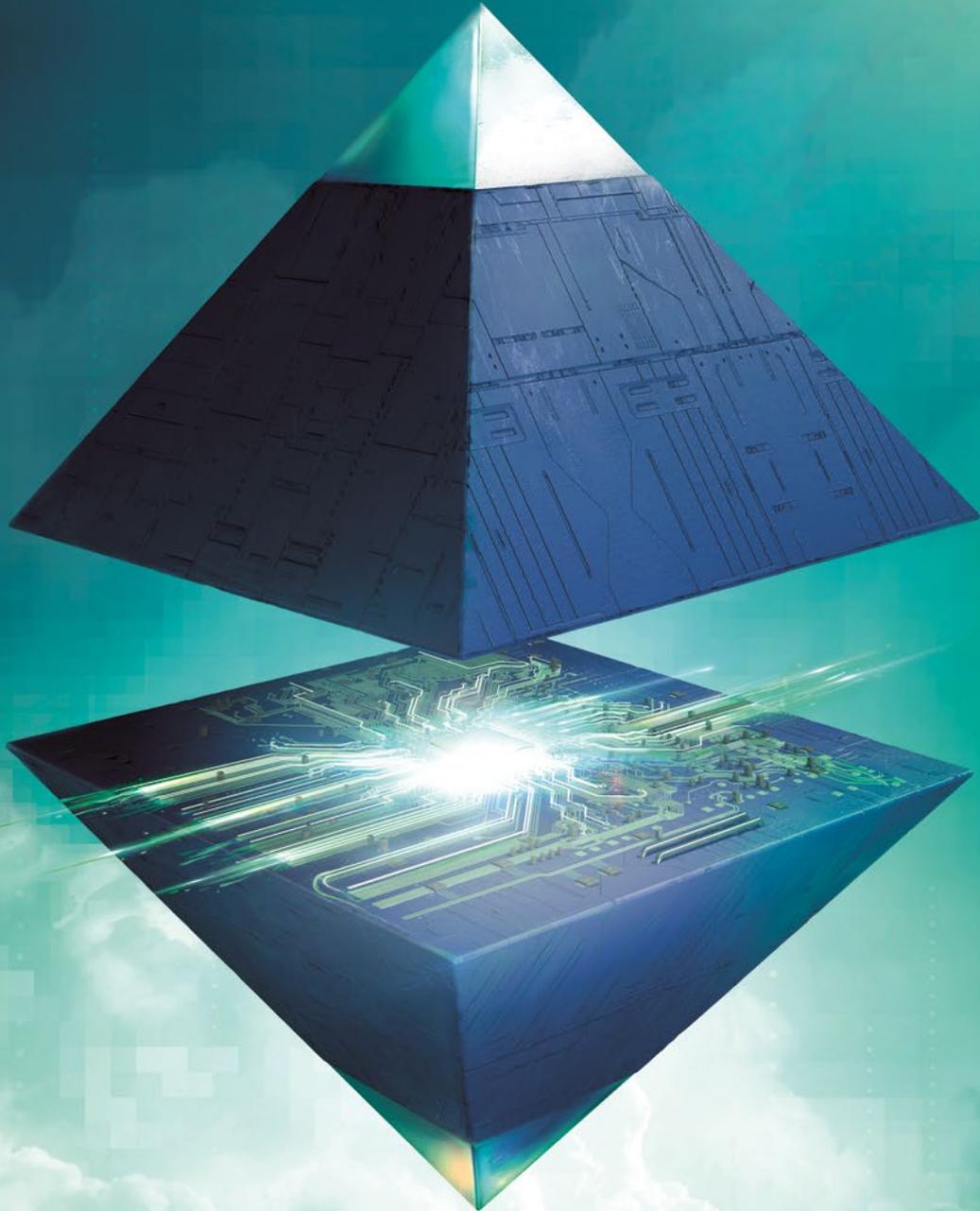


TQ

EDGE COMPUTING

FUTURE MARKETS. DISCOVERED TODAY.



**MORE POWER
FOR EMBEDDED
SYSTEMS**

**TURBO FOR
SMART
APPLICATIONS**

**KEY
TECHNOLOGY
OF THE IOT**

FIVE KEY BENEFITS OF EDGE COMPUTING

(Source: altizon.com)



TREMENDOUS OPPORTUNITIES AWAIT

In the future, more than half of all data in IoT applications will be processed by edge computing.

