



MICRO  
FOURTHIRDS

# Micro 4/3 Camera System

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freedom of  
ability of a

OLYMPUS PEN  
New Generation System Camera

E-PM1  
\$499.99  
★★★★★  
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# What is a Micro Four Thirds camera?

- The Micro Four Thirds system uses the same sensors and processors of the larger Four Thirds systems but does not utilize a focusing screen, mirror box and pentaprism used in common DSLRs. This allows for a shorter lens to sensor distance and thus opens the door to significantly smaller camera body and lens designs. Using a proper adapter, virtually any niche, legacy or future lens can be used with the Micro Four Thirds system.
- This Micro Four Thirds System engineering feat has created a new camera hybrid – smaller camera body than a DSLR and higher image quality than a compact digital camera. Below are some characteristics of the Micro Four Thirds System when compared with other systems.

# Micro 4/3 vs. DSLR

## Advantages of Micro Four Thirds over DSLR cameras

- Smaller and lighter cameras and lenses;
- Shorter flange focal distance means that practically all manual lenses can be adapted for use
- Shorter flange focal distance allows for cheaper, smaller and lighter normal and wide lenses
- Smaller sensor size allows for lower lens manufacture cost, smaller and lighter telephoto lenses
- Absence of Reflex mirror eliminates “mirror slap” noise and vibration
- Electronic viewfinder can provide real-time preview of exposure, white balance and tone
- Brighter viewfinder in low light
- Viewfinder can be used in video mode, since there is no difference in stills and videos in terms of operation
- The autofocus performance is the same for stills and videos. i.e. the autofocus speed is much faster than conventional DSLRs in video mode
- Larger crop factor (2x multiplier) means deeper depth-of-field for the same equivalent field of view and f/stop
- All have sensor dust removal technologies
- Because of the reduced sensor-flange distance, the sensor is easier to clean with swabs when compared to a DSLR

## Disadvantages of Micro Four Thirds compared to DSLRs

- The sensor is smaller than APS-C sized sensors this can lead to lower image quality than APS-C based DSLR cameras with a similar pixel count;
- Due to the absence of a mirror and prism mechanism, there is no ability to use a through-the-lens optical viewfinder. A through-the-lens electronic viewfinder (included on some MFT bodies), a separate optical viewfinder, or the universally supplied LCD screen can be used instead;
- Changing lenses can expose the sensor to dust (a problem with all ‘mirrorless’ interchangeable lens digital camera designs), compared to DSLRs which have both a mirror and a closed shutter protecting the sensor. All mirrorless bodies thus add some form of dust reduction.
- Larger crop factor (2x multiplier versus APS-C’s 1.6x) means greater depth-of-field for the same equivalent field of view and f/stop on full frame cameras. This is a slight disadvantage in achieving out-of-focus backgrounds compared to APS-C but significant compared to Full Frame (1.0x multiplier).

# Micro 4/3 vs. compact digital

## Advantages of Micro Four Thirds over compact digital cameras

- Greatly increased sensor size (5-9 times larger) gives much better image quality, e.g. low light performance and greater dynamic range;
- Interchangeable lenses allow more optical choices including niche, legacy, and future lenses;
- Shallower depth of field possible (e.g. for portraits).

## Disadvantages of Micro Four Thirds compared to compact digital cameras

- Increased physical size (camera and lenses are both larger due to increased sensor size);
- Extreme zoom lenses available on compacts (such as 10×-30× models) are more expensive or simply not available on large sensor cameras due to physical size, cost, and practicality considerations;
- Similarly, larger sensors and shallow depth-of-field make bundled macro capability and close focusing more difficult, often requiring separate, specialized lenses.