

Hitex Technology Spotlight

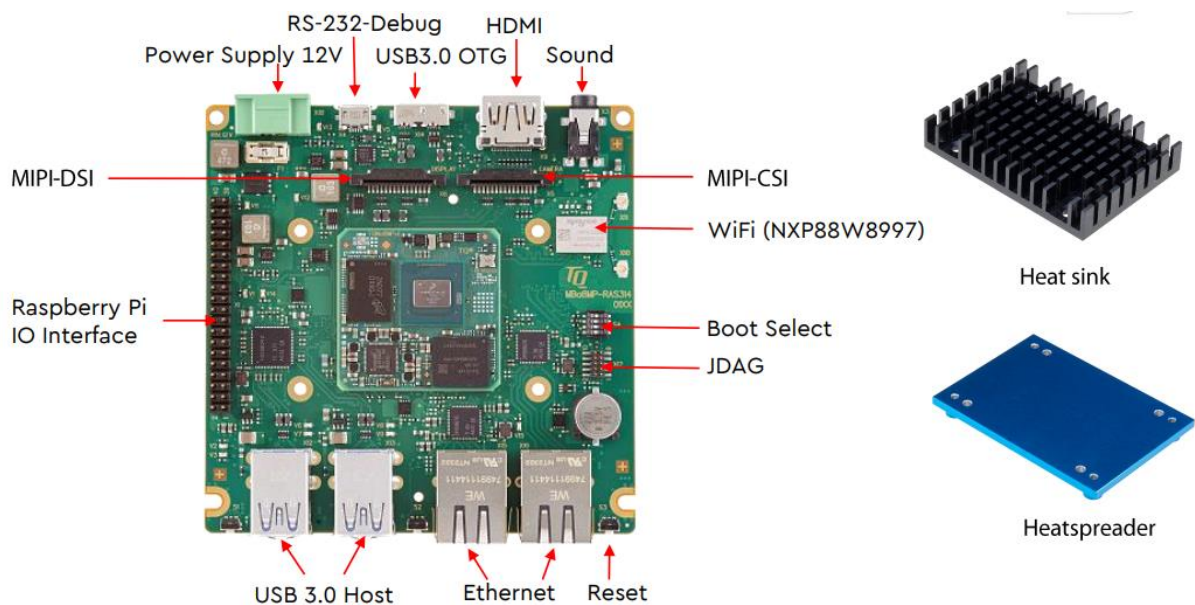
When a Raspberry Pi is not enough

When a Raspberry Pi is not enough. Part 3

By Paul Roberts

Introduction

In Part 3 we answer the question “how to manufacturer your Pi based product?”



Releasing for Production

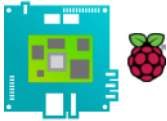
So you’ve done a lot of your development already on the Raspberry Pi or even the [MBa8MP-RAS314](#) we discussed in Part 2. Before you hand over to production take some time to look at how the product should be taken forward for series production.

Look to strengthen the path from your product idea or prototype to the finished product – shortening it without compromising on the functionality.

Look at locking down any security loopholes starting at the factory to endpoint delivery and beyond.

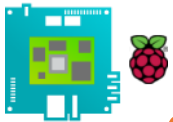
Is there an alternative path that would require a slight change to your design but lead to savings or efficiencies in production or support?

So braking the answer down into four phases I have listed them below:-



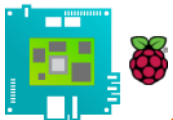
1) **Requirements development - are you on the right track?**

- An objective assessment of your situation
- Are all aspects of your project considered?
- What else needs to be done to achieve your desired level of maturity?
- Common goal: to reach series production readiness quickly and reliably
- Develop and manufacture your near-series prototype from existing functional models, circuit ideas, sketches, etc.



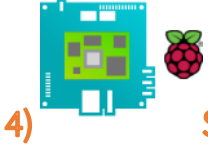
2) **Close-to-series prototype - what do you need for implementation?**

- Check if Integration of various functions and interfaces on one module
- Design check, BOM check, optimizations for series production and long-term availability analysis
- Cost optimization tailored to a target series quantity
- Use of an existing housing or a housing design including sample production
- Production of series samples of printed circuit boards and, if necessary, housings (including 3D printing, plastic or metal housing)



3) **Qualification and approval - transfer to series production / market readiness**

- Reliability tests with calculations and material analysis
- Carrying out environmental tests temperature, humidity, shock / vibration resistance, etc.
- Reliability calculations MTBF, service life, thermal image analysis
- Consider required approvals and certifications CE/ UKCA , RoHS, WEEE, EMC, UL, safety, TÜV, ...



4) **Series production - well looked after and successful in series production**

- Device production (electronics, with / without housing, assembly ...) and delivery
- Discontinuation / change management for the components
- Security from production of modules and warehousing
- Service and device repairs
- Long-term support from the development engineers

Summary/Closing Comment

These are the same phases you should be going through with any supplier. So even if you are not using Hitex services go through this checklist to check for suitability. Entry is possible into phases 1 or 2 for Hitex Services.

Also with UK based partners we can now also offer production and assembly "Made in UK" for the motherboard designs and secure quantities and more importantly control of the IP and security for you.

Talk to us if you are unsure of what alternatives are available info@hitex.co.uk . Or visit our website: www.hitex.co.uk .You can also connect with us: [LinkedIn](#)