

General Information

Order Number	2200001177
Manufacturer	Basler
Type	Frame grabber
Product Series	imaFlex Programmable Frame Grabber
Product Type	Processing
Warranty	36 Months

Device Features

Processor	Xilinx Ultrascale+ KU3P
On-Board Memory	2.5 GByte DDR4-RAM
I/O Module Interfaces (Trigger and Sync)	Trigger/GPIO-IF (Opto Trigger, TTL Trigger)
Acquisition Card Features	VisualApplets compatible

Camera Interface

Interface	CoaXPress (CXP-12)
Configurations	CXP-12; up to 5 cameras

Connectors	5 x Micro-BNC/HD-BNC
Cable Length	11 - 40 meters
Power output	17W/24V DC regulated power per CXP connector
Camera Support	■ area scan camera ■ line scan camera
Sensor Type	■ CFA sensor (Bayer) ■ Grayscale sensor ■ RGB sensor
Sensor Resolution	32k*64k (area scan sensor), 16k (line scan sensor)
Bit Depth	■ 8-16-bit (grayscale) ■ 24-48-bit (color)
Data Bandwidth	5 × 12.5 Gbit/s (1,560 MB/s)
Data Bandwidth (p.port; Total)	12.5 Gbps; 62.5 Gbps
No. of Ports	5
Test Environment	Camera Simulator

Host PC Interface

PC Bus Interface	PCIe 3.0 ×8
PC Bus Interface Performance	7876 MB/s (theoretical), 6520 MB/s (typical/max.)

Controls and

General-Purpose I/Os

Trigger Board GPIO Interfaces

Box connector (34-pin)

On-board GPIO interface

One 34-pin flat cable connector onboard: 8 input signals and 8 output signals with open-drain optionally as 4 opto-coupled inputs (4,5V - 28V), optional 2 opto-coupled differential inputs (RS422); 4 opto-coupled outputs (4,5V - 28V)

On-board Front GPIO Interface

3 differential input signals or 2 differential and 1 single-ended signal or 4 single-ended signals; 2 TTL output signals; configurable by software GPIOTool; max. voltage of the input signals between 4,5V and 25V

GPIO Synchronisation and Control

Configurable Trigger System supporting several trigger modes (grabber controlled, external trigger, gated, software trigger) and shaft encoder functionality with backward compensation, Multi-Camera-Synchronization

GPIO Interface Summary

12 in/12 out (max.), TTL or opto-coupled; differential or single-ended signals (configuration dependent)

Processing Features

Basic Features

- Image Selector
- Invert
- LUT
- Mirroring
- Overflow Management

- ROI
- Tap Geometry Sorting
- White Balance

Physical and Environmental Information

Dimensions	PCIe Standard height, half length card: 167.64 mm length x 111.15 mm height
Weight	274 g
Power Consumption / Power Source	Typ. 13,4W@12V, excluding camera and I/O power output
Operating Temperature	0 - 50 °C (32 - 122 °F)
Storage Temperature	-50 - 80 °C (-58 °F - 176 °F)
Relative Humidity (operating, storage)	5 - 90 % non-condensing (operating), 0 - 95 % (storage)
MTBF	48.684 h

Software

Software Drivers	■ Linux 64-Bit ■ Windows 11 / 10 (64-Bit)
Software Tools	■ Device Drivers ■ Documentation ■ microDiagnostics (Analysis and service tool)

- microDisplay X (Acquisition control and viewer)
- SDK

Software API

- .net interface
- Framegrabber SDK
- GenTL

FPGA Programming

VisualApplets

MV Software Compatibility

GenTL-based MV-Software

Manufacturer

Basler

Conformity

CE (incl. RoHS)

FCC

ISO 9001:2015

KC

REACH

UKCA

WEEE

Documentation

[More specifications can be found in the Documentation](#)