This edition of our knowledge magazine The Quintessence is dedicated to embedded computing – a technology that is often underestimated among the wider public because it works behind the scenes. The concept has already gone through various stages of evolution, yet the latest trend – edge computing – brings with it entirely new opportunities for device manufacturers and the semiconductor industry. Nowadays, embedded systems are used in a variety of applications, from low-cost consumer electronics to industrial equipment and even autonomous vehicles. As such, they rank among the most important interdisciplinary technologies of the 21st century. Analysts at Transparency Market Research estimate that the volume of the global market for embedded systems will be worth over USD 233 billion by the end of 2021.

According to the Market Study Report, software will account for about seven per cent of this figure, with hardware taking up the lion's share: single-chip microcontrollers, multi-core microprocessors, FPGAs, DSPs, ASICs and even memory components. Even the market for eNVM (embedded non-volatile memory) alone, which includes eFlash, eFuse, eOTP, eMTP and eE2PROM, is anticipated to grow by 18 per cent each year on average to reach a volume of USD 16.8 billion in 2024.

As the Internet of Things (IoT) evolves, the market is gaining another important stimulus. After all, embedded systems are the core elements of smart, networked devices. While early-generation IoT devices are merely able to gather data before passing it on for analysis, today's devices can process this data immediately themselves thanks to their increasingly capable processors – and edge computing is the result of this. This market is growing exponentially: the analysts at Grand View Research



assume that there will be annual growth of 54 per cent. In 2025, this would mean that the global market volume for edge computing would amount to roughly USD 28.84 billion. A report conducted by Strategy Analytics forecasts that something in the region of 59 per cent of all data in IoT applications will be processed by edge computing in 2025. Unlike with the cloud, from which only a select few companies in the technology sector benefit, edge computing offers opportunities to a variety of companies from all manner of industries. This is partly due to the need for edge computing to be tailored to their specific applications: for example, the data memory and computing power for precision-farming applications must be different to those of a mobile healthcare application. In the process, manufacturers need to carefully consider which tasks to run in the cloud, in the fog or at the edge. In the future, this will determine how successfully they can set themselves apart from competitors; not only with a focus on performance and cost benefits, but also with regard to the growing value of the data gathered by the embedded systems.

We at EBV are happy to help you develop the right solution for your edge-computing system. On that note, I hope you enjoy reading the fascinating articles in the TQ of Edge Computing. Let us shed a little more light on embedded systems – there is much to discover!

Slobodan Puljarevic
President, EBV Elektronik

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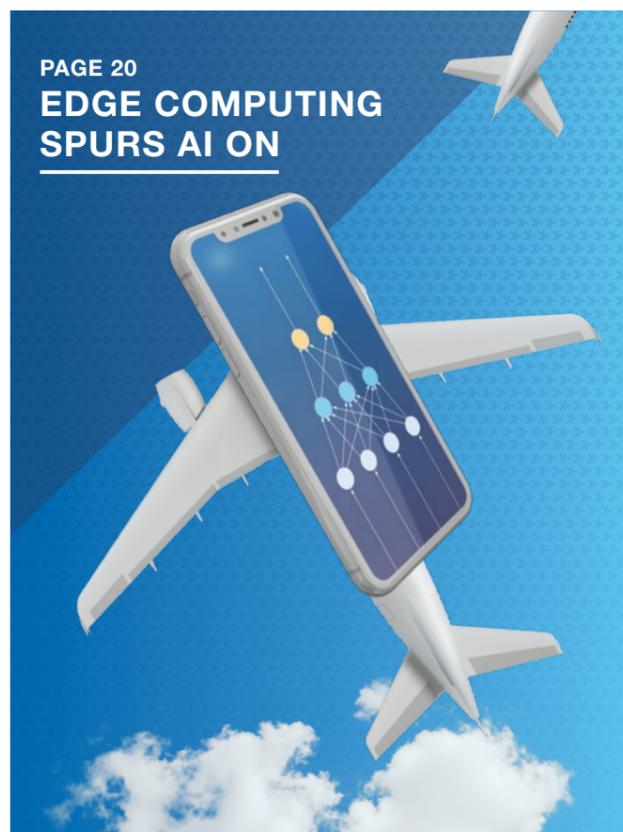
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