iWave
Embedding Intelligence

Development Platform iW-RainboW-G37D

i.MX8M Nano SODIMM Development Board



iWave's i.MX8M Nano SODIMM Development Board incorporates i.MX8M Nano SODIMM SOM which is based on NXP's power efficient i.MX8M Nano ARM Cortex A53 processor and M7 MCU and the carrier board with 5.5'' HD AMOLED MIPI DSI display Kit. The development board can be used for quick prototyping of various applications targeted by the i.MX8M Nano processor. With the 100mmx72mm Pico ITX size, the kit is highly packed with all the necessary on-board connectors to validate the i.MX8M Nano CPU features.

APPLICATIONS: Industrial HMI & Access Control, Mobile POS & Secure e-commerce, Energy Management & IOT gateway, Industrial control & automation, Medical & Healthcare equipment and White goods & Smart appliances.

iW-RainboW-G37D-SODIMM HIGHLIGHTS

i.MX8M Nano SoC

Dual Band WiFi -IEEE 802.11 a/b/g/n/ac with Bluetooth 5.0

5.5'' HD AMOLED MIPI DSI Display

1xGBE, 1x USB, 4x UART, 3x ECSPI, GPIOs

Ultra-compact form factor 100mm x 72mm

SPECIFICATIONS

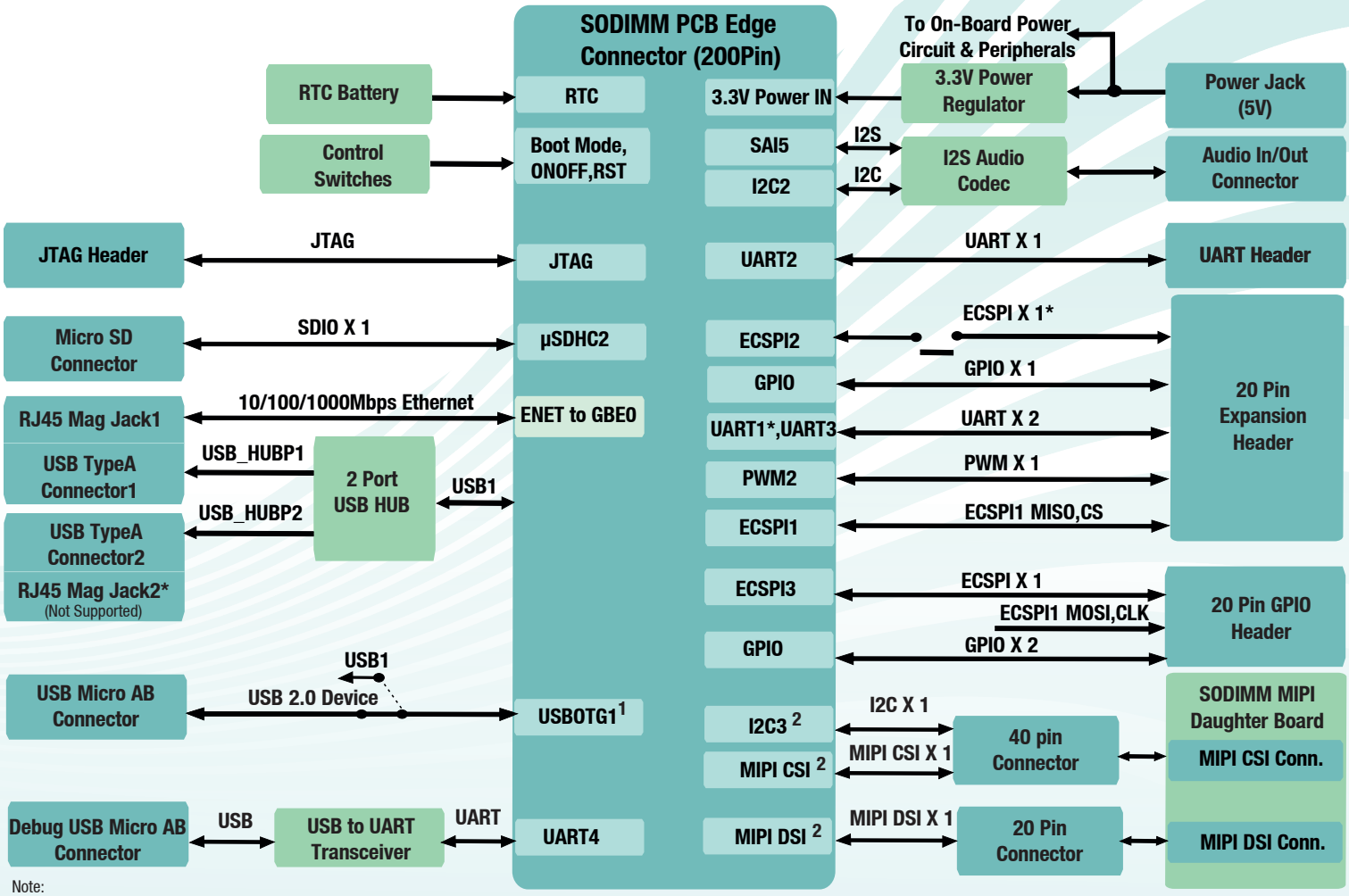
SoC: NXP i.MX8M Nano Q/QL/D/DL/S/SL
Up to 4 x Cortex- A53 & 1 x Cortex-M7
PMIC:
BD71847AMWV
Memory:
LPDDR4 - 1GB (Expandable)
eMMC Flash - 8GB (Expandable)
Micro SD slot (Optional)
QSPI Flash - 2MB (Optional)
Communication:
Wi-Fi 802.11 a/b/g/n/ac + BLE v5.0
Gigabit Ethernet PHY Transceiver x 1
SODIMM Carrier Board IO Ports Support:
USB 2.0 Host - 1 Port (Optional)
USB2.0 device - 1 Port
Gigabit Ethernet - 1 Port
5.5" HD AMOLED MIPI DSI display

