



Tessolve introduces a SMARC 2.1 SoM (System-on-Module) based on the NXP S32G2 CPU a high-performance vehicle network processor which integrates Quad Arm® Cortex®-A53 cores operating at 1 GHz and Triple Arm Cortex-M7 dual-core lockstep cores operating at 400 MHz. NXP S32G274A chipset supports ASIL D system designs.

Tessolve leverages its vast experience of product development in automotive and industrial domains all the way from conceptualization to manufacturing to develop S32G2 based SOM and telematic gateway application board and solutions.

The SoM supports 4GB of LPDDR4, 32GB eMMC and 64MB QSPI memory and high-speed IO interfaces PCIe, USB and Gigabit Ethernet. The I/O voltage level is 3.3V

The Tessolve S32G2 SoM is targeted for Industrial and Automotive applications demanding real-time, high-performance processing and ASIL D safety chipset ASIL D safety chipset.

S32G2 Series of processors support ISO 26262 ASIL D safety and offers hardware security, high-performance and are targeted for next generation application processing and networking.

The Tessolve SoM comes with a complete software suite including Device Drivers, BSP and support for Linux v5.4.69

Software Package:

Base Linux package will be provided by NXP. Tessolve provides ready to use SDK which can be used on application specific carrier board for end application development.

Operating System:

- Linux v5.4.69 and U-boot v2020.04
- Yocto 3.2 (Gatesgarth)

Product Brief



Technical Information:

Module Name	S32G2-SMARC-SOM
Processor	<ul style="list-style-type: none"> S32G274A
Memory	<ul style="list-style-type: none"> 4GB LPDDR4 @3200 MT/s 32GB eMMC / SDIO 64MB QSPI
Ethernet	2x 10/100/1000 ports
USB	1x USB 2.0 Host
SerDes subsystem with PCIe	<ul style="list-style-type: none"> 2x supporting Gen3 in X1 and X2 modes
Other Interfaces	<ul style="list-style-type: none"> 4x I2C 2x UART 2x SPI 14x GPIO
Automotive Network	<ul style="list-style-type: none"> 8x CAN 2x FlexCAN 4x LIN 1x FlexLIN 1x FlexRay
Operating Voltage Range	3.2 to 5V DC @ 3A
Temperature Range	-40 Deg C to +105 Deg C
Form Factor	82 mm x 50 mm



RoHS Compliant

Ordering Details:

Part Number – SOM	Description
M2A-S32G2-2G32G-IT	2GB RAM/32GB Flash (Temp:-40°C to +85°C)
M2A-S32G2-3G32-IT	3GB RAM/32GB Flash (Temp:-40°C to +85°C)
M2A-S32G2-4G32-IT	4GB RAM/32GB Flash (Temp:-40°C to +85°C)
M2A-S32G2-2G64-AT	2GB RAM/64GB Flash (Temp:-40°C to +105°C)
M2A-S32G2-3G64-AT	3GB RAM/64GB Flash (Temp:-40°C to +105°C)
M2A-S32G2-4GR64-AT	4GB RAM/64GB Flash (Temp:-40°C to +105°C)

Product Brief



NXP S32G2 Application Gateway

Tessolve Semiconductor introduces compact, high-performance application gateway based on S32G274A SMARC SoM targeted for vehicle networking and industrial applications.

Features of Application Gateway:

- Wireless Connectivity: Wi-Fi 6 or 5G/LTE
- M.2 AI Acceleration Module
- M.2 NVMe Storage:
- GNSS module supporting GPS + GLONASS and IMU 6 Axis Sensor
- Automotive Load Dump Protection with 6V to 36V wide supply
- Multiple network interfaces, featuring,
 - 6x CAN/CAN FD, 2x FlexCAN
 - 2x GbE Ports
- 3x USB 2.0 supported through Hub
- Box Dimensions: 190mm x 128mm x 41.75mm, Weight: 1.4 kg



Part Number - EVK	Description
M2A-APBRDS32-EVK-AT	S32G2 EVK (SOM + Carrier Board) Temp:-40°C to +105°C

Part Number - TGU	Description
M2A-APBRDS32-TGU-AT	Telematics Gateway Application Unit Temp:-40°C to +105°C

Note: Accessories are available from Tessolve

Product Brief



Sales Office:

India

Tessolve Semiconductors Pvt. Ltd
Embedded Systems Group
Plot No: 31 (P2), Electronic City Phase II,
Bangalore – 560 100, Karnataka, India
Phone: +91-80-4181 2626
Email: sales@tessolve.com

Europe & EMEA

David Mudard
Tessolve
Embedded Systems Group
France
Phone: +33 (0)4 28 29 08 00 / +33 (0)6 37 30 37 32
Email: david.mudard@tessolve.com

Singapore

Tessolve Engineering Services Pte Ltd.,
Blk 20, Woodlands Link, #06/20
Singapore 738733
Tel : +65 6297-9613
Email : sales.sg@tessolve.com

USA - California

TessolveDTS Inc., 226 Airport Parkway,
Suite 300, San Jose, CA 95110
Tel: +1 408-865-0873
Fax: +1 408-865-0896
Email (Sales Enquiries): sales@tessolve.com
Email (Other Enquiries): HR@tessolve.com