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Motivation of Scale4Edge

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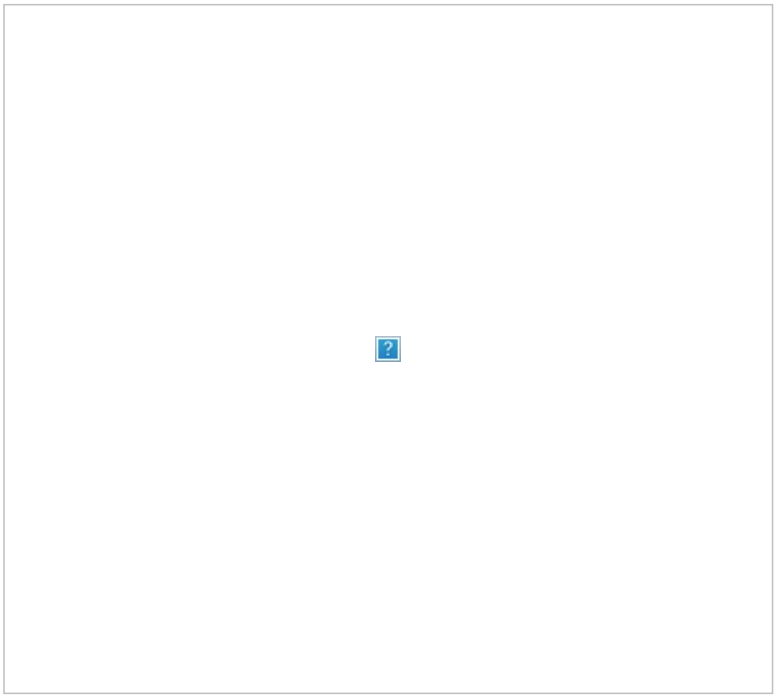
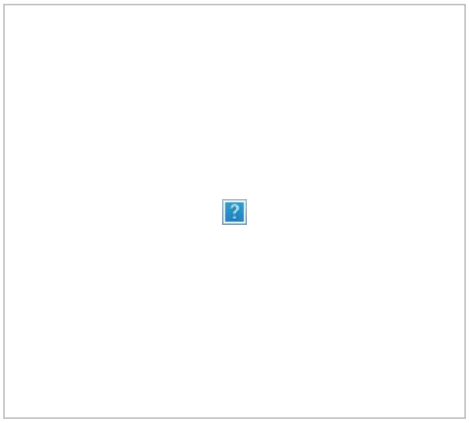
The Internet of Things (IoT) will dramatically improve both the standard of living in the private sector and the productivity of industry worldwide, and thus also in Germany, and will have a lasting impact on many areas of application (including the automotive industry, smart homes, logistics, the energy sector, medical technology, environmental information and weather forecasting). An important prerequisite for this goal is the provision of intelligent edge components in large numbers of variants, which must be embedded in their environment in a tailor-made way and interact with it independently. Edge components refer to the devices that are needed for communication between humans and the environment or machine and thus between the real and virtual world, and which must be equipped with a high degree of intelligence to ensure acceptable use. This requires resource- and energy-efficient processing of data directly in the edge components, in contrast to conventional centralized data processing in the cloud, e.g. to support people intelligently or to interact with machines and the environment in an optimized way. In doing so, security (safety and security) and privacy with complete data sovereignty are to be guaranteed. In addition to the IoT market, important German key industries such as the automotive industry, industrial automation and medical technology also benefit to the same extent from the technologies of intelligent edge components. Here too, the shift of data processing to intelligent edge components can lead to new types of advanced applications. Currently available standard components are unsuitable for these application scenarios due to the widely varying characteristics and requirements, so that there is a great need for application-specific edge components with high market potential for German industry and German SMEs.





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