.

SDI input can have noise or captions inserted on output.

ส.น.

SingMai Electronics Co. Ltd

<http://www.singmai.com/>