

# HDPYX, A 3MP, 120 dB digital CMOS Image Sensor

**Available Q1 2016**

**Key features:**

- 120 dB Dynamic range
- 2,6e- read noise
- Global shutter or Rolling shutter operation
- Advanced digital sequencing
- True 20bits reconstructed HDR linear output
- Unique dual core architecture

**Dedicated to:**

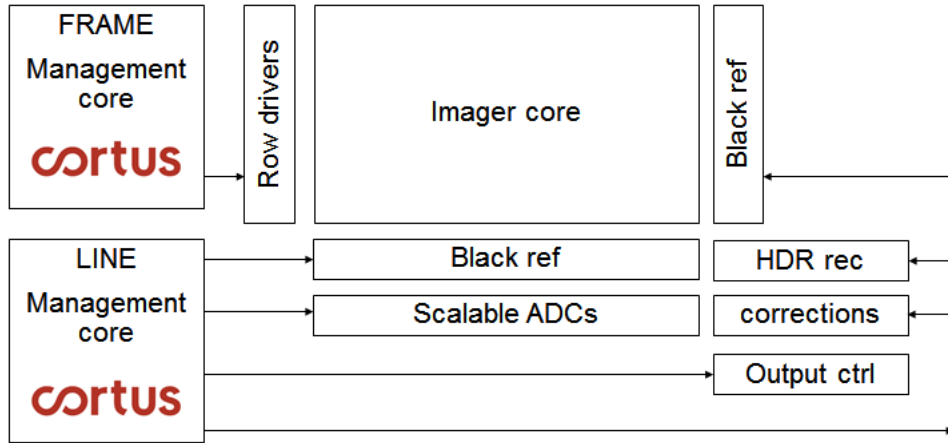
- Instrumentation (hyperspectral, interferometry...)
- HDR machine vision
- High end surveillance market

**Specification table:**

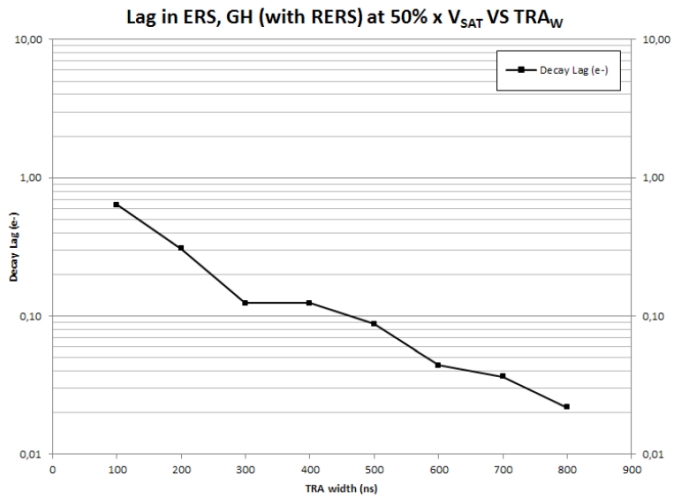
Specification	value
<b>Resolution</b>	3MP ((2880 x 1170)
<b>Optical format</b>	35mm standard
<b>Pixel</b>	6T 10x10um2
<b>ADC resolution</b>	14bits
<b>Frame rate</b>	45 fps (14 bits, full resolution) >100 fps (12 bits, 1968x1088 pixels)
<b>Shutter modes</b>	Global shutter with UDS (GS) Electronic Rolling Shutter with CDS (ERS)
<b>ROI</b>	H&V flip Sub-sampling Selectable ROI
<b>Integrated functions</b>	<b>20bits HDR reconstruction on-chip</b> <b>Anti-blooming</b> <b>black sun effect correction</b> <b>H&amp;V flip</b> <b>Power management unit</b> <b>Temperature sensor</b>
<b>Interfaces</b>	<b>SPI interface controller</b> <b>CMOS or LVDS output</b> <b>External Trigger</b> <b>External Reset</b>

Specification	value
<b>Noise</b>	2,6 e- RMS
<b>QExFF</b>	>65%
<b>Full-Well</b>	>100ke-
<b>Shutter Efficiency</b>	1000:1
<b>Dark Current</b>	< 6e-/s/pixel @20°C
<b>Color</b>	Monochrome Custom hyperspectral filters can be added.
<b>EPI Thickness</b>	Standard 5um Optional 12um hires
<b>N° pins</b>	145 pins
<b>Packaging</b>	BGA Optional uPGA, COB

**State of the art dual 32 bits APS architecture:**



**Scientific grade performances:**



*1e- image lag @ 50% Vsat*

**Customizable packaging solutions:**

