

Pds Pulnix

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Namespace Pds::Pulnix

Class TM6740ConfigV1

Public Types

```
enum { Version=1 };
enum Depth      { Eight_bit, Ten_bit };
enum Binning    { x1, x2, x4 };
enum LookupTable { Gamma, Linear };
enum { Row_Pixels = 480 };
enum { Column_Pixels = 640 };
```

Public Member Functions

```
TM6740ConfigV1();
// hard-code video output order (mode 'c')
// shutter mode (pulse width control 'AS9')
TM6740ConfigV1(unsigned black_level, // 0 - 0x1ff [10-bit scale]
               unsigned gaina,      // 0x42 - 0x1e8 [66-232] (6 - 22 dB)
               unsigned gainb,
               unsigned shutter_width_us,
               bool gain_balance,
               Depth depth,
               Binning hbinning,
               Binning vbinning,
               LookupTable lut );

// offset/pedestal setting for camera (before gain)
unsigned short  vref () const;
unsigned short  gain_a() const;
unsigned short  gain_b() const;

bool            gain_balance() const;

// shutter width in microseconds
unsigned short  shutter_width() const;

// bit-depth of pixel counts
Depth          output_resolution() const;
unsigned       output_resolution_bits() const;

// horizontal re-binning of output (consecutive columns summed)
Binning        horizontal_binning() const;

// vertical re-binning of output (consecutive rows summed)
Binning        vertical_binning() const;

// apply output lookup table corrections
LookupTable    lookuptable_mode() const;
```

Class TM6740ConfigV2

Public Types

```

enum { Version=2 };
enum Depth      { Eight_bit, Ten_bit };
enum Binning    { x1, x2, x4 };
enum LookupTable { Gamma, Linear };
enum { Row_Pixels = 480 };
enum { Column_Pixels = 640 };

```

Public Member Functions

```

TM6740ConfigV2();
// hard-code video output order (mode 'c')
// shutter mode (pulse width control 'AS9')
TM6740ConfigV2(unsigned black_level_a, // 0 - 0x1ff [10-bit scale]
               unsigned black_level_b, // 0 - 0x1ff [10-bit scale]
               unsigned gaina,         // 0x42 - 0x1e8 [66-232] (6 - 22 dB)
               unsigned gainb,
               bool gain_balance,
               Depth depth,
               Binning hbinning,
               Binning vbinning,
               LookupTable lut );

//
// Accessors
//

// offset/pedestal setting for camera (before gain)
unsigned short  vref_a() const;
unsigned short  vref_b() const;
unsigned short  gain_a() const;
unsigned short  gain_b() const;

bool            gain_balance() const;

// bit-depth of pixel counts
Depth           output_resolution() const;
unsigned        output_resolution_bits() const;

// horizontal re-binning of output (consecutive columns summed)
Binning         horizontal_binning() const;

// vertical re-binning of output (consecutive rows summed)
Binning         vertical_binning() const;

// apply output lookup table corrections
LookupTable     lookuptable_mode() const;

```