

# Quad-Core








## Vehicle Navigation Processor

### Overview

The T3 processor represents Allwinner's latest achievement in the smart automotive sector. The processor is ideal for applications that require 3D graphics, advanced video processing, rich user interfaces, low power consumption and a high level of system integration. The T3 delivers the kind of high level user experience we are used to in portable consumer devices and transitions it into the environment of modern vehicles.

In addition to its high level of performance it also supports driver safety features, a video record feature and an array of inputs and connectivity options for other devices.

### Highlights

-  Content can be displayed on either 4-lane MIPI DSI displays, an RGB panel or a LVDS panel.
-  Integrated audio codec with 24bit/192KHz DAC playback, and supports I2S/PCM interface for connecting to an external audio codec. I2S/PCM interface includes eight channels of TDM with sampling precision up to 32bit/192KHz.
-  Supports dual CMOS sensor parallel interfaces and 4-channel TVIN , which is capable of executing multi-channel video recording.
-  High-definition (HD) H.264 video encoder with a resolution of 1080p@ 45fps.
-  To reduce the total system cost, the T3 has an extensive range of support for hardware peripherals allowing for an array of configurations, supporting standards such as CAN ,UART, RTP, SPI,CIR,USB2.0OTG, TWI, etc.
-  Supports Linux3.10 and Android 4.4/6.0 system
-  Operating temperature parameters: -40 - 85

### Features

CPU	<ul style="list-style-type: none"> <li>• Quad-core Cortex™-A7</li> </ul>
GPU	<ul style="list-style-type: none"> <li>• Mali400 MP2</li> </ul>

Display Out	<ul style="list-style-type: none"> <li>• 4-lane MIPI DSI displays, or RGB panel, or LVDS panel</li> <li>• 4-channel TV-out</li> </ul>
Display In	<ul style="list-style-type: none"> <li>• Dual CMOS sensor parallel interfaces</li> <li>• 4-channel TV-in</li> </ul>
Video Encoding	<ul style="list-style-type: none"> <li>• High-definition(HD) H.264 video encoder is up to 1080p@45fps</li> </ul>
Video Decoder	<ul style="list-style-type: none"> <li>• Video decouping to 1080p@45fps</li> <li>• Supports multi-formats</li> </ul>
Peripherals	<ul style="list-style-type: none"> <li>• USB x 3/SATA x 1</li> <li>• UART x 8/SPI x 4/Smart Card x 1/TS x 2/TWI x 5</li> <li>• MAC x 2/PS2 x 2/KEYPAD x 1(8 row 8 column)/IR-RX x 2/KEYADC x 2/RTP</li> </ul>
Package	<ul style="list-style-type: none"> <li>• FBGA 468 balls,0.65mm ball pitch, 16mm x 16 mm</li> </ul>
Operating Temperature	<ul style="list-style-type: none"> <li>• -40°C~85°C</li> </ul>

## Block Diagram

