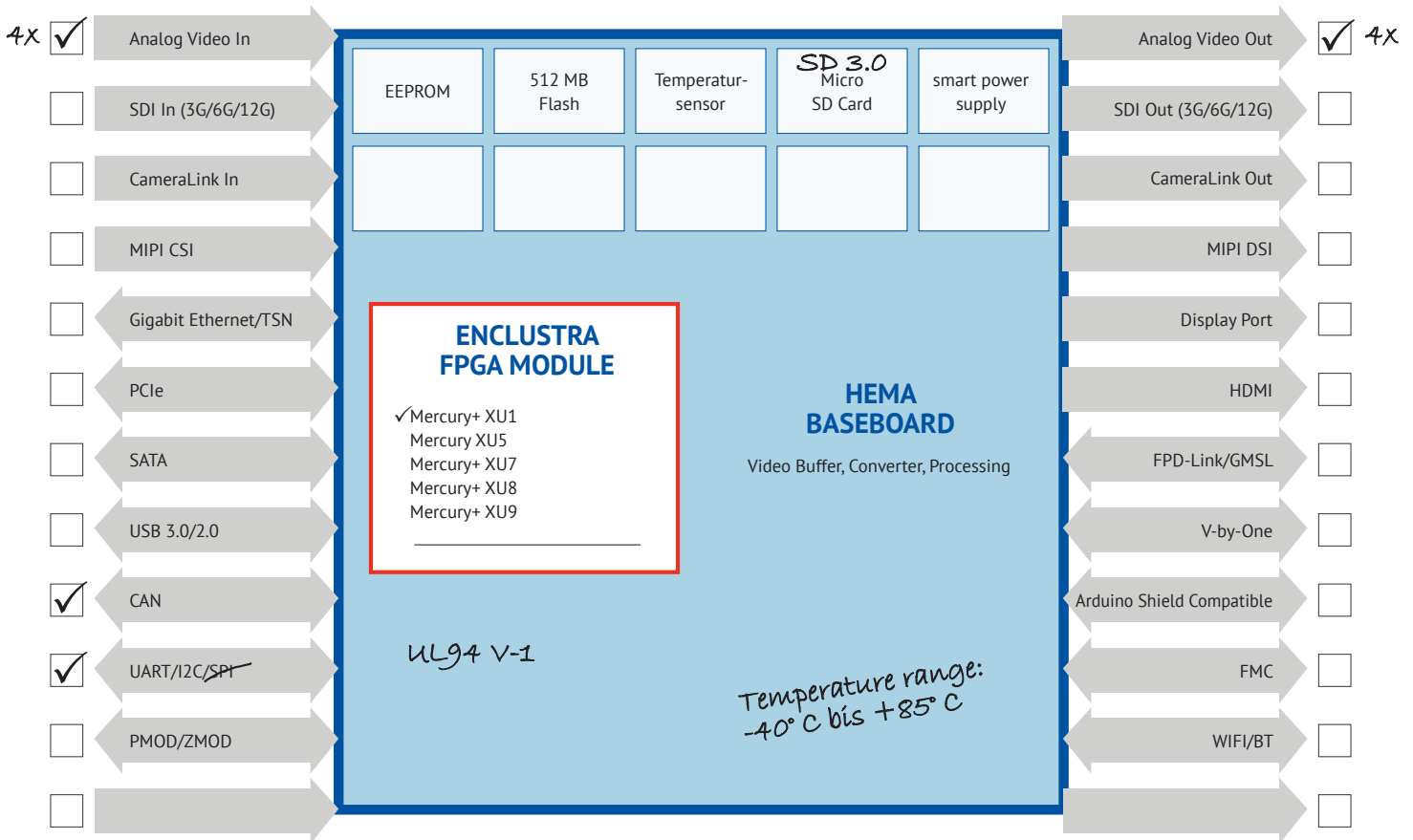


The challenge:

Economical modernization of an existing infrastructure without complete replacement



My experiences in the cooperation with hema:

Partnership

Because I have a strategic partner on an equal footing.

Strategy

Because the solutions enable strategically long-term product series.

