With software developers facing tremendous pressures to speed up the development and delivery of commercialised products, partnering with the right solutions provider is able to offer significant benefits whether that's reducing costs, speeding up time to market and ultimately, enabling your product to secure that all important competitive advantage.

The constantly shifting and fast pace of technological change is putting design engineers and software developers under pressure to innovate but without incurring additional costs or compromising when it comes to time to market. It is rare in today's technically advanced environment that developers end up working on one single, isolated product that doesn't have to communicate or interact with another device. More likely, they are having to create solutions that integrate across multiple platforms, utilise different software solutions and talk to a variety of other devices to deliver a wide range of end-user applications.

This is particularly the case with industrial and B2B applications where there has been a significant increase in the use of advanced feature-rich high definition graphical displays, screens and monitors which are helping to revolutionise the Human Machine Interface (HMI). You only have to compare the old and now outdated manual GUI creating solutions with the latest user-friendly GUI creator studios, which are increasingly prevalent today, to see just how far the HMI has evolved. And, it is this exact trend that continues to exert increasing demands on the latest embedded solutions in terms of graphics, animation and multi-touch capability.

Sourcing, testing and customising the right hardware and most appropriate software solutions to optimise performance when developing and building a basic

PROVIDING A
HEAD START

When looking to secure that all important competitive edge, more companies are turning to 'ready to go' partner solutions, as **Rok Stutnik** explains

framework is always going to take more time, more specialised software engineering expertise and therefore more money than most design engineers expect. Not only will this have a detrimental effect on your bottom line, but the subsequent loss of ground in bringing new products to market can also negate competitive advantages and have a negative impact on market share. What's more, finding out that your embedded platform is not suitable or fit or purpose later on in the project development cycle can be a costly mistake and set your launch date back by months.

Head start

Getting a head start in the development process and being able to think at the systems level early on is crucial to gaining ground as well as being prepared with the best hardware and software solutions to address ongoing design and product development challenges. Therefore, working with a specialist solutions provider that can offer expert advice on all the crucial aspects of your project, can play a significant part in the successful development and rollout of a product.

If your end goal is to deliver a feature-rich graphical interface, for example, finding a partner that can present you with a pre-configured, scalable framework which is already fully optimised for GUI applications can significantly accelerate your development timeline, reduce risks and enable early differentiation.

At Densitron, we have experience in next generation display technology with advanced electronics and systems engineering. We take a consultative approach to design and partnering customers to understand their particular requirements and are then able to create bespoke products to address those.

That's a useful combination of skills sets for a design engineer to tap in to and we are able to develop

ready-made solutions that allow and help our customers to accelerate the development of their GUI benefitting from much greater efficiencies.
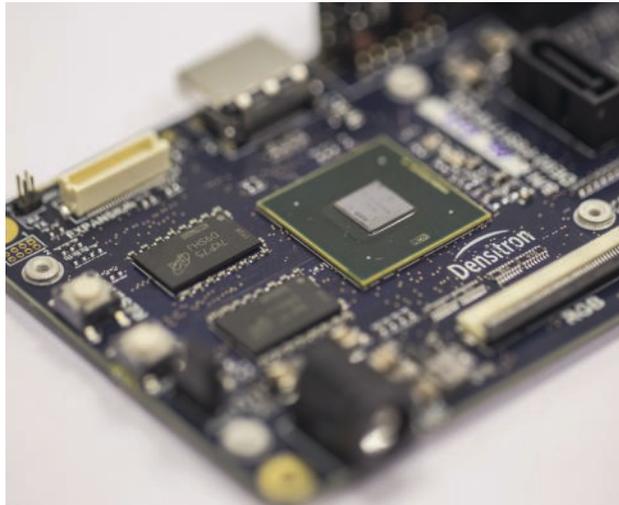
This greater efficiency is achieved by pre-loading the latest Qt 5 software library on to a SBC that is already pre-configured, and which has been tried and tested to deliver optimum performance with the latest screen and display technologies.

The result is a 'ready to go' fully working Qt-based cross platform SBC eco-environment that enables engineers to start developing their products immediately.

This out-of-box solution features native compiling of Qt applications, allowing for quick and easy development from the board itself, without the need to install any extra software. In addition, the solutions we are able to offer are also configured to facilitate quick start-up of cross compiling on preconfigured 'virtual machine' images.

These options help to eliminate the process of initial Qt software set-up and configuration, testing and rework, as well as the abundance of potential set-up issues that so often will end up taking several months and a significant amount of specialist technical resource to address and then resolve.

This 'ready to go' Qt-based environments offers design engineers

Above: 'Ready to Go' boards enable engineers to start their products immediately

a plug-and-play solution, and our customers are also able to benefit from ongoing support, advice and working examples of how to maximise Qt development for more advanced topics and specific applications. In addition, our platforms also allow for engineers to explore and build their own bespoke Qt set-up if required.

The Qt-based framework provides a head start for engineers when developing their specific functionalities and user interface, while the support we are able to offer also includes cross-compiling, enabling development to be undertaken on laptop or desktop PC and transferred and debugged immediately over Ethernet onto the SBC giving a true out-of-box advantage. This allows for easy device interaction giving developers

the fundamentals needed from day one, for quick, simple and fully flexible development capabilities to build a variety of user experiences - from the very simple open-source solutions to highly customised bespoke versions.

Furthermore, the Qt open source platform offers greater potential for continual product adaptability, ongoing future-proofing and product life extension.

While the opportunities for design engineers and software developers to start from scratch and create their own customised bespoke solutions are undoubtedly tempting, and indeed the talent and tools are there in abundance to do so, new product development constraints are very much dictated by a series of external demands.
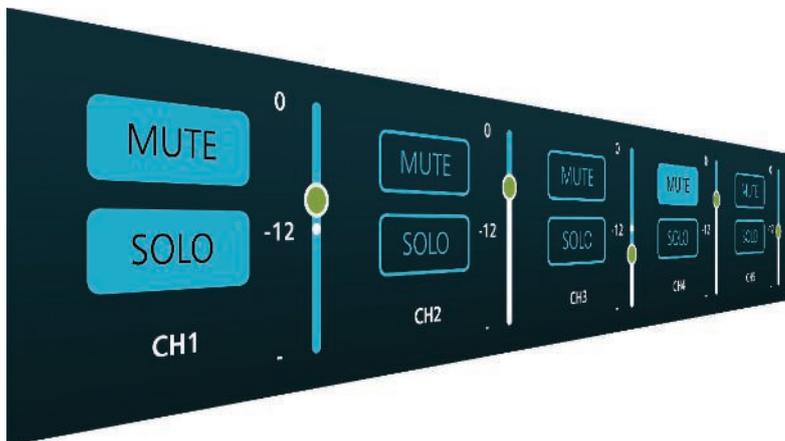
These demands will include the needs of customers, the requirements of industry and of course, those all-important time and cost considerations.

As such taking a pre-loaded Qt platform that is development-ready and already configured for use with the latest display and screen technology can offer a considerable advantage in the race to market.

As the pace of change continues to gain momentum, time and cost considerations will ultimately dictate the new product lifecycle putting increasing pressures on the design and development teams to deliver within ever decreasing timescales. It's in these situations that finding and then working with a trusted specialist partner, who can offer expert product and technical advice and ready-made plug and play solutions can really help you to propel your development project forward and give you a head start in the race to deliver a commercial, ready-to-go product.

Author profile:
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Left: The Qt-based framework provides engineers wth a head start when it comes to developing functionalities and user interfaces