iWave
Embedding Intelligence

System On Module iW-RainboW-G15M-SODIMM
i.MX6 SODIMM Module

iWave's new i.MX6 Quad/Dual/Dual Lite/Solo ARM Cortex A9 cpu based SODIMM module integrates all standard interfaces into a single board with ultra compact yet highly integrated platform that can be utilized across multiple embedded PC, system and industrial designs. It has got all the necessary functions that the embedded world demands.

APPLICATIONS : Intelligent Industrial Control Systems, Industrial Human-Machine interface, Ultra Portable Devices, Home Energy Management Systems, Portable Medical Devices.

iW-RainboW-G15M-SODIMM HIGHLIGHTS

ARM Cortex A9 @ 1GHz/800MHz Quad/Dual/Dual Lite/Solo core

Modular & Compact SODIMM form factor- 67.6mm X 37mm

HD 1080p encode and decode

2D/3D Hardware Graphics Acceleration

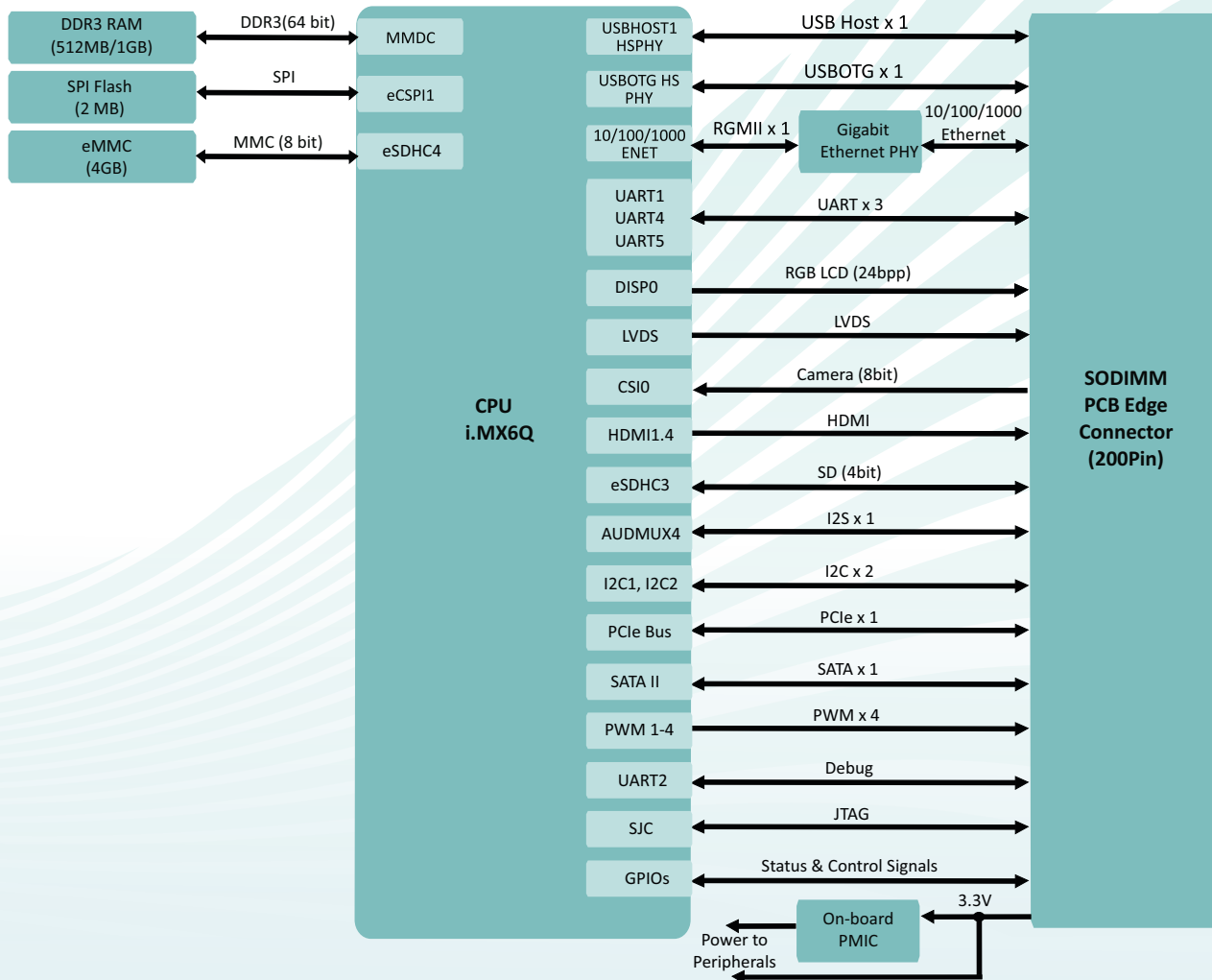Technical and quick customization support

