



Kilin-6030/6020

Communication Appliance of wire-speed performance in small packets and seamlessly embedded x86 module

Product Overview

The wire speed performance in small packets, has been long attempted since day one. Portwell's Kilin family platforms achieve it by implementing the new generation MIPS64 technology from Cavium.

To adapt this new technology, ISVs need time to migrate their existing computing centric architecture to network (or packet processing) centric architecture. Portwell has seamlessly embedded x86 module into Kilin platforms so the migration can be smooth.

Besides, some written codes has been fully optimized based on x86 hardware. Embedded x86 module also offers customers the opportunity to enjoy the synergy between x86 and MIPS64 technologies.

No matter it is a voice or data connection, " security " is always the first concern by service providers as well as enterprises. To ensure " secure " voice/data connection between two or more parties, Kilin platforms equip all necessary security features in hardware based.

Although there are up to sixteen MIPS64 cores available to make the real-time applications feasible, the power consumption of the processor unit is less than 30 watts. This low power merit not only saves the daily operating cost but also improves the system reliability due to fewer moving parts being used.



▲ Kilin-6030

Product Highlights

- Up to 16 MIPS64 Release 2 Cores
 - Of 400/500/600MHz frequency
 - Scale from 4 to 16 cores
- Memory:
 - Four DDR2 DIMM slots and up to 8G
 - On-board RLDRAM up to 288M
- Seamlessly embedded X86 module:
 - Based on the industrial standard with the smallest footprint
 - Low power solution of high reliability
 - Of scalable chipsets(Intel's 915GM, 945GM) and CPUs(Intel's Dothan, Yonah, Merom) selections
- Built-in security and acceleration hardware for associated applications:
 - TCP and Crypto accelerator for Firewall and VPN
 - Regular Expression Processor for Anti-Virus, Anti-Spam, and Intrusion Detection/Prevention System
 - Compression and Decompression Processor for Content Filtering
- Four Gigabit Ethernet interfaces with two By-pass segments
- PCI-X expansion
 - Up to 64bit with 133MHz
 - Up to two slots in 2U systems
- Independent management console(RS232) and Ethernet interface for MIPS64 and x86 systems
- Flexible SPI 4.2 interface Module
 - Connectors on M/B and module to provide more stable connectivity and avoid unexpected aging issues
 - Customized configurations per request
 - The following modules are planned:
 - a.Ten of 1 GbEs of Copper with three By-pass segments
 - b.Eight of 1 GbEs of SFP with two By-pass segments
 - c.One 10 GbE of Fiber
- Two swappable SATA HDDs
- Redundant 350W ATX PSU





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Features	Benefits
Tremendous Packet processing power <ul style="list-style-type: none"> Up to sixteen MIPS64 cores Built-in TCP acceleration 	<ul style="list-style-type: none"> Wire speed performance in small packets is feasible Suitable for processing power hungry applications, such as Triple play and UTM
Rich Built-in Security features <ul style="list-style-type: none"> Crypto accelerator Regular Expression Processor Compression and Decompression Processor 	<ul style="list-style-type: none"> Wide range of security appliances can adapt it easily System foot print can be reduced
Seamlessly embedded X86 module <ul style="list-style-type: none"> Based on the industrial standard Low power solution Scalable chipsets and CPUs 	<ul style="list-style-type: none"> Customers can easily find the suitable x86 platform Higher system reliability Customer can fully utilize the synergy of x86 and MIPS64
Flexible SPI 4.2 interface Module <ul style="list-style-type: none"> Various Copper & Fiber/SFP combination By-pass being implemented Customized configurations per request 	<ul style="list-style-type: none"> Easier customer inventory control Shorter development cycle for customized configuration Easier By-pass algorithm revision and customization
Wide range of products coverage <ul style="list-style-type: none"> 4 to 16 MIPS64 cores Various Security feature selections 	<ul style="list-style-type: none"> Customers can leverage the software development efforts across the product family
High Performance/Power ratio <ul style="list-style-type: none"> 16 MIPS64 consumes less than 30 Watts Embedded x86 module using Intel's cutting edge Low Power solutions Optimized system thermal solution 	<ul style="list-style-type: none"> Save operating cost Improve system reliability

Kilin Family is Built for

- Traditional security appliances, such as Firewall, VPN, AV, and IPS, call for wire speed performance in small packets
- High performance UTM appliance requires remarkable processing capability as well as HW based security features
- New generation appliances which consider 10 Giga Ethernet interface is mandatory
- VOIP and Wireless appliances/gateways demand high quality and "secure" communication
- Triple or Quadruple play systems



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ORDERING GUIDE

Part No.	Form Factor	Cavium processor	Ethernet	Bypass Segment	PSU	PCI-X slot	Embedded x86 System	SATA 3.5" HDD
Kilin-6030-4300	2U	CN3860-500 NSP	16 Copper GbE	5	350W redundant	2	Option	2 (swappable)
Kilin-6020-0350	1U	CN3840-500 NSP	5 Copper GbE	2	220W ATX	1	Option	1

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