iWave

Embedding Intelligence

Zynq 7000 SODIMM Module

Xilinx Zynq 7000 SoC based System On Module (SOM) features the Xilinx Zynq 7000 series SoC with Dual Cortex A9 CPU @ 866MHz, 85K FPGA logic cells and up to 120 FPGA IOs. The SOM is equipped with on-board QSPI flash, eMMC, DDR3 RAM, Wi-Fi, BT and Gigabit Ethernet. This SOM is suitable for various industrial, embedded computing and medical applications.
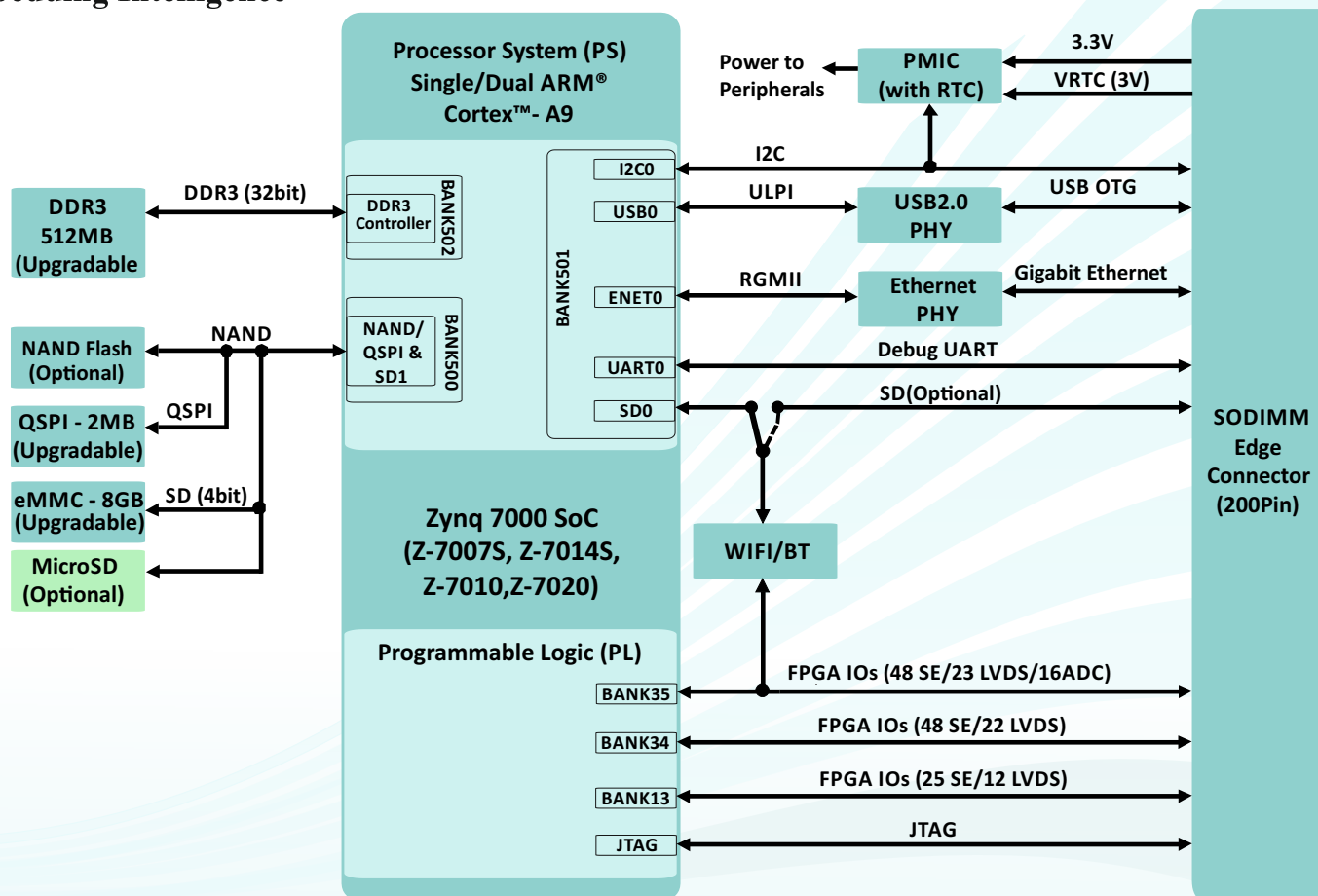
APPLICATIONS: Industrial automation, Industrial equipments, Machine Vison, Control & measurement, Scientific Instruments and Medical Instruments.

