SAK-TC333LP-32F200F AA

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Powerful next-generation AURIX™ TC3xx system architecture

SAK-TC333LP-32F200F AA belongs to the AURIX™ **TC33xLP** family**.** AURIX™ second generation (**TC3xx**) comes back with an increase in performance, memory sizes, connectivity and more scalability to address the new automotive and industrial trends and challenges. In terms of performance, T33xLP offers 1 core running at 200 MHz (300 MHz*) and up to 248 KBytes embedded RAM, and consuming below 1 W.

*300MHz on request

Key features:

- 1 TriCore™ running at 200 MHz
- Supporting floating point and fix point with all cores
- 2 MB flash/ ECC protection
- 248 KB SRAM / ECC protection
- 16x **DMA** channels
- Redundant and diverse timer modules (**GTM**, **CCU6**, **GPT12**)
- 1x Gbit Ethernet
- 2x **FlexRay**, 6x CAN FD, 5x **ASCLIN**, 4x **QSPI**, 6x **SENT**, 1x I²S emulation
- eVita full **HSM** (ECC256 and SHA2)
- **TQFP-100 package**
- ISO 26262 ASIL-D support
- **AUTOSAR** 4.2 support
- Single voltage supply 5 V or 3.3 V
- Standby mode controller
- Temperature : -40°C to 125°C

System benefits:

- Best-in-class performance enabling ASIL-D designs
- Upward and downward scalable to the rest of AURIX™ TC3xx family
- Easy migration from AURIX™ TC2xx thanks to high software and hardware compatibility

Applications:

Industrial applications:

- **Industrial robots** (advised for this product)
- **Solar panels**
- **Wind turbine inverters**
- **IO controller**
- **Servo drives**
- **Elevators**
- **Inverters**

Safety applications:

- **Air bag System** (advised for this product)
- **Chassis domain control**
- **Braking**
- **Pixel lighting**
- **Scable EPS solution** (advised for this product)
- **Full feature sensor fusion**
- **Multi-purpose camera** (advised for this product, especially the TC233LP)
- **Active suspension control system**
- **Automotive 24 GHz radar system**
- **Highly integrated automotive 77 GHz radar chipset**
- **Sensor fusions**

Connectivity Applications:

- **Wireless Charging Solution** (advised for this product)
- **Advanced gateway architecture**
- **Telematic Control unit and V2X** (advised for this product)
- **High-feature Body Domain Control unit**

Transportation applications:

- **Commercial and Agricultural Vehicles (CAV)** (advised for this product)
- **CAV 24 GHz radar**
- **Commercial and Agricultural Vehicles (CAV)**
- **Drones/Multicopters**

Powertrain applications:

- **Transfercase**
- **Gasoline multi-port injection – discrete solution**
- **Gasoline direct injection**
- **Driving Domain Controller (DDC)**
- **Automatic transmission – hydraulic control**
- **Double-clutch transmission – hydraulic control**
- **Double-clutch transmission – electrical control**
- **48V micro-hybrid**

(H)EV applications:

- (H)EV battery management system
- **EV charging station**
- **(H)EV main inverter**
- **DC-DC Converter**

Interactive Diagram [pass over the diagram with the cursor to learn more about the features]

Parametrics

Parametrics	SAK-TC333LP-32F200F AA
# of cores / lockstep cores	1/1
ASIL/SIL support	ASIL-D/ SIL-3
CAN Nodes	6
Clock Frequency	200.0 MHz
DMA Channels	16
DSP Functionality	yes
FlexRay™	2
Floating Point Unit	yes
LIN	5.0
On-chip Clock Generation	yes
On-chip Voltage Regulator	yes
Oscillator Watchdog	yes
Program Memory	2.0 MByte
Real Time Clock	yes
SPI	4.0
SRAM (incl. Cache)	248.0 kByte
Temperature	-40°C to 125°C
Type of Memory	Flash
Watchdog Timer	yes
eMMC	no

Documents

+ Expand all

+ Application Notes
+ Product Brochure
+ Application Brochure
+ Product Selection Guide
+ Presentations

Order

Sales Product Name	SAK-TC333LP-32F200F AA
OPN	TC333LP32F200FAAKXUMA1
Product Status	on request
Package name	PG-TQFP-100
Order online	
Completely lead free	yes
Halogen free	yes
RoHS compliant	yes
Packing Size	1000
Packing Type	TAPE & REEL
Moisture Level	3
Moisture Packing	DRY

Boards

+ PCB Design Data

Tools & Software

TriCore™ Development Tools

+ AURIX™ Development Studio
+ Free TriCore™ Tools
+ Simulation / Modelling
+ Software Automation / Autocode Generation
+ Operating Systems / Middleware
+ Compiler Tool Chains
+ Timing & Program Analysis
+ Debugger, Test and Verification Systems
+ Flash Programmers
+ Calibration / Data Measurement / Rapid Prototyping
+ Access to MCAL Driver
+ Embedded Software

Embedded Software Solutions

+ Infineon software overview
+ AURIX™ - AUTOSAR MCAL driver
+ Infineon AUTOSAR MCAL drivers MC-ISAR TC2xx product overview
+ Infineon AUTOSAR MCAL drivers MC-ISAR TC3xx product overview

+ Software

Training

+ Online Trainings / eLearning
+ Expert classroom trainings for Infineon Microcontrollers
+ Quick Trainings
+ Expert Trainings

Support

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How can I get my 24 GHz radar demo board started/software fo...

For Distance2GO: Please go to software & tools then follow the steps to download the Infineon toolbox followed by the steps in the start up...

+ Read more

Package information

The package information is available on our homepage at https://www.infineon.com/packages Please note, that they are divided into the subcategories "Leaded and...

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