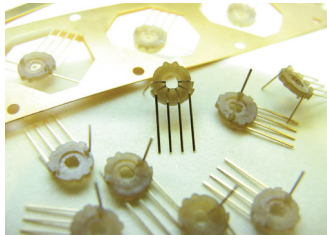


Product showcase

Micro medical moulding



The PEEK lead frame part, 4mm in diameter, is moulded and post-mould formed and singulated.

Today's manufacturers, especially those in the medical and microelectronic markets, are continuing to push the limits of plastic and metal. Features like 75µm-thick (0.003in) sections and parts around ultra-fine-gauge wire are common attributes.

The combination is not limited to plastic and metal, however.

Accumold has seen moulding used over other materials such as flex circuits, delicate fabrics and glass, as well as other plastics.

The process commonly involves the material being fed through as a continuous strip, but may sometimes require individually placed inserts. Automation and packaging often accompany lead frame moulding projects. Some of the products Accumold produces have to be manufactured in a clean environment and the final part cannot be touched by human hands. Many of the components also require some form of secondary process, such as singulation, sub-assembly, post-mould die-forming or testing.

Understanding the details of how a lead strip will articulate through the mould and how it will close tightly around the strip without damaging it is also a critical step in the process. Customers rely on Accumold's expertise to figure this part out.

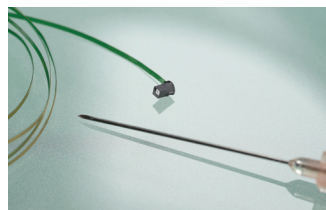
Accumold is a high-tech manufacturer of precision-micro, small and lead-frame injection-moulded plastic components.

Using processes developed from its Micro-Mold technology, the company designs, builds and produces unique moulds and parts efficiently for multiple markets, including microelectronics, automotive, micro-optics, medical and military applications.

Further information

Accumold
www.accu-mold.com

Miniturisation and precision



The NanEye 2B image sensor.

AWAIBA's multi-purpose image sensors for medical applications are available as standard components. The NanEye 2B image sensor is considered a wafer-level camera. Equipped with a digital camera head dimension of just 1mm x 1mm x 1.5mm and a total of 250 x 250 pixels at 3µm pitch rolling shutter the sensors provide clear and sharp images at a rate of 44fps.

The lens is made completely of glass (optional) and its planar surface provides an excellent interface to body fluids. In most cases, there will be no need to provide additional sealing windows. The lens does not increase the diameter of the sensor, making it the world's smallest compact digital camera.

The sensor operates autonomously on a 1.8V supply and is connected to minimal diameter four-wire flex cable that can drive the signal up to 2.5m. Image data is transmitted over a 10b digital LVDS applying a data transmission protocol developed in-house. The NanEye sensor provides instant and

smooth video, resulting in safe operation and a clear diagnosis.

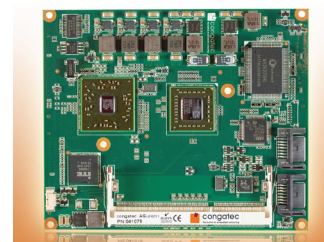
The NanEye family of image sensors is optimised for integration into endoscopy, dental imaging, and surgical robot solutions which call for ever greater miniaturisation as well as exacting precision.

AWAIBA provides custom design sensors in addition to its standard products. In response to customer demand and utilising the latest advancements in the semiconductor industry, AWAIBA was even able to deliver a full system on-chip with a footprint of only 0.49mm². A custom-sensor development permits a medical device OEM to optimise the sensor for a specific application and provides better performance and cost trade off. With NanEye sensors, you can bring visualisation into virtually any micro-invasive procedure or greatly improve the image quality and operation security when replacing traditional fibroscope technology.

Further information

AWAIBA GmbH
www.awaiba.com

Future-proof ETX and XTX standards



AMD Fusion processors deliver significant performance improvements.

congatec, a leading manufacturer of embedded computer modules, is giving the ETX and XTX form factors a viable future with the integration of AMD Fusion technology. Modules based on AMD Fusion processors deliver significant improvements with regard to performance and scalability. Intel's discontinuation

of the 855 chipset family left a major gap in the market for ETX computer modules. This gap has now been closed by processor manufacturer AMD with the Fusion architecture.

congatec has integrated the AMD Fusion architecture into its ETX and XTX COM modules, opening up new scalability options for this form factor to meet even the most demanding tasks. The company supports the Fusion architecture with two new COM modules: conga-EAF and conga-XAF. While conga-EAF is an ETX module, conga-XAF is an XTX module based on the XTX standard. The two modules have many similarities. Both run on processors from AMD's G-series and are equipped with the embedded controller hub Hudson E1, providing a powerful and compact two-chip solution with up to 4GB of fast and inexpensive single-channel DDR3 memory. congatec currently offers a total of five processors from the AMD embedded G-Series platform.

The Fusion architecture combines two previously separate computing functions, namely the central processing unit (CPU) and the graphics processing unit (GPU) into an accelerated processing unit (APU). The architecture implements the graphics unit as general-purpose GPU (GPGPU) and contains many configurable parallel processing units that can also be used for tasks that have nothing to do with the graphics. The GPGPU can therefore be used to perform certain computing-intensive tasks in parallel. Because of their power efficiency and low power consumption, AMD Fusion processors are ideal for use in fanless and/or battery operated devices.

Further information

congatec
www.congatec.com