

# UCD-2 Vx1

USB connected  
V-by-One capture device



## USB Connected Frame Grabber

UCD series is a family of compact sized capture devices utilizing USB interface. They provide a flexible and robust way of image capture in automated testing of display related ASICs and display electronics. The dedicated hardware and the easy to apply SW library provide an optimal platform for creating sensitive but short cycle time routines for test systems.

UCD series frame grabbers are designed for test applications. They provide the captured image bit-to-bit in the way it was received without any compression or data loss. The software routines provide full control of the interface and options for e.g. color depth selection, pixel mapping and channel allocation configuration. The dedicated software API is tailored for the purpose, no DirectShow overhead included.

## V-by-One Signal Capturing

UCD-2 Vx1 is a 8-lane V-by-One capture device. It enables automated testing of TV Main Boards with V-by-One output. Synchronized image data from all input channels will be combined to one bitmap for the application SW. This makes creation of the test functions easy and straightforward.

### Highlights

- Compact, USB connected device
- Captures 4 to 8 parallel V-by-One data lanes, 16 lanes with two units
- Up to 36 bit color depth
- Easy to use SW SDK for Windows and Linux

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## Buffering Frame Grabber

UCD series capture devices provide a flexible way of retrieving the video output of the D.U.T. Their role is to replace part of the display electronics (T-Con, Source drivers) and provide the received data for the test software for evaluation.

## Windows and Linux

The use of UCD devices is easy since they are compatible with any PC with an USB connection. Drivers and software are available for both Windows and Linux operating system. SDK with example application help the designer for a short design-in time.

UCD series currently includes capture devices for LVDS, mini-LVDS and V-by-One capturing.

## Resolution vs Lane Count

Please find below some lane count configurations and UCD-2 Vx1 capability to buffer non-drop frames.

| Resolution               | Frame rate / Pxl clock | N of data lanes | Buffering (frames) |
|--------------------------|------------------------|-----------------|--------------------|
| Full HD<br>ex. 1920x1080 | 60 Hz (148.5 MHz)      | 2               | 16                 |
|                          | 120 Hz (297 MHz)       | 4               | 32                 |
|                          | 240 Hz (594 MHz)       | 8               | 64                 |
| 4K x 2K<br>ex. 3840x2160 | 60 Hz (594 MHz)        | 8               | 16                 |
|                          | 120 Hz (1188 MHz)      | 16              | 32                 |
|                          | 240 Hz (2376 MHz)      | 32              | 64                 |

## Specifications

|                    |   |
|--------------------|---|
| Image Data Input   | 4 or 8 parallel V-by-One lanes<br>2 units can be synchronized for capturing 16 lanes parallel |
| Input Connector    | 2 x Standard Type A HDMI connectors<br>(pls see documentation for details)                    |
| Input Resolution   | Please see the table  |
| Color Depth        | Up to 12 bits / color   |
| Frame Buffering    | Please see the table  |
| Capture Speed      | Approximately 4 FHD frames / second   |
| Computer Interface | USB 2.0   |
| Sync In / Out      | Synchronizing input and output for Master / Slave configuration                               |
| Operating System   | Windows 8, 7 and XP, Linux  |
| SW SDK             | SW API with Example and preview applications  |
| Power Input        | +5 Vdc (AC/DC converter included)   |
| Module Size        | 172 x 128 x 55 mm   |
| Weight             | 600 g (w/o AC/DC converter)   |

All specifications subject to change without notice.

