



# V100:R2



## **SURPRISING AFFORDABILITY**

With systems starting at under \$7k, V100 cameras deliver the industry's most affordable high-performance tracking platform.

## **EFFICIENT PERFORMANCE**

Our cameras are engineered for maximum capture efficiency, offering sub-millimeter tracking at a fraction of the price you would expect.

## **WORLD CLASS LENSES**

We custom design our own super low distortion, high illuminance lenses. Our "fast glass" dramatically increases your camera's range and capture volumes.

## **REFERENCE VIDEO**

Any of your V100:R2 capture cameras can also operate in full frame grayscale, for flexible reference video that's calibrated into your mocap system.

## **FILTER SWITCHER**

Move from visible to infrared imaging with a single mouse-click, enabled with the FS add-on.

## **OPTISYNC**

OptiTrack's custom sync system, which sends and receives sync signals over USB cable. As a result, cabling is reduced by 50%, which enables simpler setup.

## **ON-BOARD PROCESSING**

Our heralded real time, on-camera image analysis delivers clean, reliable data to your PC with minimal demands on your CPU for efficient system scaling.

## **CAMERA CONTROL**

Control exposure, frame rate, resolution, image processing mode, LED intensity, and more directly from the application UI.

## **FREE CAMERA SDK**

Integrate V100:R2 cameras into your custom tracking and vision applications with the free Camera SDK, which offers a simple C++ interface.

# TECHNICAL SPECIFICATIONS

## CAMERA BODY

- Width: 1.78 inches (45.2 mm)
- Height: 2.94 inches (74.7 mm)
- Depth: 1.44 inches (36.6 mm)
- Weight: 4.20 ounces (0.1 kg)
- Mounting: 1/4"-20 tripod thread
- Status Indicators:
  - 2 digit numeric LEDs

## IMAGE SENSOR

- Pixel Size : 6  $\mu\text{m}$   $\times$  6  $\mu\text{m}$
- Imager Size : 4.5 mm  $\times$  2.88 mm
- Imager Resolution : 640  $\times$  480 (0.3 MP)
- Frame Rate: 25, 50, 100 FPS
  - Frame decimation (transmit every Nth frame)
- Spatial decimation:
  - 320  $\times$  240
  - 160  $\times$  120
- Accuracy: Sub-millimeter
- Latency: 10 ms
- Shutter Type: Global
- Shutter Speed:
  - Default: 1000  $\mu\text{s}$
  - Minimum: 20  $\mu\text{s}$

## IMAGE PROCESSING TYPES

- Object (Centroids)
- Precision (Grayscale)
- Segment (Thresholded)
- MJPEG Grayscale
- Raw Grayscale

## LENS & FILTER

- Default Lens:
  - 4.5mm F#1.6
    - Horizontal FOV: 46°
    - Vertical FOV: 35°
- Optional Lenses:
  - 3.5 mm F#1.6
    - Horizontal FOV: 58°
    - Vertical FOV: 43°
  - 5.5 mm F#1.6
    - Horizontal FOV: 38°
    - Vertical FOV: 28.5°
- M12 Lens Mount
- Adjustable focus w/ spring assist
- 800 nm IR pass filter
- Optional: 800nm IR pass filter w/ Filter Switcher

## LED RING

- 26 LEDs
- 850 nm IR
- Adjustable brightness
- Strobe or continuous illumination
- Removable

## INPUT/OUTPUT & POWER

- Data: USB 2.0
- Camera Sync: USB 2.0 or Wired Sync
- Power: USB 2.0
  - Standard: 5V @ 490mA
  - High Power: 680mA

## SYSTEM REQUIREMENTS

- Windows XP/Vista/7
- 1GHz processor
- 1GB of RAM
- 50MB of available disk space
- USB 2.0 Hi-speed port

## IN THE BOX

- 1 V100:R2 camera (part no: FL-R2)
- 1 Quick start guide

