

PineTime Smartwatch and Good Code Play Bad Apple

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PineTime is the open smartwatch from our friends at Pine64. [TT-392] wanted to prove the hardware can play a full-motion music video, and they are correct, to a point. When you watch the video below, you should notice the monochromatic animation maintaining a healthy framerate, and there lies all the hard work. Without any modifications, video would top out at approximately eight frames per second.

To convert an MP4, you need to break it down into images, which will strip out the sound. Next, you load them into the Linux-only video processor, which looks for clusters of pixels that need changing and ignores the static ones. Relevant pixel selection takes some of the load off the data running to the display and boosts the fps since you don't waste time reminding it that a block of black pixels should stay the way they are. Lastly, the process will compress everything to fit it into the watch's onboard memory. Even though it is a few minutes of black and white pictures, compiling can take a couple of hours.

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[Gadgets](#)

Links:

[1] <http://www.tuxmachines.org/taxonomy/term/139>

[2] <https://hackaday.com/2021/10/16/pinetime-smartwatch-and-good-code-play-bad-apple/>