



Sondrel's SFA 100 IP platform for intelligence gathering chips at the Edge

High performance IoT solutions for AI at the Edge can now be created up to 30% faster

Reading, UK 5 July 2021. Designed to be the solution for an AI compute device right at the Edge, Sondrel's new SFA 100 IP reference platform makes creating high-performance, battery-powered IoT devices easy and fast. The design has an onboard Arm® CPU to locally process data gathered from its associated sensors for onward transmission via wire or wireless connection for further analysis. Naturally, security is built in using standard secure/encrypted protocols. The datasheet can be downloaded at <https://www.sondrel.com/solutions/architecting-the-future>



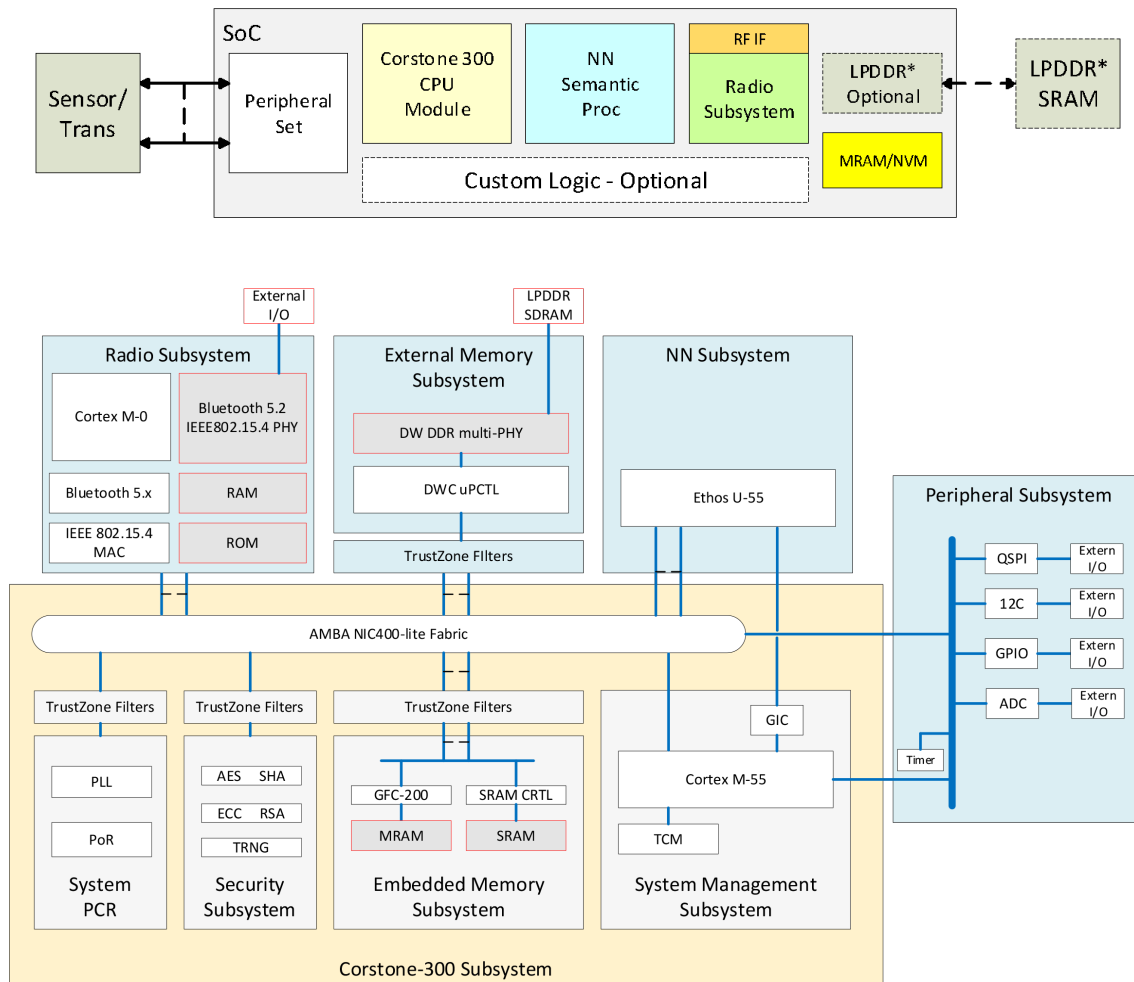
“Knowledge is power but raw data needs to be processed to make useful,” explained Graham Curren, Sondrel’s CEO. “The Internet of Things is all about gathering information about what is happening in a smart house, a smart factory or a smart office to make them smart. The SFA 100 IP platform has been designed specifically for this purpose by providing a compact, powerful, compute capability to intelligently transform data into knowledge and add ‘smarts’. Most of the design work has already been done to create this reference design so that all that is needed is the customer’s own IP and any minor customisation needed for the final ASIC. This innovative, *Architecting the future*™, semi-custom approach therefore reduces risk, design costs and time to market by up to 30% compared to starting from scratch.”

The SFA 100 provides the ability to integrate a machine-learning engine onto a low cost, low power edge device and is based on the Arm® Corstone™-300 subsystem that ensures a very high level of security. It consists of an Arm Cortex®-M55 with secure boot with cryptographic algorithm accelerators and supports TrustZone® and CryptoCell™ for additional security for the onward processed data. Also included is the Arm Ethos™-U55 Machine Learning (ML) processor that provides a 480x uplift in ML performance. This powerful, combined processing capability enables the endpoint device to perform a variety of ‘smarts’ such as voice activation, image classification, gesture recognition, filtering, inference and tracking depending on the application. If these need more memory, it can easily be scaled up via the DRAM interface.

The design has GPIO, I2C, UART and QSPI peripheral interfaces to capture sensor data, such as video, image, sound and both static and dynamic data, along with a 12-bit audio DAC for voice commands. The low overall power requirement of the SFA 100 design enables it to

operate on battery power for long periods which is complemented by low power, wireless connectivity using either Bluetooth BT5.1-LE or ZigBee.

To further reduce risk and time to market, Sondrel offers a full turnkey service that turns designs into fully tested, shipping silicon.



About Sondrel™

Founded in 2002, Sondrel is the trusted partner of choice for handling every stage of an IC's creation. Its award-winning, define and design ASIC consulting capability is fully complemented by its turnkey services to transform designs into tested, volume-packaged silicon chips. This single point of contact for the entire supply chain process ensures low risk and faster times to market. Headquartered in the UK, Sondrel supports customers around the world via its offices in China, India, France, Morocco and North America. For more information, visit www.sondrel.com

Press contact:

Nigel Robson, Vortex PR. nigel@vortexpr.com +44 1481 233080

Sondrel and *Architecting the future* are trademarks of Sondrel Limited

Arm, *Cortex* and *TrustZone* are registered trademarks and *Corstone*, *Ethos* and *CryptoCell* are trademarks of Arm Limited

All other trademarks are acknowledged.