

# HFOV and PPM

## HD Visible Camera

### HFOV and PPM Calculations

Below are the calculations for the horizontal field of view and pixels per meter for our most popular camera lenses at 1km, 5km, 10km and 25km distances, when paired with a 2MP 1/2.8" sensor.

		1km	5km	10km	25km
315mm Lens (Phoenix 39X)	HFOV	17.3m	86.4m	172.7m	432m
	PPM	111	22	11	4.4
1000mm Lens (Sigma 33X)	HFOV	5.5m	27.2m	54.4m	136m
	PPM	353	70	35	14
2050mm Lens (Viper 128X)	HFOV	2.7m	13.3m	26.6m	66m
	PPM	724	144	72	29

### FOV Simulations at 1km



**315mm FOV at 1km (17.3m wide)**



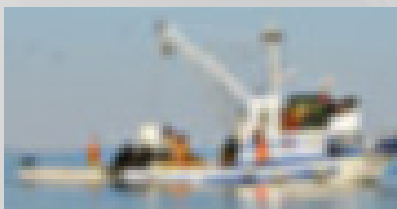
**1000mm FOV at 1km (5.5m wide)**



**2050mm FOV at 1km (2.7m wide)**

Above are simulations of what the field of view would look like when viewing a 12.5m long vessel\* 1km away. These images represent how large objects would appear on the monitor, estimating a human height of 1.6m to 1.7m, and using six inch tall ship lettering.

### PPM Simulations at 25km



**315mm Detail at 25km (4.4 ppm)**



**1000mm Detail at 25km (14ppm)**



**2050mm Detail at 25km (29ppm)**

Above are simulations of the level of detail visible on a 17m long fishing boat\* 25km away. These are not representations of the field of view, but rather the amount of detail if you were to digitally zoom into the image. Note that these simulations are based on perfect conditions, however in reality atmospheric distortion can greatly limit the amount of detail that can be seen 25km away.

\*Vessel sizes are estimated based on the human height in each image.