Raspberry Pi unveils $50 interchangeable-lens camera board
1 May 2020, by Peter Grad

Raspberry Pi's new high quality camera doesn't sport a fancy name—it's actually called "High Quality Camera"—but it packs some new features do-it-yourselfers are sure to enjoy, and it's being offered at Raspberry's typical bargain-basement prices.

The camera includes a 12.3 megapixel Sony back-illuminated sensor, back-focus adjustment ring, lens and tripod mounts as well as adaptors for higher end C- and CS-mount lenses. The camera is available immediately for $50 from Raspberry Pi distributors such as Cana Kit and PiShop.us.

This is the first Raspberry camera to offer interchangeable lenses. Two lenses will be offered initially. A 10-megapixel resolution telephoto C-mount lens is available for $50. With a 16mm focal length and f 1.4-16 aperture, it provides better resolution and performs in lower-light scenarios than its predecessor. The $25 Raspberry Pi Camera Module v2 launched in 2016 offered a fixed-focus 3.04 mm lens and captured images up to 8 megapixel resolution.

The other lens available for use with the new camera board is a 6mm CS-mount CCTV lens for $15.

A Raspberry engineer explained that the company felt it was time to address a key drawback of earlier camera models.

"Versatile though they are, there are limitations to mobile phone-type fixed-focus modules," said Raspberry Pi Foundation senior principal engineer Simon Martin. "The sensors themselves are relatively small, which translates into a lower signal-to-noise ratio and poorer low-light performance; and of course there is no option to replace the lens assembly with a more expensive one, or one with different optical properties."

The High Quality Camera is compatible with almost all Raspberry Pi models. Camera adaptors are available.

Raspberry Pi has also published a 132-page guide for the HQ Camera offering detailed instructions on how to create variety of projects. A hard copy of the book is $12.50 but a free PDF version is available from The MagPi magazine website.

Low-cost Raspberry Pi camera systems have allowed programmers to explore creative avenues that would have been difficult or impossible with costlier higher-end cameras.

Users can construct video-streaming cameras, smart doorbells, webcams, security cameras, face-recognition smart locks, a time-lapse photo setup and an irrigation system for vegetation. And, of course, someone came up with the idea of a low coffee-bean jar supply alert system because if there is one thing worse than being cooped up in your home for what may be an eternity, it's running out of coffee.