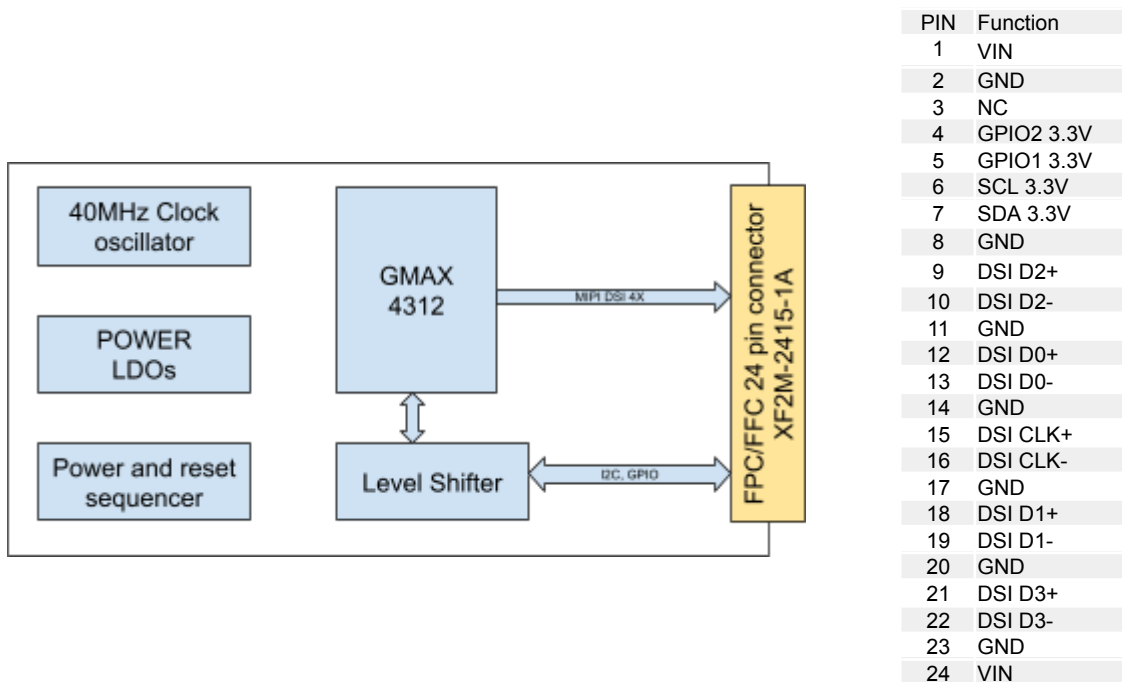


## ELNAGE-GMAX-4312 is a 1.1” compact sensor module

The ELNAGE-GMAX-4312 camera module is based on the GPIXEL sensor GMAX3412. GMAX3412 is a 1.1” optical format CMOS image sensor with 4096 x 3072 effective pixels with frame rates up to 30 fps over the 4 MIPI D-PHY channels. Based on a high-performance 3.4  $\mu\text{m}$  charge domain global shutter pixel, GMAX3412 achieves a max full well capacity of 9.0 ke- and min dark noise of 1.9 e-, delivering max 67.9 dB linear dynamic range. Red Fox technology delivers QE of 75% @ 540 nm, and a NIR QE of 33% @850 nm.



### Block diagram



## Technical specification

Photosensitive area	14.0mm x 10.5mm	
Pixel size	3.4µm x 3.4µm	
Number of active pixels	4096 (H) x 3072 (V) Effective 4240 (H) x 3090 (V) Readable	
Full well capacity(FWC)	9.0 ke- @12-bit, PGA gain x1.0	
Temporal noise	3.7 e- @ 12-bit, PGA gain x1.0	
Dynamic range	67.9 dB @ 12-bit, PGA gain x1.0	
Peak QE	75% @540 nm; 33% @850 nm	
Parasitic light sensitivity	- 88 dB (angular dependence)	
Angular Response	> 15 ° (80% response)	
Dark Current	6.5 e-/s/pixel	
Input clock rate	40MHz	
Max. Frame rate	30 fps @MIPI 12bit	
Data rate	Max. 1.2Gbps per lane @MIPI	
Output format	4 lanes of MIPI data output	
Supply voltage	4.5V - 14V	
Power consumption	< 1.5 W	
Chroma	Bayer RGB or Mono	
Dimensions	44 mm x 45 mm	
Temperature	Operating: -40°C to 80°C Storage: -40°C to 85°C	
Connector	XF2M-2415-1A	

## Ordering information

ELNAGE-GMAX-4312 - compact sensor board