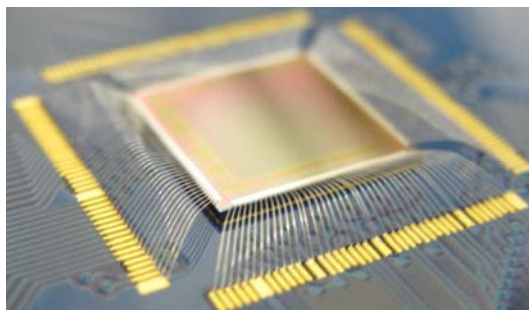




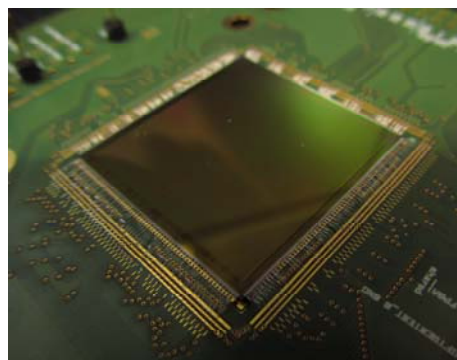
The PImMS family of imagers is designed for high performance imaging in the field of Time of Flight Mass Spectrometry (ToF-MS). Presently, the family comprises 2 chips, PImMS1 and PImMS 2. These are operated using a simple camera system controlled by a LabView interface.

Both sensors use the same pixel architecture, allowing for detection of incoming particles with a time resolution of 12.5ns. Up to four hits per pixel per frame can be detected.

Both chips use the same basic architecture, but PImMS 2 incorporates some additional features. These include additional digital outputs (for a potential increase in frame rate of 6 times), a larger array and onboard bias control.



PImMS1



PImMS2

Specification	Unit	PImMS 1	PImMS 2
Time Resolution	ns	12.5	12.5
Spatial Resolution	pixels	72x72	324x324
Pixel Pitch	µm	70	70
Full Well	e-	24k	24k
Frame Rate (single output)	fps	1200	59
Quantum Efficiency	%	8	8
Digital outputs		1	6
Analogue outputs		2	4
Digital Bias Control		No	Yes
Individual Pixel Trim		Yes	Yes

Both sensors are controlled by the same simple camera system. This communicates with the sensor via USB 2.0. The user interface is a LabView system which incorporates all the code required for calibrating and operating a sensor. #

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