



## ETX COMPUTER -ON- MODULE BEST OF BOTH WORLDS

### Overview

Embedded technology is bringing computing power to an ever growing list of industries and devices. Manufacturers are dealing with greater complexities and competition in applying the latest technological advances to their application.

Industry has always made special demands on the world of embedded computing. The single board computer – in its various guises, combines specialised expansion, small form factors and power efficiencies. Of equal importance is the managed longevity and support of the board, a SBC can typically have a minimum three year availability.

However this inherent product stability can mean it's harder to take advantage of the latest advances in CPU technology.

### The Modular Concept

The Single Board Computer market now includes a number of standardised form factors – each one with its own benefits and limitations. However, there are circumstances where an off the shelf solution is unlikely to provide a perfect fit for an increasing array of embedded applications.

Where an OEM needs a very specific degree of functionality or board layout, the

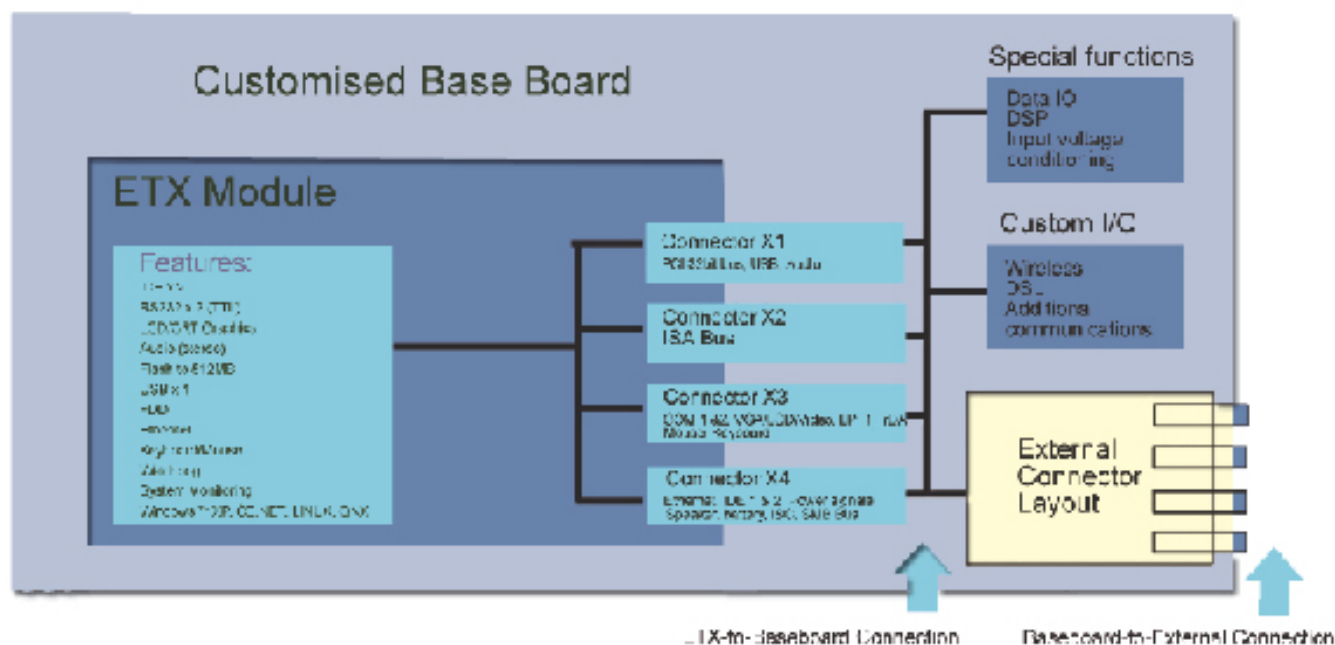
customisation route will potentially involve longer development times and increased costs. The answer lies in a modular approach, which marries a standard range of computer cores with a tailored host board.

### The ETX Form Factor

ETX stands for Embedded Technology eXtended – this is a mainstream standard interface for industrial System-on-Module applications. All ETX modules feature a standardised form factor of 114mm x 95mm and a standardised connector layout that carry a specified set of signals.

### Benefits

- ▶ Faster time to market
- ▶ Industry standard form factor
- ▶ Decrease in initial R&D investment
- ▶ Decrease development, financial and business risks
- ▶ More flexibility for smaller production runs and future upgrades



This standardisation allows designers to create a baseboard that can accept present and future ETX modules. The baseboard can be whatever format is required - PCI, EBX, ATX, PISA, Compact PCI, VME or whatever shape/size is needed to support your specific application.

At the same time, it's relatively simple to add further low level electronics on the system board, such as touch screen decoding, data acquisition, power conditioning etc. Further communications can be added such as CAN bus, wireless LAN - particularly suited for wireless control systems in off site applications or portable devices.

The ETX module supports the PCI bus, now prevalent amongst high functionality devices such as LAN controllers, PCMCIA controllers and secondary graphics displays. Yet it also retains the ISA interface, making legacy hardware upgrades simple.

### Simple Evaluation

Using an ETX Evaluation board will give your design project a further boost. This ATX based board is a complete platform, equipped with all the usual industry standard connectors - PCI, ISA, RS232, USB, CRT, IDE etc, which lets you test and evaluate the ETX module in tandem with target baseboard development.

This approach enables system integrators and OEMs to focus on custom specific baseboard development, independent of the dynamic nature of CPU and chipset evolution. It's estimated that research and development costs can be decreased by up to 80%. Furthermore, you have a scalable, upgradable solution.

The whole technique fosters partnership between hardware designers and OEMs. By sharing our ETX roadmap with the customer, we can evolve our product base together. This means the next generation of higher performance, low power, fanless solutions reaches the market at maximum speed, minimum cost; and that's the beauty of ETX.