

Preliminary

Blue Impala

VIDEO PROCESSING PLATFORM



ELECTRONIC GROUP, INC
480-635-8400 p * aegis-g2@aegiselect.com
<http://www.aegis-elec.com>



Blue Impala video processing board is being created by the convergence between IT and video imaging.

This embedded vision platform has been specifically designed for video applications. It features a LVDS industrial camera block input and can be delivered with HDMI and HD-SDI inputs options.

FEATURES

- i.MX 6 Dual Core ARM Cortex™-A9
- FPGA real time pre-processing
- Embedded Linux
- Open source software
- Image processing library
- Low latency h.264 encoding / decoding
- Supports LVDS camera inputs
- Ethernet, USB, HDMI output
- ONVIF protocol
- GPIO's, UART, SPI, I²C
- Local recording on SD-Card

Main functionalities

Blue Impala video processing board offers a low latency HDMI output for video display, h.264 encoding and decoding, 10/100 Mbit/s Ethernet for video stream, bi-directional communication, USB.2 port for Wi-Fi connection or external storage, local recording MicroSD Card.

Open & scalable platform

Used in conjunction with an iMX6 ARM Cortex™-A9 processor, this smart solution is based on an embedded Linux Operating system fully customizable as it integrates Qt, Gstreamer, OpenCV libraries... It enables you to implement your own software application, image processing and GUI.

Flexible & cost effective solution

Blue Impala is a ready to use embedded vision system that can be easily tuned to your needs, as IOs can be selected based on the end-application requirements.

This smart platform offers flexibility for customers by using a solution which comes with production-ready software to quick start the development of various applications.

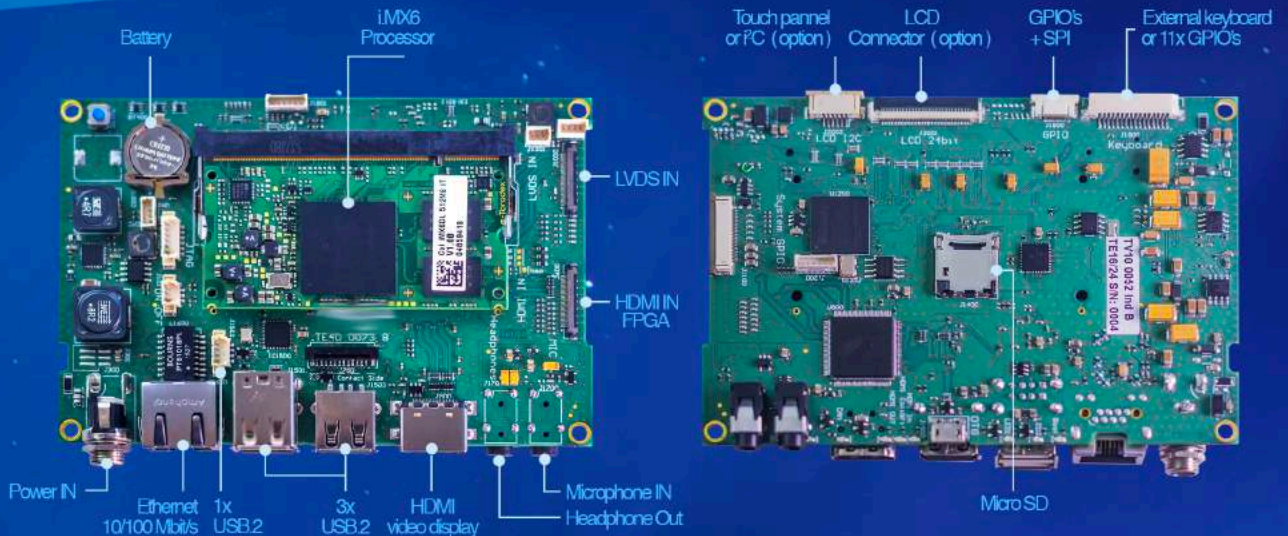
This approach greatly reduces the time-to-market and the development costs.

TARGET APPLICATIONS



Medical / Defence / Transport & surveillance / Automatic Number Plate recognition / UAV's
ROV's / Inspection / Low vision / Video conferencing / Industrial automation / Robotics

Onboard Connectors



TWIGA - Blue Impala video encoding board

Product code	H.264-BL
Multimedia	
Video encoding / decoding	h.264 Constrained Baseline, Baseline Profile, Main, High Profile – Up to 1080p30 (14Mbps)
Streaming	RTSP stream (128 to 20000 kbit/s)
Video Input	
LVDS	x1
HDMI / HD-SDI (option)	x1 HDMI – x1 HD-SDI via expansion board
Display support	
HDMI / HD-SDI (option)	HDMI x1- 1.4a (266Mpixel/s) / HD-SDI Loop via expansion board
Parallel RGB LCD interface	Up to WUXGA (1920x1200) resolution + Touchscreen ADC + Backlight up to 50V (option)
Networking	
Ethernet	10/100 Mbit/s (RJ45)
Wi-Fi (option over USB port)	802.11 a/b/g/n + MIMO
Connectivity	
SD Card	On-board
USB Host/device	3x USB 2.0 High Speed
UART+ IRDA	x3 up to 3.6Mbps
I2C / SPI	x1 option / x1
GPIO's	Up to 16
RTC	On-board + battery backup
CPU	
Freescale SOC	MCIMX6U5DVM10 AC
SoC Family / CPU Type	i.MX 6 Dual Lite / ARM CortexTM-A9 processor dual core
CPU frequency (Max)	996MHz
Memory	
DDR3 RAM Size	512MByte
eMMC NAND Flash (8bit)	4GByte
OS Support	
Linux	Yocto, Linux distribution Poky 1.8.1
Electronic specifications	
Supply voltage	12VDC- (optional 18 to 36VDC)
Environmental specifications	
Operating / storage temperature	Operating : 0°C to 60°C / Storage : -20°C to 60°C
Mechanical specifications	
Dimensions (W x L x H)	120mm x 80mm x 22mm

PPB_Blue Impala video encoding board_rev.b_v.1_11/10/2016