

Product Brief

MEDIATEK

Evaluation Board - i500 Nano SoM

TESSOLVE introduces Evaluation board based on the MEDIATEK i500 Family of processors which integrates Quadcore Arm Cortex-A53 and Quadcore Arm Cortex-A73 equipped with NEON engines operating at 2GHz.

The i500 (MT8385) is a powerful platform designed for portable, home or commercial IoT applications that requires high performance edge processing, advanced multimedia capabilities, multiple high-resolutions cameras, connected touch screen displays, and multi-tasking OS. It's multi-core AI processor (APU) operates up to 500MHz and enables deep learning, neural network acceleration and computer vision applications.

TESSOLVE leverages its vast experience of product development in embedded multimedia systems for professional applications and systems combining audio/video, graphics and HMI. The modules come with a complete software suite including Device Drivers, BSP and support for Android 9.0.

Product development is made easy, with the industry leading complete system solution package from Tessolve.

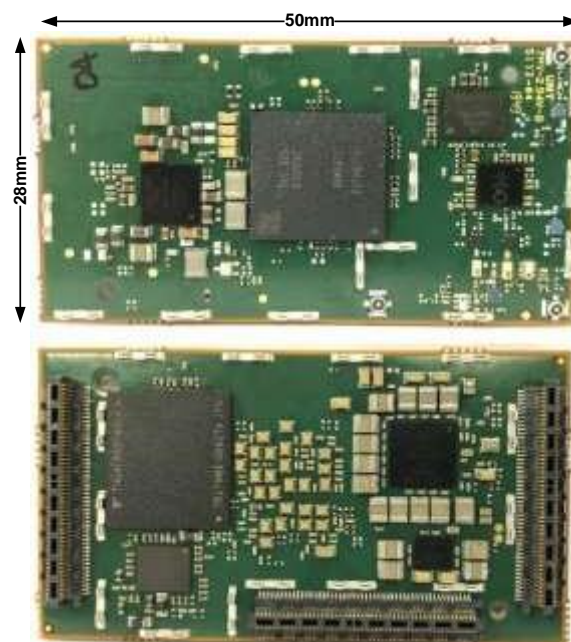


Figure 1: MT8385 Nano SoM

The MT8385_NANO_SOM modules are available in Octa Core CPU with wide variety of IO feature sets.

Technical Information	
Module Name	MT8385_Nano_SOM
Processor	<ul style="list-style-type: none"> • 4xCortex-A73 up to 2.0GHz • 4xCortex-A53 up to 2.0GHz
Graphics	<ul style="list-style-type: none"> • ARM Mali –G72 MP3, 400Mega pixel/sec @800MHz • Open GLES 3.1/3.0/2.0/1.1
Memory	<ul style="list-style-type: none"> • LPDDR4x up to 8GB
Display Interface	<ul style="list-style-type: none"> • 1x MIPI DSI (4-data lanes),1.2Gbps per lane • HDMI 1.4
eMMC	<ul style="list-style-type: none"> • eMMC5.1 (Boot & Storage)
Camera	<ul style="list-style-type: none"> • 2x MIPI CSI interface, 2.8Gbps per lane (4 lane)
Video	<ul style="list-style-type: none"> • Encoder:1080p 30fps H.264 • Decoder:1080p 30fps H.264, H.265/HEVC, MPEG 1/2/4
SD card	<ul style="list-style-type: none"> • 1x SDIO interface (SDIO 2.0/3.0 protocols)
USB	<ul style="list-style-type: none"> • 1x USB 2.0
WiFi/BT	<ul style="list-style-type: none"> • MT6631 (WiFi-11ac), Wi-Fi:2.4GHz,5GHz • Bluetooth :4.2 (Low energy),5.0(Low energy)
GNSS	<ul style="list-style-type: none"> • Supports GPS/GLONASS
Other Interfaces	<ul style="list-style-type: none"> • 4x I2C • 1x SPI • 1x UART • 29x GPIO
Operating Voltage Range	<ul style="list-style-type: none"> • 3.8V
Temperature Range	-20 Deg C to +85 Deg C
Form Factor	50mmx 28mm

