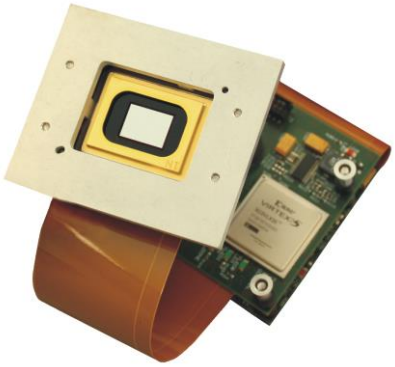
Hi-Speed V-Module

High-Performance subsystem for Texas Instruments DLP® technology

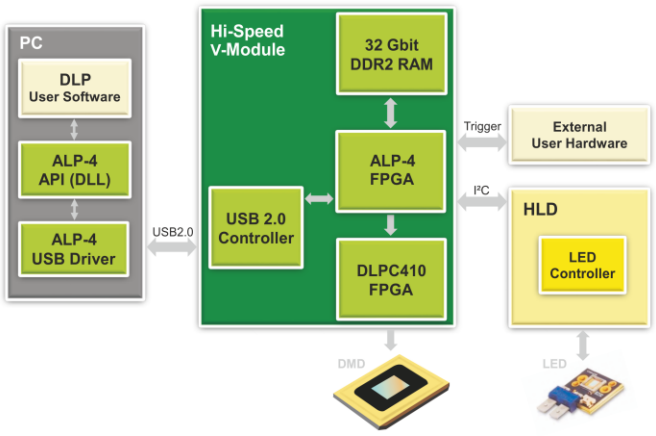
The V-Module product line of ViALUX includes USB3.0 SuperSpeed models as well as this USB2.0 Hi-Speed model.

All V-Modules are based on the DLP® Discovery™4100 platform and represent the highest performance class of the DLP product family available from catalogue. The ViALUX V-Modules offer unique flexibility in mirror control enabling a wide variety of new emerging applications. Outstanding pattern frequencies of 22 727 global array updates per second are achieved taking advantage of the 50 Gbit/s bandwidth of the DLP® Discovery™ chipset. The usable spectral range covers all wavelengths from 350 nm UVA to 2500 nm NIR. The Type A DMD package has efficient cooling options enabling up to 60 W sustained optical power transfer per DMD.

The V-7000 Hi-Speed V-Module is a compact, cost-effective package for using high-performance DLP technology and to shorten time to market for new emerging products. Hi-Speed V-Modules are well suited for education, academic research, proof of concept, and also as OEM components for series production. The Hi-Speed V-Module comes with completely configured high-speed FPGA logic and USB controller firmware so that customers save time and costs required for a dedicated hardware and firmware development.



The ViALUX Controller Suite ALP-4.2 drives the high-performance Discovery™ 4100 chipset of the Hi-Speed V-Modules. The ViALUX proprietary FPGA design is the core of the well proven ALP-4 firmware and software. The industrial grade USB 2.0 device driver for all current Microsoft® Windows® operating systems guarantees smooth integration with any type of PC. Multiple Hi-Speed V-Modules can be controlled from one computer simultaneously. The USB 2.0 transfer is speeded up by lossless compression achieving effective PC transfer rates of up to 1.2 Gbit/s. The Hi-Speed V-Module software API, a DLL library, fits seamlessly into standard programming platforms like C++, .NET, LabVIEW, MATLAB.



Outstanding features of Hi-Speed V-Modules are: Small form factor, robust, connector-free design and reliable USB2.0 interface. It supports the 0.7” XGA DMD (DLP7000) and is available for use with visible or ultra-violet light.

V-7000 Specifications

DLP chip	Discovery™ 4100
DMD Type	0.7” XGA 2xLVDS (DLP7000)
Window Options	VIS, UV
Micromirror Array	1024 x 768
Micromirror Pitch	13.7 µm
Active Mirror Array Area	14.0 x 10.5 mm²
Controller Board Type	V4100
Control Board Dimensions	71 x 68 mm²
DMD Board Dimensions	67 x 50 mm²
Flexible Cable Length	90 mm
RAM Capacity on Board	32 Gbit
Binary Patterns on Board	43 690
Hardware Trigger	master / slave
Controller Suite	ALP-4.2
Array Switching Rate 1bit B/W	22 727 Hz
Array Switching Rate 6bit Gray	1091 Hz
Array Switching Rate 8bit Gray	290 Hz
PC Interface	USB 2.0
PC Transfer Rate	800* fps

*Typical value, can vary depending upon data compression ratio and PC

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