10+ years, long term support

SPECIFICATIONS

CPU:	PCIe x 1
i.MX6 Q/D/DL/S @1GHz/800MHz ARM-Cortex-A9	UART x 3
PMIC:	10/100/1000Mbps Ethernet
MMPF0100	HDMI x 1
RAM:	SATA x 1 *
1GB DDR3 for Q/D/DL (Expandable)	USB Host 2.0 x 1
512MB DDR3 for Solo (Expandable)	USB OTG 2.0 x 1
2MB SPI NOR Flash (Expandable)	SD (4bit) x 1
4GB eMMC Flash (Expandable)	I2S Audio x 1
Communication:	LVDS Display x 1
10/100/1000 Ethernet PHY	24bpp RGB Display x 1
Power Input:	8bit Camera x 1
3.3V , 3.5A input through SODIMM edge	I2C X 2
Operating Temperature:	GPIOs
-40°C to +85°C Industrial	PWM x 4
0°C to +70°C Commerical	Debug UART Port
Form Factor:	JTAG Port
67.6mm X 37mm SODIMM Form Factor	**Operating Systems:**
SODIMM Edge Connector Interfaces:	Linux 3.14.38, Android Lollipop5.0, WEC 7*

Note: SATA support not available in i.MX6 DL/S
*Note: * Denotes Optional Features.*

i.MX6 SODIMM Module BLOCK DIAGRAM

Proven Partner NXP

Block diagram elements:

- DDR3 RAM (512MB/1GB) — DDR3(64 bit) — MMDC
- SPI Flash (2 MB) — SPI — eCSPI1
- eMMC (4GB) — MMC (8 bit) — eSDHC4

CPU i.MX6Q

CPU block	Signal	SODIMM PCB Edge Connector (200Pin)
USBHOST1 HSPHY	USB Host x 1	
USBOTG HS PHY	USBOTG x 1	
10/100/1000 ENET	RGMII x 1 → Gigabit Ethernet PHY → 10/100/1000 Ethernet	
UART1 UART4 UART5	UART x 3	
DISP0	RGB LCD (24bpp)	
LVDS	LVDS	
CSI0	Camera (8bit)	
HDMI1.4	HDMI	
eSDHC3	SD (4bit)	
AUDMUX4	I2S x 1	
I2C1, I2C2	I2C x 2	
PCIe Bus	PCIe x 1	
SATA II	SATA x 1	
PWM 1-4	PWM x 4	
UART2	Debug	
SJC	JTAG	
GPIOs	Status & Control Signals	

On-board PMIC — 3.3V — Power to Peripherals

OS SUPPORT

Linux 3.14.38
Android Lollipop 5.0
WEC 7*

DELIVERABLES

i.MX6 SODIMM Module
Board Support Packages
User Manual

OPTIONAL /MODULES

i.MX6 Development Kit
4.3" LCD Display Kit
Heat Spreader
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, NXP, Renesas, Altera, Qaulcomm, Intel 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 SOM
The board can be ordered online from the iWave Website
http://www.iwavesystems.com/webforms

IW-G15M-SODIMM-BR-R1.3