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Putting firmware on the device: a Zephyr+Yocto+Mender hike

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One of the biggest real-life challenges for embedded developers is putting the various bits and pieces of technology together to form an actual product. Usually, each component offers good documentation and resources to get started, but documentation examples that encompass bigger, interconnected parts of a pipeline are often hard to come by.

In this presentation, we will start by building a firmware binary to be run on a coprocessor in an NXP i.MX7-based AMP system. The resulting artifact will be included in a subsequent build process which generates a full Linux distribution. To facilitate this, a Yocto Project feature called "multiconfig" will be harnessed to orchestrate the successive tasks and integrate the results in a single artifact. This will constitute the actual, complete application binary that the device hardware will run.

Still a real product needs more than this⋯

It's not enough to have the binary somewhere on the development machine - chances are that it also needs to be deployed as an update to devices in the field multiple times during the lifecycle of the product. At that point, Mender provides an OTA solution which can directly integrate into the Yocto Project based build process, helping to streamline the last step of distributing the generated binary image to a fleet of devices.

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Yes

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