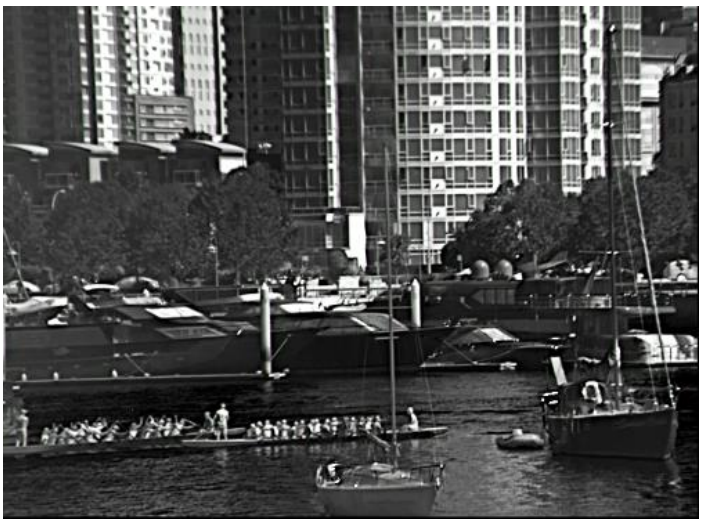
TVPE-15: Thermal Video Processing Engine

Advanced Video Processing Engine for Cooled Thermal Imaging Systems.

Introducing a high-performance video processing engine for cooled thermal systems. This engine provides the most advanced image enhancement and processing with unmatched performance. Ideal for security and surveillance systems, this configurable and flexible engine will easily provide superior imaging and performance to even the most demanding thermal imaging applications.

PROCESSING FEATURES:



- 2-Pt NUC (64 Tables)
- BPR (bad pixel detection and replacement)
- Contrast Limited Histogram Equalization
- Local DRC Contrast Enhancement
- Sharpening and 5x5 Convolution Kernels
- Noise Reduction
- Adaptive Temporal Filter
- Auto NUC table and integration time selection
- Image Statistics
- Autofocus
- Proprietary Detail Enhancement and Noise Reduction Algorithm.

MANIPULATION FEATURES:

- Color Palettes
- Gamma Adjustment (Power-Law)
- Manual/Auto Gain and Level Control
- Polarity (White-Hot/Black-Hot)
- Digital Zoom
- Freeze
- Reticle/Cross-Hair and User Image Overlay
- Image File Capture and Display
- User Splash Screen

RP OPTICAL LAB

RP Optical Lab 5 Shimshon St, Petach Tikva 49517, ISRAEL
Tel. +972-3-5057436 | Fax. +972-3-9199878 | Email: info@rp-optical-lab.com

Supported Detectors	
Type	Cooled Digital Detectors
Image Size	VGA (640 x 512 pixels) XGA (1,024 x 768 pixels), SXGA (HD ready – 1,280 x 1,024 pixels)
Interface	Camera Link and similar LVDS interfaces.
PCB Specification	
Processor	1.2 GHz DSP + FPGA
Memory	256 MB RAM, 256 MB NAND (Flash storage)
Communication	Gigabit Ethernet (TCP/IP), 4x RS232/422
Power Input	+12V DC
Power Consumption	~ 4 Watts
PCB Size	112mmx70mm
Video Input/Output	
Frame Rate	True 60 Hz Processing and Output for SXGA (1,280 x 1,024) Resolution. True 180Hz for VGA (640x512) Resolution.
Detector Image Sizes	Up to 1280x1024
Output Formats	NTSC/PAL 525i/525p, 625i/625p 720p, 1080i/1080p
Analog Output	YPbPr Component and Composite
Digital Output	Camera Link
Sync	Internal or External Sync
Latency	32 ms in 60 Hz full processing mode, or 5 lines in low-latency mode.
System and Peripheral Controls	
System Control	RS232, RS422, Ethernet TCP/IP, Camera Link UART
Lens Control	Autofocus Zoom and Focus via RS422/232 Protocols Auto NUC Table Selection using Zoom Position Focus Maintaining during Zoom
Sync	External or Internal Video Sync
Ordering information	
P/N	Detector supported
TVPE-15/V	Supports VGA (640 x 512) detectors
TVPE-15/X	Supports up to SXGA (1,280 x 1,024) detectors

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