

Quad-screen video playback with one single embedded board

DATA MODUL introduces powerful SBC based on Rockchip RK3588 ARM SoC

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DATA MODUL expands its embedded portfolio with a powerful single-board computer from its partner FORLINX Embedded. The new OK3588 SBC is based on the AIoT processor Rockchip RK3588 and enables the simultaneous control of four independent displays with different video content – while maintaining low power consumption and a compact design.

With this quad-screen functionality, the OK3588 sets new standards in the embedded market, particularly in the ARM ecosystem. While multi-display solutions often require multiple boards or additional graphics solutions, the OK3588 enables four fully independent video outputs on one single embedded board.

Powerful hybrid processor with 8K support

The board is powered by the RK3588 SoC featuring an 8-core architecture (4x Cortex-A76 and 4x Cortex-A55). The processor further integrates a powerful graphics engine with 8K video encoder and decoder support.

Four independent display interfaces provide maximum flexibility in system design:

- ▶ HDMI
- ▶ Embedded DisplayPort (eDP)
- ▶ DisplayPort (DP)
- ▶ MIPI-DSI

Integrated AI performance for edge applications

In addition, the RK3588 features an integrated NPU delivering up to 6 TOPS of computing performance. This enables demanding edge AI applications directly on the device – without the need for additional accelerator cards. Vision AI algorithms, camera-based analytics and intelligent image processing can therefore be implemented efficiently and in an energy-optimized manner.

Economic advantages for OEMs

By consolidating four display outputs on a single ARM-based SBC, customers benefit from:

- ▶ reduced hardware costs
- ▶ simplified system architecture
- ▶ lower energy consumption
- ▶ reduced cooling requirements
- ▶ more compact designs
- ▶ reduced development and maintenance effort

Especially in industrial environments, this leads to an optimized total cost of ownership (TCO) and higher system reliability.

Target markets and typical applications

The OK3588 targets applications in:

- ▶ Industrial IT
- ▶ Digital signage
- ▶ Vision AI
- ▶ Medical and healthcare applications
- ▶ Agricultural vehicles

Typical use cases include:

- ▶ Industrial HMIs with camera-based analysis
- ▶ Edge computing and vision AI systems
- ▶ Multimedia and video applications
- ▶ Digital signage systems with multiple displays

With the OK3588, DATA MODUL further underlines its expertise as a system integrator for ARM- and x86-based embedded solutions, providing customers with a powerful and energy-efficient platform for demanding multi-display and AI applications from a single source.

Further information is available at www.data-modul.com. The solution will also be presented from **March 10–12** at embedded world in Nuremberg at the DATA MODUL booth (**hall 1, booth 368**). For individual consultation, please contact your DATA MODUL sales representative via email at sales@data-modul.com or via www.data-modul.com/de/contact.

About DATA MODUL

As a passionate enabler, DATA MODUL AG does everything in its power to turn customers' visions into reality. With a comprehensive understanding of hardware, software and services as a harmonious unit, the focus is on developing customised display solutions that precisely meet the specific needs and objectives of the customer. The outstanding core competence of DATA MODUL AG lies in customising, whereby the company not only provides products, but rather tailor-made solutions with a clear market focus. With over 50 years of experience, DATA MODUL AG represents financial stability, innovative strength and international growth. Its presence at more than 20 locations worldwide and a total area of around 40,000 square metres for production, logistics and administration enables the company to respond flexibly to global challenges.

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