

## Development Platform iW-RainboW-G17D-Q7 Cyclone V SoC Qseven Development Board



iWave Systems launched Cyclone V SoC Development Kit – iW-RainboW-G17D equipped with Cyclone V SoC based Qseven SOM and generic Qseven carrier card for the increased system performance requirements. The Dual ARM Cortex A9 core with the FPGA allows greater flexibility for the system designers and helps to lower the system cost and power consumption. The improved logic integration with integrated high speed transceivers and hard memory controllers provides increased bandwidth capacity which is ideal for cost-sensitive high end applications.

**APPLICATIONS :** Industrial Automation, Smart Energy Systems, Video Surveillance, Defence & Aerospace, Mobile, Ultra Mobile, Automotive - Telematics, Medical Instrumentation

### iW-RainboW-G17D-Q7 HIGHLIGHTS

ARM Cortex A9 Dual core CPU integrated with FPGA with up to 110K LEs

Enhanced with integrated transceivers and hard memory controller

Readily available FPGA IP cores for integration

Ideal for Quick Proof of concept (POC) development

Shortens 60% of the new product development life cycle

Quick customization services

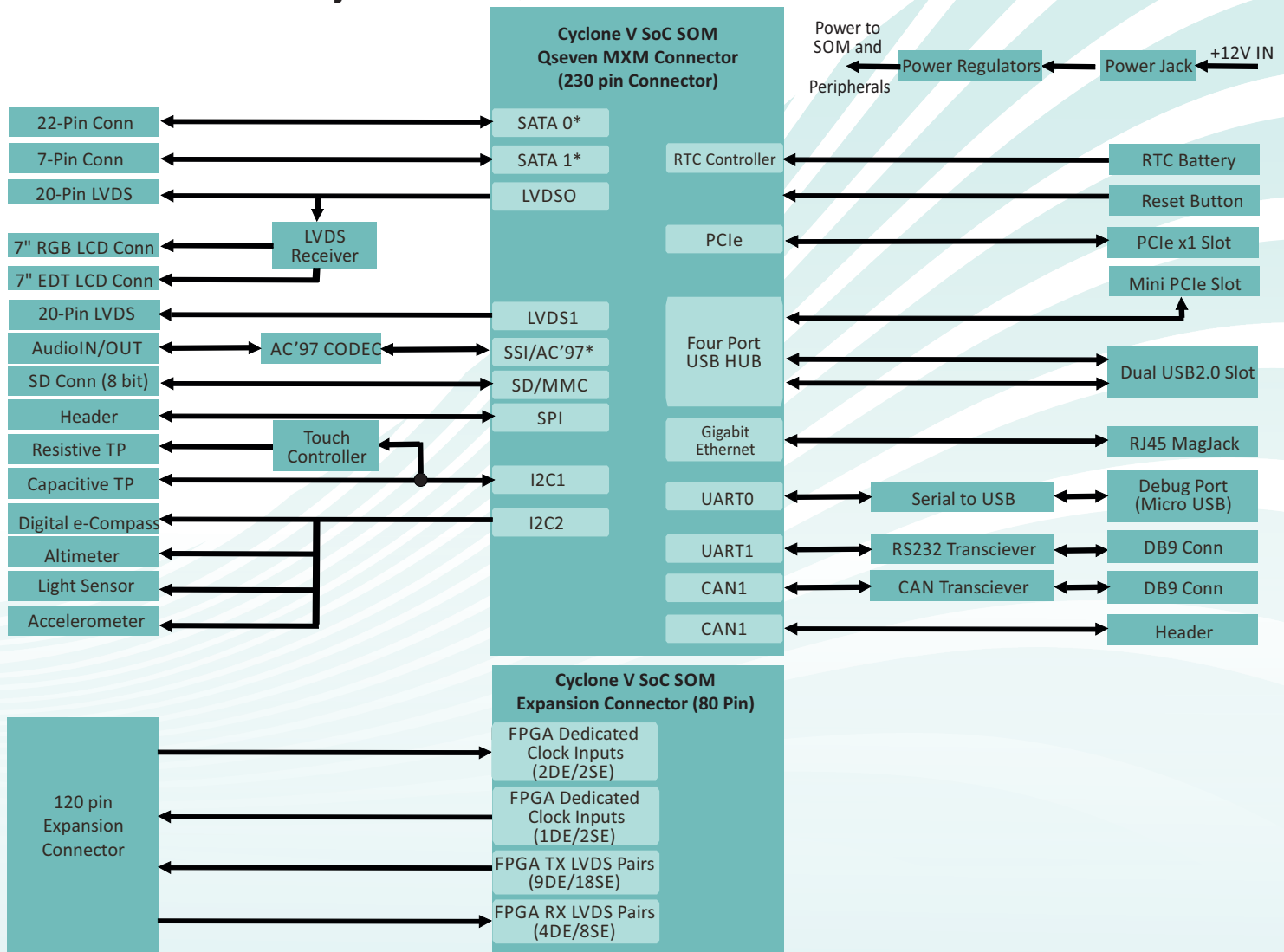
### SPECIFICATIONS

Cyclone V SoC Qseven SOM	Qseven Carrier Board
Cyclone V SoC 5CSXFC6	Standard SD/MMC - 1 Port (Boot & OS Storage)
512MB HPS DDR3 RAM	SATA 3.0 - 1 Port <sup>#</sup>
256MB FPGA DDR3 RAM	Debug Console through Micro USB
10/100/1000 Ethernet PHY	Data UART - 1 Port
4 Port USB2.0 HUB	CAN – 1 Port
On SOM µSD Slot*	USB 2.0 Host - 3 Ports
JTAG Header for FPGA	10/100/1000 Ethernet - 1 Port
RTC Controller	PCIe x1 Slot
OS: Linux 3.10	AC'97 codec- Audio IN/OUT Jacks <sup>#</sup>
	LVDS – 2 Ports
	7" TFT Display (800x480) with Capacitive Touch
	2nd LVDS Connector
	PWM
	JTAG Header*
	Operating Temperature: 0 to 55°C
	Form Factor: Nano-ITX (120mmx120mm)
	Power Input: 12V

\*Optional items are not supported by default

<sup>#</sup> Only Hardware support is provided by default

## Cyclone V SoC Qseven DEVELOPMENT BOARD BLOCK DIAGRAM



### OS SUPPORT

Linux Kernel 3.10

### DELIVERABLES

iW-RainboW-G17D-Q7 Platform  
Board Support Packages  
Power Adapter  
User Manual

### OPTIONAL KITS

iW-RainboW-G17M-Q7  
(Cyclone V SoC Qseven SOM)

### CUSTOM DEVELOPMENT

Custom SOM/ Carrier Card Development  
BSP Development/ OS Porting  
Design Review & 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 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 continuous effort to meet the best of breed specification. The registered trademarks are proprietary of their respective owners.

\*Optional items are not supported by default

### Ordering the Cyclone V SoC Qseven Development Board

The board can be ordered online from the iWave Website  
<http://www.iwavesystems.com/webforms>

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