

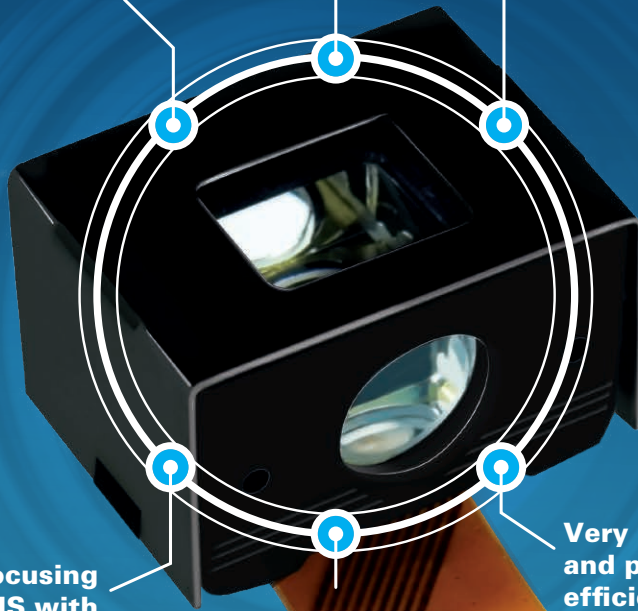


optotune

Large focusing
range from
Inf to 5cm macro

Large OIS
angle of 1.5°

Suitable for
standard fixed focus
tele camera modules



Fast focusing
and OIS with
<3 msec
response time

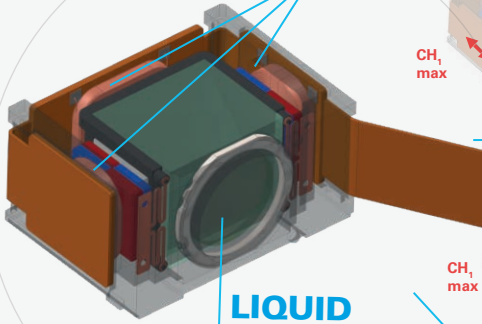
Field of view
expansion
up to 13°

Very compact
and power
efficient

Liquid lens focusing and optical image stabilization F1A module

Our ultra compact F1A module enables four functions in one, namely focusing, macro, optical image stabilization, and field of view expansion.

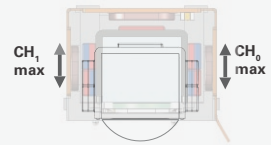
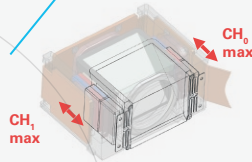
ACTUATORS



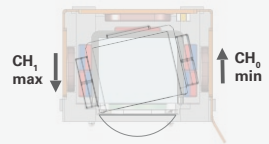
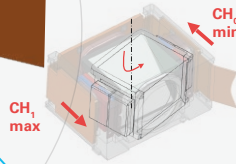
LIQUID LENS

WORKING PRINCIPLE

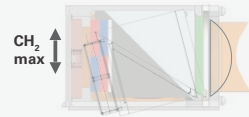
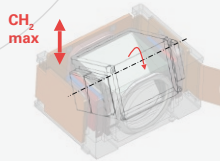
FOCUS



X PLANE TILT



Y PLANE TILT



BENEFITS



4 IN 1



FASTER AF SPEED



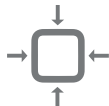
LOWER POWER



LOWER COST



LOWER &
CONSTANT F#



SMALLER
MODULE
FOOTPRINT



LARGER
TILT ANGLE



FASTER VIDEO
SHOOTING

NEXT GENERATION FOLDED CAMERA MODULE STRUCTURE

Combining the F1A module with a 5x tele lens barrel enables an ultra compact camera module with superior optical performance especially for macro imaging.

