



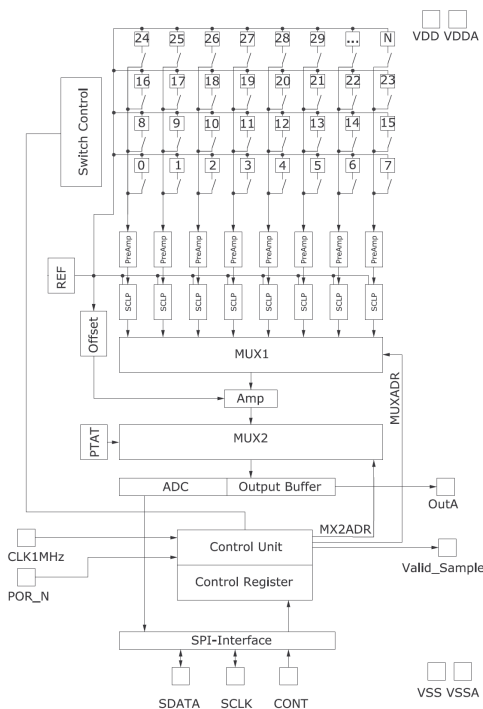
## HTPA 8x8, 16x4, 32x31, 64x62

## Thermopile Array with Ge-Lens

Heimann offers world new fully monolithic thermopile sensor arrays. This allows the measurement of temperature distribution of the environment, where very high resolutions are not necessary, such as person detection, surveillance of temperature critical surfaces, hotspot or fire detection, energy management and security applications. Other applications can be found in industrial process control and air condition control.

The benefits of this technology are low costs, the very small power consumption, small size, as well as the high sensitivity of the system. The larger arrays fit in a TO8 can and the 8x8 and 16x4 array even in a TO39 housing, which provides small dimensions and a reliable mechanical assembly.

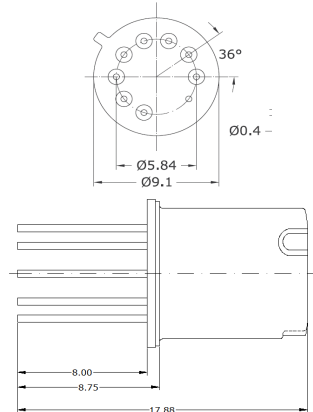
### Principal Schematic 8x8, 32x31, 64x62:



The built-in lens can be varied

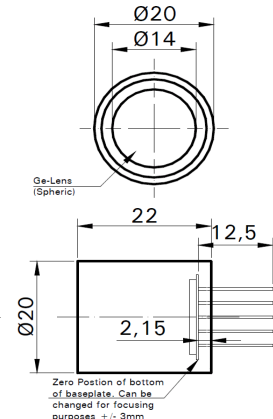
### HTPA 8x8 L7 TO39

(single Si-Lens, f=7mm)

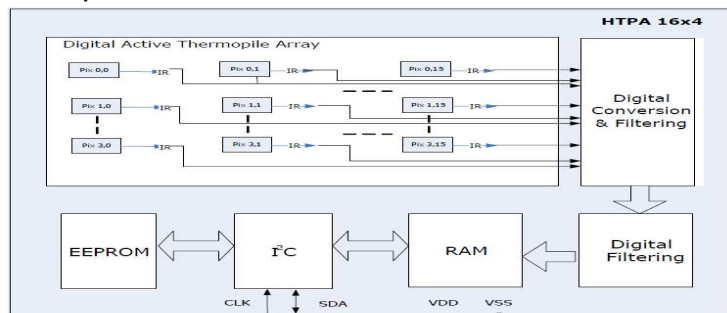


### HTPA 32x31 L10 / HTPA 64x62 L10

(dual lens, f=10mm, f/# 1.0 or 0.8)



### Principal Schematic 16x4:



HTPA series parameter overview					
Parameter	HTPA8x8	HTPA16x4	HTPA32x31	HTPA64x62	Unit
Technology	n-poly/p-poly Si	n-poly/p-poly Si	n-poly/p-poly Si	n-poly/p-poly Si	
Sensitivity (without optics/filter)	Std: 75   Hi: 250	175	Std: 60   Hi: 195	350	V/W
NETD @ 1 Hz and 100°C	Std: 80   Hi: TBD	95	Std: 120   Hi: 60	190	mK
Total noise	Std: 70   Hi: 90	300	50	50	nV/sqrt(Hz)
Specific detectivity	Std: 2.4E7   Hi: 6.1E7	8.75E+06	Std: 1.8E7   Hi: 5.9E7	4.20E+07	cm*sqrt(Hz)/W
Pixel time constant	Std: <4   Hi: TBD	<4	Std: <4   Hi: 7	<7	ms
Internal ADC	12	16	/	/	bit
Interface type	SPI	I <sup>2</sup> C	SPI	SPI	
Analogous/digital out	Analogous+ digital	Digital	Analogous	Analogous	
selectable Gain	880x / 2640x	13x / 26x	880x / 2640x	880x / 2640x	
Pitch	300	220	220	110	µm
Absorber size	220x220	22700	150x150	60x60	µm <sup>2</sup>
Frames per second	70	512	>20	5...10	Hz
Supply voltage	5	3	5	5	V
Sensitive elements	64	64	992	3968	

Modifications reserved Rev.06/ 14.10.2013