

## Disclaimer

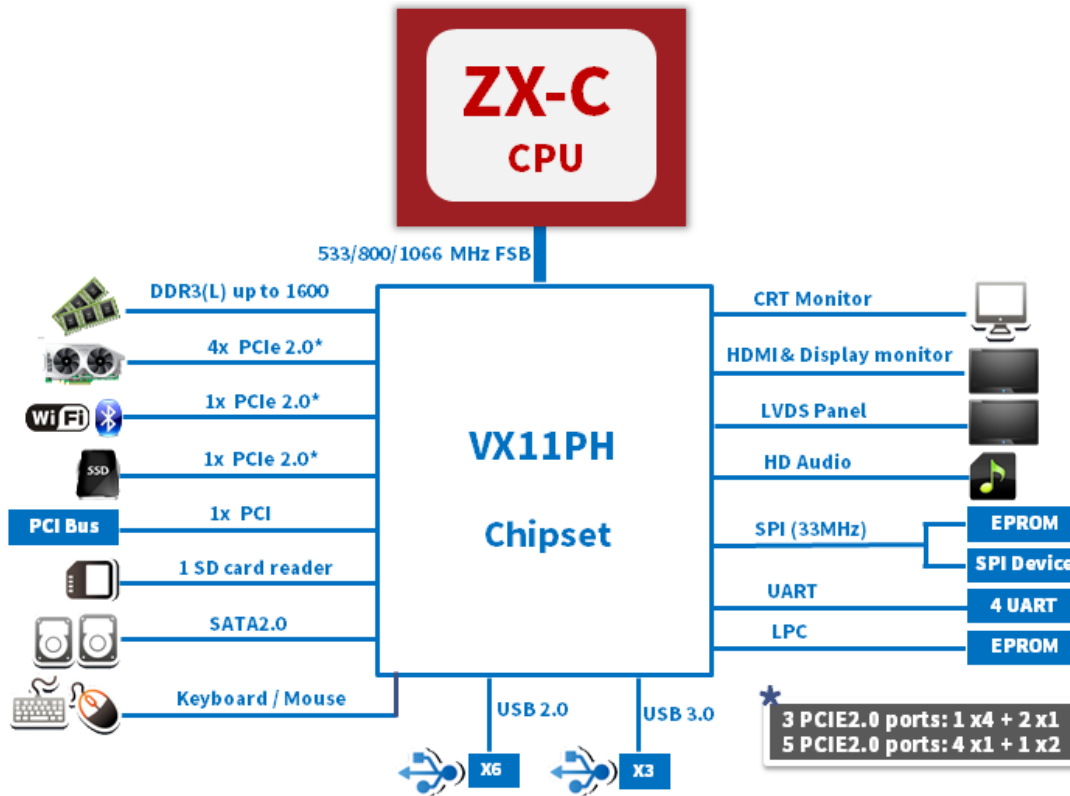
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# Desktop and AIO Solution

## Kaixian ZX-C Processor + VX11PH Chipset



### Desktop and AIO Solution

ZX-C series processor is a new generation of quad-core processors, they are designed for high performance computing, where there are 4 CPU cores integrated inside. ZX-C series processor delivers industry leading performance-per-watt and improved multi-tasking ability, without consuming more power.

ZX-C processors leverage a multi-core architecture to offer up to quad the performance in multi-threaded optimized applications, while staying within the same signature low-power envelope. Featuring four out-of-order x86 cores, ZX-C processors support native 64-bit software support, VT CPU virtualization technology, and physical encryption and decryption.

ZX-C series processor has been offered in several different models, each model has different clock speed preset region from 1.2GHz to 2.0GHz. They are designed to meeting the needs of different applications.

ZX-C processors are built using the latest 28nm fabrication process. ZX-C processors' package size is 21mm x 21mm and pin to pin match with ZX-A series.

There is a unique security engine in ZX-C series processor, which could provide



hardware-based high-performance and affordable security features. It is a very useful and important tool for information protection and system security.

VX11PH Chipset offering a world-class HD multimedia platform. VX11PH features Chrome 640\645, including a high-performance and versatile Chromotion 5.0 video processor, a genuine DirectX11 graphics processor and a HD audio.

The VX11PH Chipset Chromotion 5.0 video processor provides ultra-smooth decoding of MPEG-4, H.264, MPEG-2, and VC-1. It offers advanced filtering and cutting edge post-processing. Support for the latest connectivity standards includes Display Port, HDMI, DVP, VGA and LVDS.