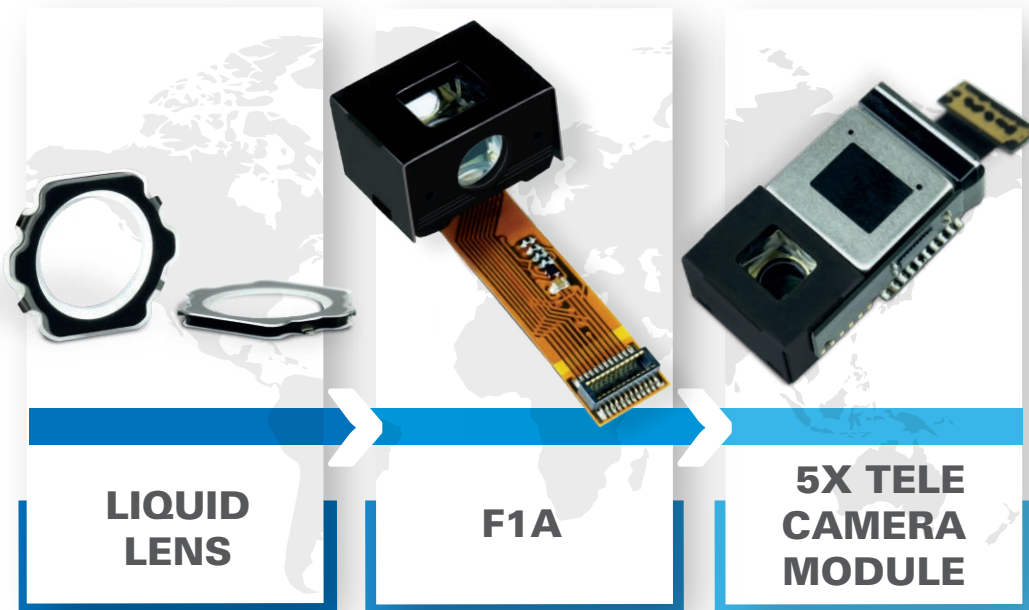
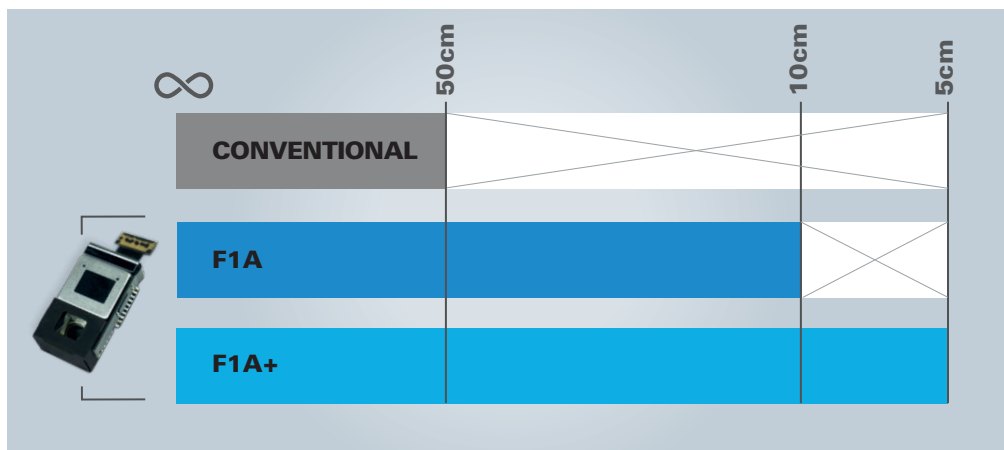


IMAGE QUALITY MAP: STANDARD (125lp tan. MTF $\geq 30\%$)





Macro

Fast and reliable super-macro focusing. Our F1A module allows for focusing distances down to 5cm. Whereas conventional 5x tele cameras are limited to a minimum focusing distance of 50cm.



Optical image stabilization for folded tele cameras

Our F1A module allows for fast and robust optical image stabilization of up to 1.5° with superior hand shake suppression.



Field of view expansion

Field of view expansion of up to 13° without moving the camera.



Optotune Switzerland AG

Bernstrasse 388 | CH-8953 Dietikon | Switzerland

e-mail: sales@optotune.com | www.optotune.com