

sondrel

Sondrel poised to support the evolution of intelligent cars with ultra-complex chips

The next generation of cars will have software running on customised central platforms

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According to Sondrel (AIM:SND), a leading provider of ultra-complex chips, the designing of Software Defined Vehicles (SDVs) is changing the automotive ecosystem, including new methodologies and technology approaches that could significantly reduce costs and shorten time to market for advanced features.



According to a report by IDTechEx, [Connected and Software-Defined Vehicles 2024-2034: Markets, Forecasts, Technologies](#), “*Connected and Software-Defined vehicles (SDVs) represent a new paradigm for automakers and consumers. Whereas older ICE (Internal Combustion Engine) vehicles were a conglomeration of 70+ Electronic Control units, kilometres of wiring, and many thousands of components, the new era of vehicles can be more centralized, connected, and convenient, bringing benefits to both the consumer and OEM.*”

“Differentiation has always been key for car manufacturers,” explained Oliver Jones, Sondrel’s VP Strategic Sales. “As software, electronics and connectivity become the dominant sources of innovation in cars, car manufacturers are each creating their own platforms of bespoke chips and software that can be scaled to suit all the various models of vehicle (SDV) in their range. Such a platform will provide cost savings from the huge economies of scale and prevent rivals from copying their innovations as significantly fewer off-the-shelf chips are used.

“We have a head start in being able to provide such bespoke platform solutions for customers as we already have our innovative, modular family of *Architecting the Future* design platforms with the SFA 250A and the SFA 350A that are specially designed for automotive use and ISO 26262 compliance, and have already been successfully used to fast track automotive projects. These powerful platforms were designed to support scalability based on requirements and to be configured with the processing capability and power depending on the end use case and the demands of the customer’s software.

“The challenge is that SDV chips will need several processors with billions of transistors to deliver the advanced processing performance to run all the functions such as infotainment, ADAS, vehicle sensing and connectivity. Our team works closely with customers at the architectural design stage to ensure that the right balance of power, performance and cost is achieved right from the start. We use the most advanced semiconductor nodes and our turnkey service can take projects all the way from initial architectural design through the exhaustive testing needed for automotive components to supplying chips. This turnkey service frees the Automotive OEMs from the risks of a multi-stage, multi-supplier, manufacturing chain that have become all too problematic over the past couple of years. By partnering with Sondrel, they can now own their chip destiny and, with our global footprint, we are ideally positioned to deliver it for customers around the world.”

Sondrel’s experience in automotive electronics has been developed from many chip projects that built up the company expertise in functional safety (FuSa), ISO 26262 and silicon-level security. The latter is particularly important for SDV cars as the 10- to 15-year lifetime of cars means that updates and patches will have to be implemented without exposing vulnerabilities to hackers so security needs to be integral to the chip design. This has to be right from the start when the chip is being specified and continued through all the stages of the chip design and on into the silicon production. Jones concluded, “We are one of the few companies with the experience and expertise to design such ultra-complex chip projects that fully integrate hardware and software and will be the enablers of SDVs.”

More on Sondrel’s innovative *Architecting the Future* IP platforms [here](#).

About Sondrel (Holdings) PLC

Sondrel is a UK-based fabless semiconductor company specialising in high end, complex digital Application Specific Integrated Circuits (ASICs) and System on Chips (SOCs). It provides a full turnkey service in the design, prototyping, testing, packaging and production of ASICs and SoCs.

The Company is one of only a few companies capable of designing and supplying the higher-spec chips built on the most advanced semiconductor technologies, selling into a range of hyper-growth end markets such as high-performance computing, automotive, artificial intelligence, VR/AR, video analytics, image processing, mobile networking and data centres. Sondrel designs have enabled products by leading technology brands including Apple (iPhone), Sony (PlayStation), Meta’s (Oculus), Samsung, Google and Sony smartphones, JVC (prosumer camcorders), Tesla and Mercedes-Benz cars.

Sondrel is well-established, with a 20-year track record of successful delivery, supported by long standing ecosystem partnerships including Arm, TSMC and Samsung. Headquartered in the UK, Sondrel has a global presence with offices in UK, USA, China, India and Morocco. It is listed on the London Stock Exchange with the ticker AIM:SND.

For more information, visit www.sondrel.com

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