RoHS



RoHS Compliant

Evaluation Board Architecture Block Diagram

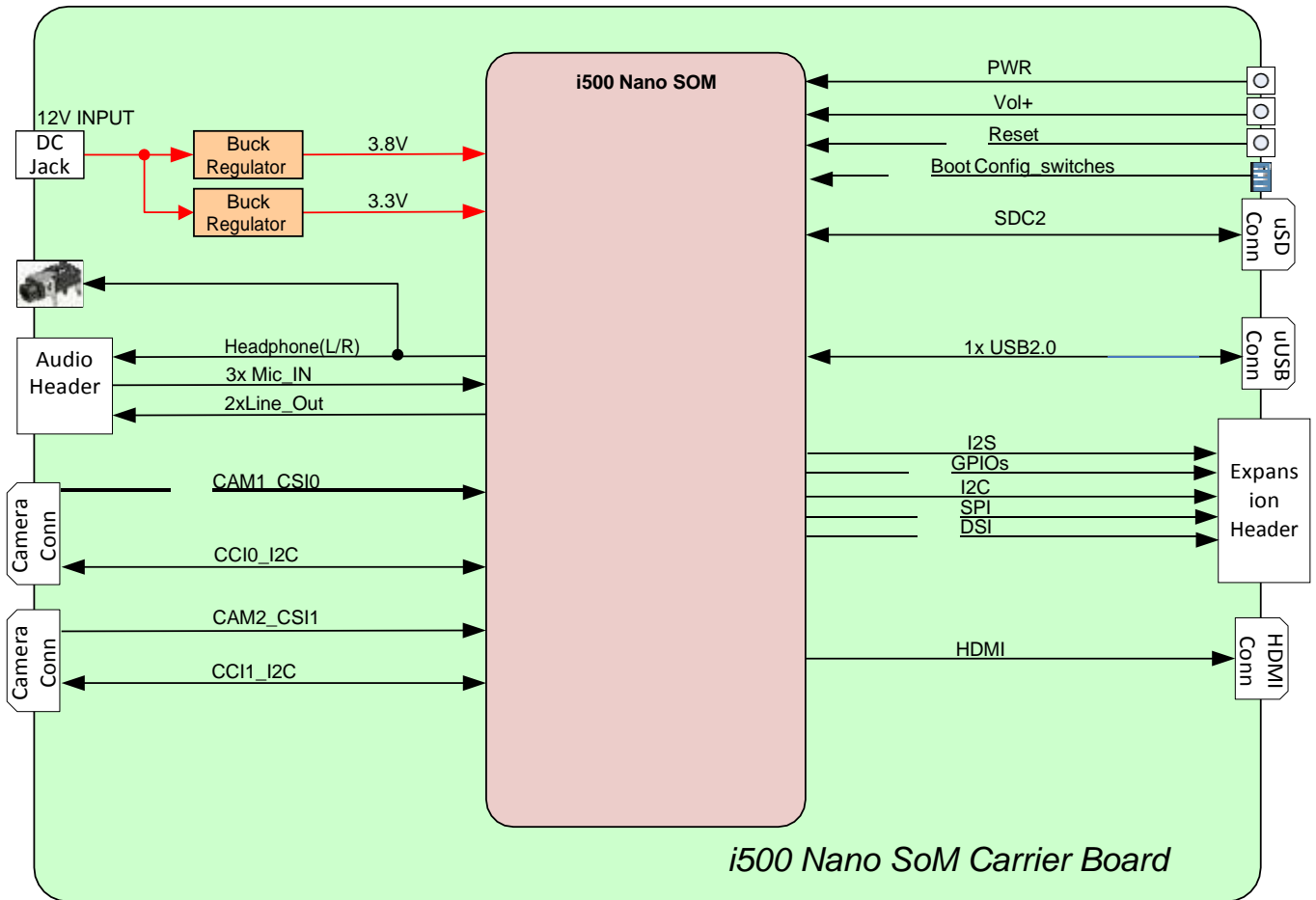


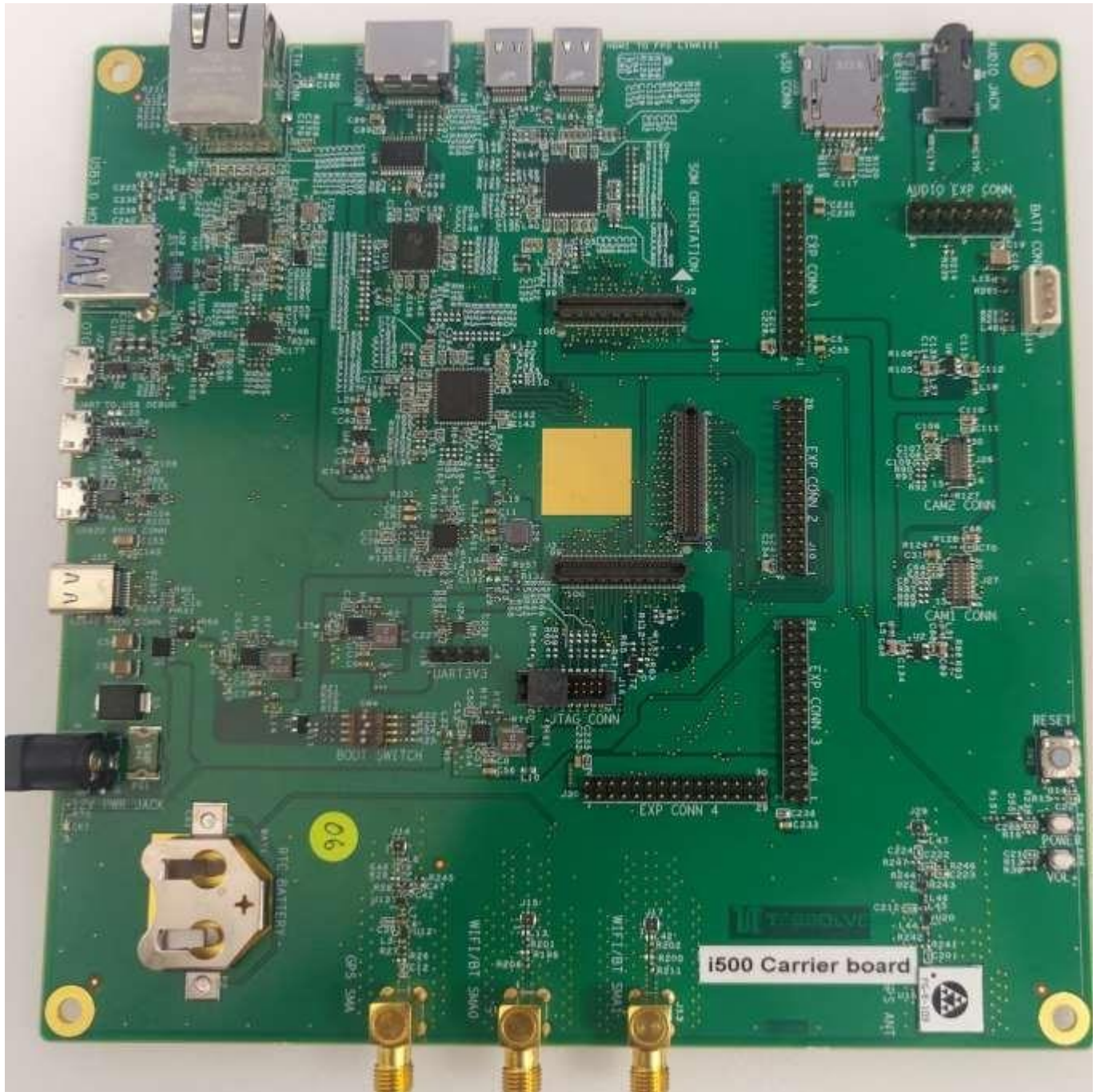
Figure 2: i500 Evaluation Board Block Diagram

Technical Information	
Processor	MEDIATEK i500
Mechanical Form Factor	Mini-ITX (170 mm × 170 mm)
I/O Connectors	1× uUSB2.0 (OTG), 1x HDMI, 2× MIPI-CSI Connectors, 1× MIPI-DSI to FPD link III on USB Type C, 1× 3.5mm Headset, 1× Audio Expansion Connector, Expansion Connector, 1x Micro SD card Slot, 2× MHF4 (WiFi/BT), 1× MHF4 (GPS)
Input Power	12 V DC

Figure 3: i500 Evaluation Board with i500 Nano SoM

Included Software Packages

TESSOLVE provides ready to use SDK for evaluation and application development based on **Android 9.0**



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