MIPI CSI Camera Connector
Micro SD Slot
Audio Codec, In/Out Jack
Serial Console on Micro USB Port
Data UART x 1 Port
JTAG Header
RTC Coin Cell
Boot Mode Switch
ON/OFF, Reset Switch
20 Pin Expansion Header:
UART, eCSPI, GPIOs
Power Supply: 5V @ 1A DC Input
Operating Temperature: 0°C to +60°C
OS Support:
Linux 4.14.98, Android Pie 9.0.0
Form Factor: 100mm x 72mm
REACH & RoHS Compliant

iWave
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Proven Partner NXP

i.MX8M Nano SODIMM DEVELOPMENT BOARD BLOCK DIAGRAM



Note:
1.USBOTG1 is connected to USB MicroAB connector by default and optionally connected USB Hub.
2.I2C3,MIPI CSI and DSI interface can be validated only with an add on board-SODIMM MIPI daughter board.
*Optional

OS SUPPORT

Linux 4.14.98
Android Pie 9.0.0

DELIVERABLES

i.MX8M Nano SODIMM Dev-Kit
Kit Board Support Packages
5V AC-DC Adapter
HW/SW User Manual

OPTIONAL KITS

SODIMM Heatsink
MIPI Camera Module

CUSTOM DEVELOPMENT

BSP Development/OS Porting
Custom SOM/Carrier development
Custom application/GUI development
Design review and support

iWave Systems Technologies, established in 1999, focuses on Product Engineering Services involving Embedded Hardware, Software & FPGA. The company designs and develops cutting edge products and solutions. iWave has been an innovator in the development of highly integrated, high performance, low power and low cost System On Modules and Development Platforms. iWave's expertise has brought out multiple SOMs based on ARM, Freescale, Intel Atom, Marvell and TI Processors.

iWave Systems has won the confidence of its customers over the years by being a reliable partner in developing innovative products. Our engineers combine outstanding System design experience to deliver Quality Solutions. iWave specializes across Industrial, Automotive and Medical domains. We support our customers by being time efficient, which in turn helps our customers accelerate time to market their products. iWave is a Windows embedded Silver partner and a winner of the Partner Excellence Award.

Note: iWave reserves the right to change these specifications without notice as part of iWave's continous effort to meet the best in class specification. The registered trademarks are proprietary of their respective owners.

**Optional items not included in the standard deliverables*

Ordering the i.MX8M Nanoi SODIMM Dev Kit
The board can be ordered online from the iWave Website
http://www.iwavesystems.com/webforms

iWave Systems Tech. Pvt. Ltd.,
7/B, 29thMain, BTM Layout 2 nd Stage,
Bangalore-560076, India.
Ph:+91-80-26683700, 26786245
Email: mktg@iwavesystems.com
www.iwavesystems.com

iWave Japan, Inc.
8F-B, Kannai Sumiyoshi Building,
3-29, Sumiyoshi-cho, Naka-ku,
Yokohama, Kanagawa, Japan.
Ph: +81-45-227-7626
Email: info@iwavejapan.co.jp
www.iwavejapan.co.jp

iWave Europe
Postbus 6197
3130 DD Vlaardingen
The Netherlands
Ph: +31 10 28403383
Email: info@iwavesystems.eu

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