VX11PH Chipset DX11GPU is designed to leverage the power of parallel processing and provides support for sophisticated shading and texturing technologies, which offer richer visual and 3D contents for immersive environments. Such as tessellation for smoother 3D animation and more lifelike graphics. Including Shader 5.0 to integrate cohesive post graphic processing, DirectCompute 11 for scalable GPGPU computing, as well as better multithreading and control for parallel computing, VX11PH Chipset provides enhanced graphic capabilities for today's applications and has been designed to support OpenCL™. VX11PH supports Chipset S3TC Technology, provides Pure 24 bit 3D texture compression algorithm, reduces the memory requirements of the system, with low power consumption, better texture display quality and overall better performance.

The VX11PH Chipset features the high-performance and versatile Chromotion 5.0 video processor, providing ultra-smooth decoding of MPEG-4, H.264, MPEG-2, and VC-1. It offers advanced filtering and cutting edge post-processing. Support for the latest connectivity standards includes Display Port, HDMI, DVP, VGA and LVDS.

VX11PH Chipset supports HD audio, The Vinyl HD audio controller supports 8 channel high fidelity 192kHz sampling rate, providing richer experience a full range of digital sound effect.

VX11PH Chipset supports up to 16GB of the latest DDR3 system memory at speeds of up to 1600MHz. Integrating all the features of a traditional north and south bridge solution into a 33mm x 33mm single chip package by using the 40nm process. VX11PH Chipset is a single chip solution that reduces overall silicon footprint and lowers system power consumption.

VX11PH Chipset has received SuperSpeed USB certification from USB-IF. It supports up to three USB 3.0 ports.

Targeting variety desktop products, ZX-C processors + VX11PH solution extend the reach into multitasking and performance-oriented segments and offer end users an optimal, power-efficient computing experience.

## ZX-C Specifications

Essentials	
CPU Name	C46XX
Launch Date	Q2'15
CPU TDP	18W
# of Cores/ Threads	4C/4T
Clock Speed	2.0GHz
Adaptive Overclocking	NO
Max Turbo Frequency	NO
L2 Cache	2MB With ECC(Shared)
Instruction Set	x86 and x64 (64-bit)
Instruction Set Extensions	SSE4.2/AVX
System Bus Type	FSB
System Bus Clock	1333MHz
APIC Supported	Yes
Hardware Virtualization (VMX) Supported	
VT-x with EPT Supported (INTEL® VT-X Compatible)	Yes
Dynamic Power Saving	
Thermal Monitoring and Catastrophic Thermal Protection	Yes
Low power consumption	Yes
Enhanced PowerSaver	Yes
Power Management States Support	Yes
C-State Support (C1-C4)	Yes
P-State Support	Yes
Data Protection Technology (PADLOCK)	
Advanced Cryptography Engine (ACE)	Yes
Secure Hash Algorithm: SHA-1	Yes
Secure Hash Algorithm: SHA-256	Yes
Secure Algorithm: SM3/SM4	No
Random Number Generator	Yes
Platform Protection Technology	
Trusted Execution Technology(TXT)	No
NoExecute Support	Yes
Manufacturing & Package Specifications	
Manufacturing Process	28nm
Package Type	FCBGA
T <sub>junction</sub> (°C)	90
Package Size	21mm x 21mm
Wide Temperature (-40~60°C)	No

## VX11PH Specifications

Essentials	
Chipset Name	VX11PH
Chipset TDP	8.8W
Max Memory Size (dependent on memory type)	32GB
Memory Clock	1333/1600(UDIMM Only)MHz
Memory Types	DDR3/DDR3L UDIMM/SODIMM
# of Memory Channels	1
Max Memory Slots	2
Max Memory Size per Slots	16GB
ECC Memory Supported	No
Physical Address Extensions	64-bit
Graphics Specifications	
Integrated Graphics Processor	Yes
Graphics Base Frequency	700MHz
# of Displays Supported	2
HDCP Support	Yes
HDAC Codec	Yes
Types of Display Interface	2xDP/2xHDMI/DVP/VGA/LVDS
Expansion Options	
PCI Support	Yes
PCI express Revision	2
Max # of PCI express Lanes	6
Max # of PCI express Ports	5
PCI express Configurations	x4,2x1 or 4x1,x2
I/O Specifications	
SATA Revision	2
Total # of SATA Ports	2
Total # of USB3.0	3
Total # of USB2.0	6
SD Revision	3.0
Total # of SD Ports	1
HD Audio Support	Yes
LAN Support	No
MISC	LPC, SMBus, SPI, UART, GPIO
Manufacturing & Package Specifications	
Manufacturing Process	40nm
Package Type	FCBGA
T <sub>junction</sub> (°C)	90
Package Size	33mmx33mm
Wide Temperature (-40~60°C)	No