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Embedding Intelligence

i.MX6 SODIMM Development Kit

iWave's i.MX6 SODIMM development board incorporates i.MX6 SODIMM SOM Which is based on Freescale's high performance i.MX6 Quad ARM Cortex A9 processor and the carrier board with optional 4.3" resistive display kit. The development board can be used for quick prototyping of various applications targeted by the i.MX6 processors. With the 100mm x72 mm Pico ITX size, the kit is highly packed with all the necessary on-board connectors to validate the i.MX6 CPU features.

APPLICATIONS: Industrial HMI and Access Control , Industrial Control and Automation, Medical and Healthcare Equipment, Infotainment and Digital Signage, Portable Embedded Devices, White Goods and Smart Appliances.

iW-RainboW-G15D-SODIMM HIGHLIGHTS

High Performance Quad Cortex -A9 CPU @ 1GHz

Gigabit Ethernet, PCIe, SATA, LVDS, HDMI High Speed Interface Support

4.3" Display Kit with Resistive touch screen

Ultra Compact form size 100mm X 72mm

Compatible with Cortex A7 i.MX6UL SODIMM SOM

SPECIFICATIONS

i.MX6Q SODIMM SOM:		Resistive Touch Controller
i.MX6Q Cortex A9 CPU @ 1GHz		Audio Codec, In / Out Jack
PF0100 PMIC		8 - Bit CSI Camera Port
1GB DDR3		Serial Console on USB Port
4GB eMMC Flash		Data UART - 1 Port
10/100/1000 Ethernet PHY		CAN PHY - 1 Port
SODIMM Carrier Board:		IO Expansion Headers
HDMI - 1 Port		JTAG Header
SATA - 1 Port		**OS Support:**
Gigabit Ethernet - 1 Port		Linux 4.1.15
Half Mini PCIe - 1 Port		Android Nougat 7.1.1
LVDS Display - 1 Port		**Power Input:**
USB 2.0 Host - 2 Ports[1]		5V @ 2A DC Input
USB 2.0 OTG - 1 Port [1]		**Operating Temperature:**
Micro SD Slot - 1 Port		0°C to +60°C
4.3" RGB LCD Display[2]		**Form Factor:** Pico ITX : 100mm x 72mm

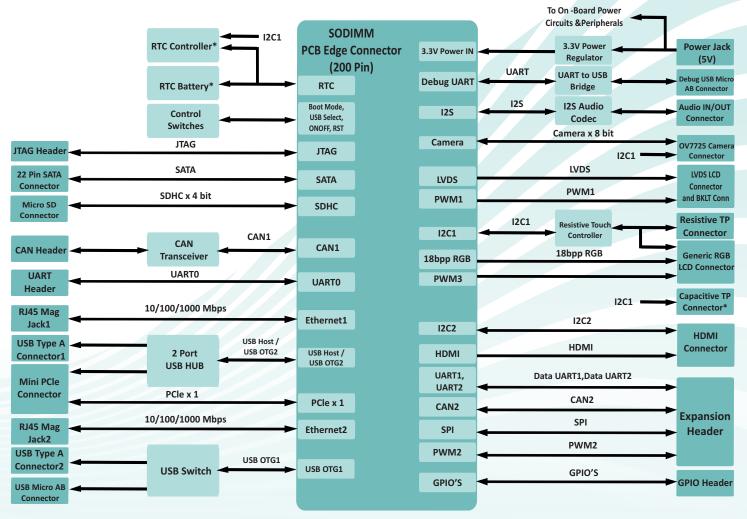Note1: 2nd USB Host Port and USB Port is Multiplexed. Anyone can be used at a time.
Note2: 4.3" Display Kit is Optional Feature.

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i.MX6 SODIMM Development Board Block Diagram

SODIMM PCB Edge Connector (200 Pin)

To On-Board Power Circuits & Peripherals

Left side blocks	Connector signals	Right side blocks
RTC Controller* — I2C1	RTC	3.3V Power IN
RTC Battery*		Debug UART
Control Switches	Boot Mode, USB Select, ONOFF, RST	I2S
JTAG Header — JTAG	JTAG	Camera
22 Pin SATA Connector — SATA	SATA	LVDS
Micro SD Connector — SDHC x 4 bit	SDHC	PWM1
CAN Header — CAN Transceiver — CAN1	CAN1	I2C1
UART Header — UART0	UART0	18bpp RGB
RJ45 Mag Jack1 — 10/100/1000 Mbps	Ethernet1	PWM3
USB Type A Connector1 — 2 Port USB HUB — USB Host / USB OTG2	USB Host / USB OTG2	I2C2
Mini PCIe Connector — PCIe x 1	PCIe x 1	HDMI
RJ45 Mag Jack2 — 10/100/1000 Mbps	Ethernet2	UART1, UART2
USB Type A Connector2 — USB Switch — USB OTG1	USB OTG1	CAN2
USB Micro AB Connector		SPI
		PWM2
		GPIO'S

Right-side peripheral connections:

- 3.3V Power Regulator → Power Jack (5V)
- UART to USB Bridge → Debug USB Micro AB Connector (UART)
- I2S Audio Codec → Audio IN/OUT Connector (I2S)
- Camera x 8 bit → OV7725 Camera Connector (I2C1)
- LVDS → LVDS LCD Connector and BKLT Conn
- PWM1 → LVDS LCD Connector and BKLT Conn
- Resistive Touch Controller → Resistive TP Connector (I2C1)
- 18bpp RGB → Generic RGB LCD Connector
- PWM3 → Generic RGB LCD Connector
- Capacitive TP Connector* (I2C1)
- I2C2 → HDMI Connector
- HDMI → HDMI Connector
- Data UART1, Data UART2 → Expansion Header
- CAN2 → Expansion Header
- SPI → Expansion Header
- PWM2 → Expansion Header
- GPIO'S → GPIO Header

Note: * Denotes Optional Features.

OS SUPPORT
Linux 4.1.15
Android Nougat 7.1.1

DELIVERABLES
i.MX 6Q SODIMM Development Kit
Support Board Package
Hardware & Software User Manuels

OPTIONAL KITS
4.3" RGB LCD Display Kit

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.

Ordering the i.MX6 SODIMM Development Kit
The board can be ordered online from the iWave Website
http://www.iwavesystems.com/webforms

IW-G15D-SODIMM-BR-R1.1

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