



microEnable 5

LightBridge ACL/VCL

Factory Vision with PCIe Data Transfer via Fiber and
Most Establish Machine Vision Standard

What you need to know:

- ◆ External frame grabber with Camera Link interface (all configurations)
- ◆ Support of Power Over Camera Link (PoCL) with Safe Power
- ◆ Up to 60 meters optical connection to host PC - noise immunity, up 940 MB/s
- ◆ Plug ,n' Plug real-time image and signal processing
- ◆ LightBridge VCL with custom programming by VisualApplets
- ◆ Compact and fanless housing (IP40 pending)
- ◆ GPIO (5-24V opto-decoupled) for communication and synchronization with external devices
- ◆ Mounting options by DIN rail or direct wall mounting
- ◆ 100% compliant with Silicon Software SDK and GUI control and service tools
- ◆ Third-party Vision tool interfaces: Halcon, Common Vision Blox and others

Please note: LightBridge ACL is not available now - coming soon!

Technical Specification:

Camera Interface

- ◆ Camera Link 2.0, GenICam GenTL
- ◆ Base, DualBase, Medium, Full, Deca modes
- ◆ PoCL SafePower, 4Watt/cable
- ◆ PixelClock: up to 85 MHz
- ◆ Extended cable length
- ◆ 2x SDR connectors
- ◆ Test environment: Camera simulator

Onboard Memory

- ◆ LightBridge ACL : 512 MByte DDR3-RAM
- ◆ LightBridge VCL: 2 GByte DDR3-RAM

V-Series Vision Processor (marathon VCL)

- ◆ Xilinx Kintex 7 XC7K160T

Host Interface

- ◆ Thunderbolt, Gen1 (Direct Memory Access)
- ◆ Up to 940 MB/s sustainable data bandwidth

Physical and Environmental Properties

- ◆ Aluminum case 120x130x55 mm or 4.72"x5.12"x2.17" (L*W*H)
- ◆ Direct screwing or top hat rail mounting
- ◆ Operating temperature: 0° to 55°, fanless
- ◆ Requires Thunderbolt connectivity
- ◆ ROHS, CE pending

Controls and General-Purpose I/Os

GPIO Interface (for connection with terminal block)

- ◆ 4 opto-coupled inputs (4,5-28V), optional 2 opto-coupled differential inputs (RS422)
- ◆ 4 opto-coupled outputs (4,5-28V)
- ◆ Shaft encoder input, programmable rescaler, multiple-camera synchronization

Front-GPIO (HD SubD15 connector)

- ◆ 2 opto-coupled differential inputs (RS422) and 1 opto-coupled differential / single ended input; optional (conf.): 4 opto-coupled Inputs (4,5-28V) with up to 1 MHz frequency
- ◆ 2 TTL outputs, up to 20 MHz frequency
- ◆ Shaft encoder input, programmable rescaler
- ◆ Multiple-camera synchronization

Software

- ◆ Windows 7 & 8 and Linux for 32/64bit
- ◆ Image acquisition control and viewer tool
- ◆ Camera control tool (GenICam)
- ◆ Service tool (test and firmware updates)
- ◆ Software API: SDK (C/C++ projects, .net interface)
- ◆ Vision tool interfaces: Halcon, CVB, VisionPro, Labview, MIL, others on request
- ◆ FPGA programming (LightBridge VCL) with VisualApplets

Current Availability

- ◆ LightBridge VCL