

ELMOS

Chinese chipmaker on shopping spree

A Swedish daughter company of the Chinese SAI Microelectronics likes to buy the Elmos Semiconductor production facilities in Germany. This needs to be approved by the German government.

Update from November 9, 2022: The German government has prohibited the sale of Elmos' semiconductor production facilities in Germany to a Chinese investor after security concerns. This is reported by the news agencies Deutsche Presse-Agentur (dpa) and Reuters, claiming government circles.



The Chinese SAI Microelectronics is involved in automotive and military projects (Source: Adobe Stock)

Elmos is a German chipmaker specialized in MEMS (micro electro-mechanical system) development and production. The company supplies mainly to the automotive industry. One of the products is a system base chip (SBC) comprising a CAN FD transceiver. End of last year, the Swedish Silex Microsystems and Elmos, signed a sale and purchase agreement (SPA) to transfer the Elmos wafer fabrication at the Dortmund location to Silex. The Swedish company belongs to SAI Microelectronics headquartered in Beijing, China. The Chinese enterprise has a strong relation to the Chinese government and is also involved in military projects. This is why, the German government evaluates currently, if the purchase is politically acceptable.

Elmos likes to sell its wafer fabrication activities in Dortmund for a net purchase price of 85 million €. The purchase incorporates a supply agreement under which Silex Microsystems will continue

the current wafer manufacturing, operating as an independent foundry supplying CMOS wafers to Elmos.

Based in Dortmund, Germany, Elmos develops, produces, and markets semiconductor products, primarily for use in the automotive industry. The products communicate, measure, regulate, and control safety, comfort, powertrain, and network functions. "The acquisition of this automotive qualified 200-mm wafer fab will be an important milestone in our successful growth strategy as World Leading foundry for MEMS and advanced wafer processing services," said Dr. Edvard Kälvesten, CEO of Silex. "Although Elmos is on a growth path, the customer demand for our 350-nm automotive products will decline in the long term, as smaller node size products will be used in the future," said Dr. Arne Schneider, CEO of Elmos.

SBC with CAN FD transceiver

The CAN SBC family by Elmos provides a CAN FD physical medium attachment implementation and the main μC power supply. Depending on the product version, this can be a DC/DC buck converter or an LDO (low drop-out) regulator with 3,3 V or 5 V output voltage and load current up to 200 mA. In the LDO version an external NMOS transistor allows to share the power dissipation between external transistor and internal LDO. The integrated CAN high-speed (HS) transceiver complies with ISO 11898-2:2016 and supports data phase bit rates up to 2 Mbit/s.

CAN FD networks are used increasingly in passenger cars and heavy-duty vehicles (e.g. based on SAE J1939-17/22). Additionally, UAVs (unmanned aerial vehicles) are migrating from Classical CAN to CAN FD communication.

All supplies are monitored and can signalize a fail-event by means of SPI (serial peripheral interface). System failure can activate a fail-safe output signal for limp home support. The CAN SBC family provides sleep, stop, active, failsafe modes.

[hz](#)