



UVC drivers see it with the *FourCC* Y800.

The *Device Driver for The Imaging Source USB 33U, 37U and 38U Cameras* offers this pixel format as the Y800 video format.

### 5.1.1.2 12-Bit Packed Monochrome

This format transmits data using 3 bytes for each pair of 2 consecutive pixels.

*USB3 Vision* drivers see this pixel format as Mono12p.

UVC drivers see it with the *FourCC* Y12p.

The *Device Driver for The Imaging Source USB 33U, 37U and 38U Cameras* offers this pixel format as the Y16 video format. Since the DMK 37BUX287 camera offers both 12-bit packed and 16-bit monochrome pixel formats, the driver will use the 12-bit packed format when the Y16 video format is selected.

### 5.1.1.3 16-Bit Monochrome

The sensor of the DMK 37BUX287 camera is not capable of providing 16-bit data output. Instead, the pixel data is transmitted in the most significant bits which allows application programs to ignore the sensor-specific data type, and treat the data as if the sensor outputs 16 bits.

*USB3 Vision* drivers see this pixel format as Mono16.

UVC drivers see it with the *FourCC* Y16.

The *Device Driver for The Imaging Source USB 33U, 37U and 38U Cameras* offers this pixel format as the Y16 video format.

## 5.1.2 Resolution

The DMK 37BUX287 allows the user to specify which rectangular region of the image sensor to read out during camera operation. The size of this rectangle determines the number of pixels that have to be transferred for each frame and has a significant influence on the required USB bandwidth.

Lowering the resolution also often allows the image sensor to operate at a higher frame rate. Changes in the vertical resolution have more effect on the maximum frame rate than changes in the horizontal direction.

The way the resolution is controlled varies greatly between the driver technology used to access the camera:

- When using *USB3 Vision*, the resolution is controlled through the GenICam features Width and Height.
- When using the uvcvideo on Linux, the resolution is selected from a list of fixed formats. Dynamic frame sizes are not available.
- When using *IC Imaging Control*, the resolution is part of the video format, a parameter that combines pixel format, resolution and readout mode. For more information, refer