Platform

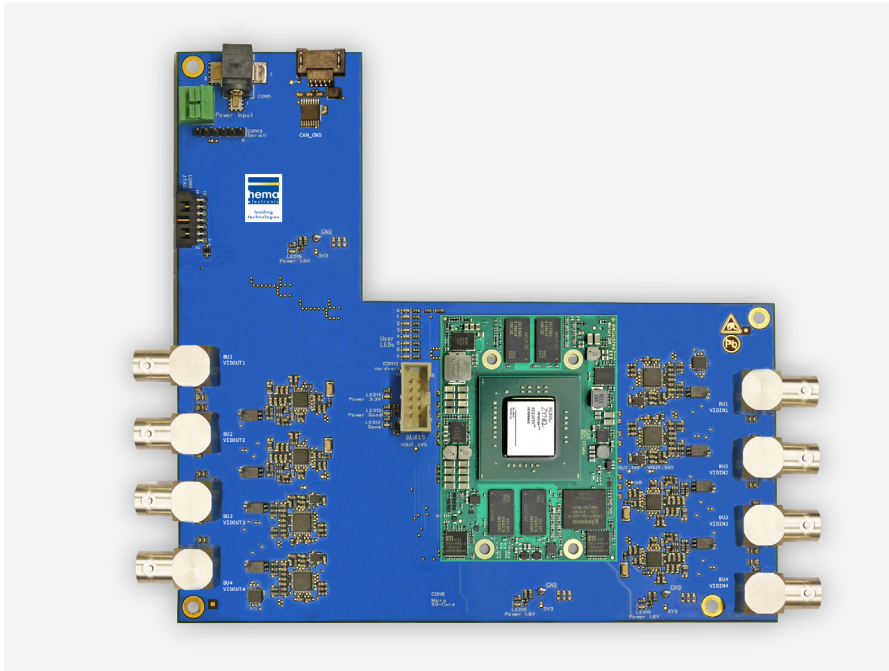
Because modular concepts and platforms deliver strategic advantages.

Future-proof

Because I can pick up my project again and continue it at any time.

... because working with hema is simple, binding and effective!

Save time and costs with smart modernization: Digitizing analog systems economically



Flexible and fast processing, high security and unlimited use: digital data offer great advantages. Nevertheless, costs and effort are high if analog systems are to be replaced in traffic applications, logistics and monitoring. Retrofit solutions that expand analog systems without having to replace the entire infrastructure provide a remedy. With modular electronics design, they are economically feasible and can be adapted to different applications.

Retrofit electronics extend analog systems with the possibilities of digital data processing. Here, the analog signal data is digitized and processed with modern FPGAs or ARM processors. Multiple signal inputs and outputs allow analog and digital data to be combined and output either analog or digital depending on the desired further processing. At the same time, all interfaces of the existing system are supported, so that the electronics

can be perfectly integrated into existing systems. Defective modules can be replaced by more modern components with little effort and the infrastructure can be continuously modernized. A complete system change, which is associated with high effort, costs and risks, is not necessary.

Once the data from the sensors has been digitized, all the advantages of digital processing can be used, above all low-latency processing with response times of less than 35 ms. In addition, new image processing functions are available, such as color graphics overlays, picture-in-picture displays or video multiplexing. For the cost-effective development of such electronics, hema electronic has developed its embedded vision design platform. It includes hardware and middleware as well as a software framework that enables users to obtain a ready-to-use solution in the shortest possible time. To start development,

they select the required interfaces, computing power and functionalities; more than 45 building blocks are already available for this purpose. Unlike a new development, customers benefit from industry-proven circuit parts and a time and cost advantage in development. New functions or customer-specific circuit parts can be easily integrated.

The required computing power is provided by System on Modules with FPGAs and/or ARM processors. They also include the memories and other EMC-critical components. The modular design reduces complexity during development. The interface of the modules is standardized, so upgrades or different product variants are often possible without a complete hardware redesign.

With the embedded vision design platform, retrofit electronics can be developed in as little as six weeks - from order to near-production prototype. We accompany you through all development steps up to certifications and approvals.

APPLICATIONS

- Retrofit electronics for integration into existing systems - without complete renewal of the infrastructure
- Video data recording/streaming, remote data transmission, low latency
- Possible areas of application: Railroads, airports, tunnels, logistics, transportation, surveillance, defense, etc.