HIGHLIGHTS

Dual Cortex A9 @ up to 866MHz

Up to 85K FPGA logic cells

Up to 120 FPGA IOs

Wi-Fi/BT Support

2MB QSPI Flash

8GB-eMMC

Industrial grade availability

10+ Years availability

Linux BSP support

SPECIFICATIONS

SoC: Xilinx Zynq 7000 SoC	
Single/Dual Cortex A9 @ upto 866MHz	
Up to 85K logic cells	
Compatible devices: Z-7007S, Z-7014S, Z-7010, Z-7020 (CLG400 package)	
Memory:	
512MB DDR3 (Expandable to 1GB)	
512MB NAND Flash(Optional)	
2MB QSPI Flash(Boot Device)	
Micro SD Slot /8GB-eMMC (Secondary Boot Device)	
On SOM features:	
PMIC with RTC	
Gigabit Ethernet Transceiver	
USB2.0 Transceiver	
Wi-Fi/BT Module	

SODIMM Edge Connector Interfaces:
Zynq SoC PS Interfaces:
Gigabit Ethernet x 1 Port
USB 2.0 OTG x 1 Port
SD (4bit) x 1 Port(Optional)
Debug UART
JTAG Port
Zynq SoC PL Interfaces:
60LVDS/120 SE FPGA IOs
OS Support: Linux 4.14.0
Power Supply:
3.3V through SODIMM Edge Connector
Temperature support:
-40°C to +85°C
Form Factor: 67.6mm x37mm

iWave
Embedding Intelligence

Zynq - 7000 SoC SODIMM SOM Block Diagram

XILINX
ALLIANCE PROGRAM
CERTIFIED MEMBER — BASE

Processor System (PS)
Single/Dual ARM® Cortex™- A9

DDR3 512MB (Upgradable

DDR3 (32bit)

DDR3 Controller — BANK502

NAND Flash (Optional)
NAND
QSPI - 2MB (Upgradable)
QSPI
eMMC - 8GB (Upgradable)
SD (4bit)
MicroSD (Optional)

NAND/QSPI & SD1 — BANK500

Zynq 7000 SoC (Z-7007S, Z-7014S, Z-7010,Z-7020)

Programmable Logic (PL)

BANK501
I2C0
USB0
ENET0
UART0
SD0

Power to Peripherals

3.3V
VRTC (3V)
PMIC (with RTC)

I2C
ULPI — USB2.0 PHY — USB OTG
RGMII — Ethernet PHY — Gigabit Ethernet
Debug UART
SD(Optional)

WIFI/BT

BANK35 — FPGA IOs (48 SE/23 LVDS/16ADC)
BANK34 — FPGA IOs (48 SE/22 LVDS)
BANK13 — FPGA IOs (25 SE/12 LVDS)
JTAG — JTAG

SODIMM Edge Connector (200Pin)

Note:
- In PS, QSPI Flash or NAND Flash can be used as boot flash.
- In PS, QSPI+SD1 and NAND signals are multiplexed in the same pins and so either QSPI & MicroSD/eMMC or NAND can be used at a time.
- PL supports Dual 12bit 1Msps ADC and supports upto 16 Analog Inputs through PLBANK35. Only On-Chip voltage reference is supported.
- In PL, Bank13 is available only in Z-7014S & Z-7020 SoC.
- If BT support is required, then two SE Ios from PL BANK35 can't be connected to SODIMM edge connector.

OS SUPPORT

Linux 4.14.0

DELIVERABLES

Zynq-7000 SODIMM Development Kit
Board Support Package
Hardware & Software User Manuals

OPTIONAL KITS/Modules

Zynq-7000 SODIMM SOM

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 System 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.

Optional items not included in the standard deliverables.

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

Ordering the Xilinx based Zynq 7000 SODIMM SoC
The device can be ordered online from the iWave Website
http://www.iwavesystems.com/webforms
Or from our Local Partners in your region
http://www.iwavesystems.com/about-us/business-partner.html

iW-BR-Zynq-R2.0