Product brief

AURIX™ TC35xTA
High performance radar and autonomous driving microcontroller

Infineon releases its second generation AURIX™ TC3xx microcontroller in embedded Flash 40 nm Technology. It comes with an increase in performance, memory sizes, connectivity and scalability to address the new automotive trends and challenges. In terms of performance, the radar application high-runner TC35xTA offers 3 cores at 300 MHz, up to 3.6 MBytes embedded RAM, and consumption below 2 W. Its mirrored embedded flash banks (2x 2 MB) support A/B swap capabilities.

For radar applications, the TC35xTA comes in a BGA-292 package (17 x 17 mm) and in a BGA-180 package (12 x 12 mm) for space critical designs. It embeds specific accelerators and offers high amount of radar specific embedded RAM (2.5 MB). The SPU (Signal Processing Units) is dedicated to the radar processing, and offers not only FFT acceleration, but also filtering and mathematical transforms functions (e.g. CFAR, binning, windowing, …). A complete tool chain is also provided to help customers develop optimized algorithms.

The TC35xTA is software and pin to pin compatible to easily migrate to TC39xXA and TC33xDA, in order to build a complete radar portfolio.

Safety is the core know-how of Infineon, and all products provide safety mechanism (including but not limited to lock-step cores, LBIST, ECC RAM) to ensure a safety platform supporting ASIL-D ISO 26262. The TC35xTA has 2 lock-stepped cores and 1 non lock-stepped core, providing up to 1400 DMIPS in ASIL-D and 700 DMIPS in ASIL-B.

In terms of security, this product has an HSM compliant Full EVITA, ensuring the implementation of future proofed security measure. On top of it, it offers extensive connectivity with CAN-FD, FlexRay, LINs, QSPI and new high speed communicating interfaces such as Gigabit Ethernet (RGMII).

www.infineon.com
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Block diagram – TC357TA

Product table

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Ordering code</th>
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<tbody>
<tr>
<td>SAK-TC35xTA-64F300S</td>
<td>3x 300 MHz TriCore™, 4 MB flash, 3.6 MB SRAM, 2x SPU, radar interface, 1 Gbps Ethernet, 8 CAN FD, EVITA Full HSM, LFBGA-292</td>
<td>On request</td>
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<tr>
<td>KIT_A2G_TC35xA_S_TRB</td>
<td>Eval board: 3x 300 MHz TriCore™, 4 MB flash, 3.6 MB SRAM, 2x SPU, radar interface, 1 Gbps Ethernet, 8 CAN FD, EVITA Full HSM, LFBGA-292</td>
<td>On request</td>
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<tr>
<td>KIT_A2G_TC35xA_TFT</td>
<td>Low cost kit: 3x 300 MHz TriCore™, 4 MB flash, 3.6 MB SRAM, 2x SPU, radar interface, 1 Gbps Ethernet, 8 CAN FD, EVITA Full HSM, LFBGA-292</td>
<td>On request</td>
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