

nüvü cameras

every photon counts

h·nüTDI

HIGH SENSITIVITY
TIME DELAY
INTEGRATION
MODE

A NEW STANDARD FOR LOW LIGHT IMAGING

NÜVÜ™ TDI CAMERA OPTIMIZED FOR DEMANDING SCANNING APPLICATIONS



OUTSTANDING LOW-LIGHT SCANNING PERFORMANCES:

- Line rate up to 103 KHz
- Resolution of 4424 (H) x 128 (V) pixels
- Readout noise lower than 45 electrons

TIME-DELAY INTEGRATION (TDI) PRINCIPLE:

A readout mode based on the concept of the accumulation of cumulative exposures of the same object as it is moving linearly under the detector. It synchronizes the transfer of the charges from one line to the next with the same speed as the object is moving under the camera.



Fig 1. Example of imaging the word NÜVÜ using TDI readout mode. The intensity of the signal is increased as the word moves across the detector.

Typical Spectral Response

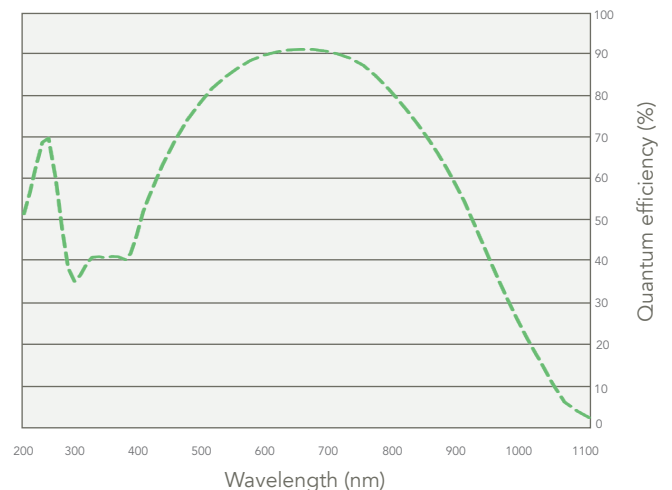


Fig 2. Typical spectral response as a function of wavelength, as measured by the detector manufacturer

SIMPLE INTEGRATION & QUALITY PRIORITY

Nüvü Camēras offers the highest standard of technology in a compact thermoelectrically cooled camera. The technology at the heart of the HNü was originally designed for space exploration where the need for state-of-the-art instruments drives innovation. Now optimized and extended to a broad range of applications, the user-friendly HNü provides many advantages to efficiently bridge the gaps between purchase, setup, discoveries and publications.

All parts are treated in compliance with high vacuum requirements, including all metal sealed in a Class 10,000 cleanroom to ensure the longest camera lifetime without maintenance. Nüvü Camēras uses at least $\lambda/10$ quality windows, essential for optimal image quality.

Consultation services are available on demand.

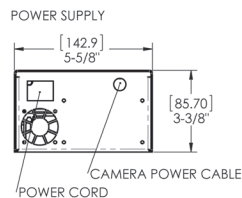
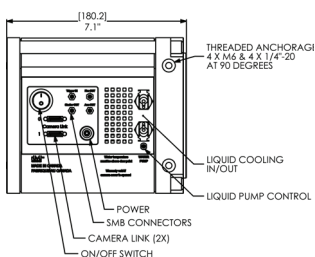
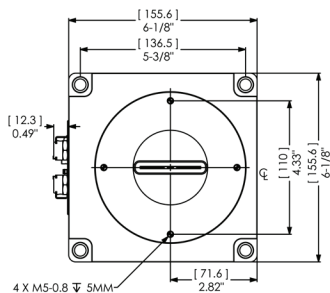
h·nū TDI

CHARACTERISTICS

SPECIFICATIONS

Line Rate	Up to 103 kHz
Megapixel/Second Troughput	420
TDI Transfer Direction	Unidirectional
Interface	Camera Link x 2
Resolution (H V)	4424 x 128 pixels
Data Rate	30 MHz per Output
Pixel Size	12 x 12 Microns
Data Format	14 Bits
Output	16
Dynamic Range	>60 dB
Size (H W D)	155.6 x 155.6 x 177.8 mm
Mass	5 Kg
Operating Temperatures	0°C to 30°C
Power Supply	120 - 140 V
QE	See Spectral Graph (Fig.2.)
Sensor Type	Back Thinned
Effective Area	49.152 mm x 1.52 mm
Readout Mode	Conventional
TDI Pixel Clock Rate	30 MHz
TDI Line Rate Control	Internal or external
Full Well Capacity	100k Electrons
Readout Noise	45 Electrons
Binning	Vertical, 1 to Full Binning
Digital Output	14 Bits per Pixel
Image Processing	None
Power Requirements	100 W
Sensor Cooling	Thermoelectric, Down to -20°C
Dark Current	<30 e/pix/s @ -15°C

Technical drawings



Contact us at:
info@nucameras.com
 +1 514 733 8666
 Montreal (Quebec)
 CANADA

HNü and NüPixel are the intellectual property of Nüvü Camēras. All other brands are properties of their respective owners. Incremental changes are made to the products and specifications are subject to modification without prior notice.

HNü TDI Specification Sheet 1.0
 © Nüvü Camēras, 2019