Portwell

Complete Your Networld

www.portwell.com/products/ca.asp

- 3G Wireless
- Wireless Gateway
- Media Server
  (VoIP, Video/Image Processing)
- Network Management
  (RAS, QoS, Load Balancing)
- Security
  (Firewall/VPN, IDS/IPS, Anti-Virus, Anti-Spam, Content Filtering)

Ver. 28C

TABLE of CONTENTS

ABOUT CA

Who is Portwell, Inc.?

Portwell, Inc. founded in 1993, committed to advanced design and engineering expertise in electronics and mechanical with manufacturing integration capability. The effort to adhere to the world-class criteria in every aspect qualified Portwell as a member of the Intel Communications Alliance. With streamline access to the latest Intel technology, we deliver cutting-edge solutions to meet and exceed the demanding needs of market. Based on 815E and E7500/E7501 chipset, Portwell designed two Intel Proof of Concept appliance platforms. For more detailed information, please visit the web pages as follows:

http://developer.intel.com/platforms/applied/eiacomm/value2/value2.htm
http://developer.intel.com/platforms/applied/eiacomm/perform3/perform3.htm

Portwell provides system integration development experience, proven expertise in CPU board, chassis, thermal, power, and packaging, to create quality appliance platform with industry grade components for both ISVs and OEM customers.

Why Partner with Portwell?

Portwell offers industry-leading Communication Appliance platform solutions. They're easy to install and affordable, but also flexible and scalable to accommodate the future changes of your application. Portwell has great confidence to be the world number one in providing Communication Appliance Server platform based on the following facts...

- Provide full range of superior off-the-shelf appliance server solutions for one-stop source
- Design dedicated system for not only ultimate computing and communication performance but also ease of installation
- Meet the target of time-to-market so as to reduce your sales cycle and also cost of doing business
- Increase the success of market penetration by highly flexible and scalable appliance platform
- Enhance your brand-name awareness through private-label branding service
- Focus on core competencies on embedded H/W technology and listen to your request

Why Portwell Communication Appliance?

- Allow ISV entering the market with shorter time-to-market and lowest cost for a complete platform
- Allow ISV offering end-users with Plug-and-Play solution.
- Allow ISV promoting solutions with own brand image exposure.
- Allow ISV concentrating on software development without hardware headaches.
- Allow ISV providing preloaded complete system instead of software only solution.

What is the design concept?

Portwell's Communication Appliances are robust hardware embedded platforms with Intel open architecture that enable the porting of a variety of security and management applications. Portwell appliance server architecture is designed to supply consistent, high-stability, and 24-hour continuous operation. The product family ranges from desktop appliance perfect for remote and branch office to high-performance rack-mountable appliances for enterprise and data center.

ABOUT CA

Benefits to Our Customers

- **Faster time-to-market**
  Customer can port/develop their software to/on our ready-to-ship solution for time-to-market.
- **Better products scalability and coverage**
  Select from our wide range of solutions to scale your products. Portwell not only provides board level solutions but system and peripheral level solutions as well.
- **Leading edge hardware innovation**
  You can always trust the most leading-edge products from Portwell because of our dedication to hardware platform development.
- **Free of inventory and manufacturing hassle**
  Independent software venders can team up with Portwell to provide solutions to system integrators or end-users without manufacturing and inventory hassles.

What Value-added services will Portwell offer?

Hardware platform development

- Scalable and flexible appliance platform easy for Build-to-order business demand
- The minimum 3-year H/W lifecycle maintenance
- Dedicated and embedded system design for not only reliability but also ergonomic advantage
- Advanced thermal design to assure product stability
- Provide HDD, CF, and DOM storage solution
- Watchdog timer prevents the software lockup
- Redirect to console BIOS allows user to operate system through serial port
- Validated with embedded Linux and FreeBSD
- Load factory-default mechanism
- Multiple listing available on CE, FCC, and UL

Manufacturing

- In-house design, engineering, manufacturing, system integration to assure comprehensive quality and revision control
- ISO 14001 and ISO 9001 certified manufacturing facility
- Flexible to accept low- to high-volume requirement
- Manufacturing guide to flaw-less assurance
- Integration service for OS and AP loading

Private-label branding

- Custom BIOS splash screen
- Chassis desired color and Private-logo bezel printing
- Private branded packaging
- Data label with production number control, EMC and Safety mark
- Drop-shipment for global logistic service

E225800

REFERENCE TABLE

< x86 Architecture >



MODEL	NAR-7090				NAR-5630		NAR-5620	NAR-5612
Sub-Model	-1412	-1413	-1417	-1418	-611	-1011	-0110	-1120
Chipset	Intel® 5000P				Intel® 945G		Intel® E3100	Intel® 945G
CPU (Max.)	Dual-Core Xeon® up to 3.0GHz Quad-Core Xeon® up to 2.66GHz				Core™ 2 Duo		Core™ 2 Duo up to 2.33GHz	Core™ 2 Duo
RAM (Max.)	32GB				4GB		4GB	4GB
Ethernet								
Fiber	0	8	4	0	0	0	up to 6	up to 2
Copper GbE	8	0	4	8	4	6	up to 6	up to 11
10/100 FE	0	0	0	0	2	4	1	0
Bypass Seg.	4	0	0	2	2	2	up to 3	up to 3
Expansion Slot	3 expansion slots for variable PCI-X, PCI-E & PCI-E x8				One PCI (internal, proprietary)		One PCI-X on rear panel	One PCI-X on rear panel
Storage Device								
HDD	Two removable/linner 3.5" SATA HDDs				One 3.5" SATA HDD, up to two		One 3.5" SATA HDD	One 3.5" SATA HDD
CF	Optional				Optional		Optional	Optional
DOM	Optional				Optional		Optional	Optional
DOC	N/A				N/A		N/A	N/A
Serial Port								
Console	RJ45 on front panel				RJ45 on front panel		RJ45 on front panel	RJ45 on front panel
LCD module	N/A				EZIO-3		EZIO-3	EZIO-3
LEDs	Power, Data-access, LAN status & Speed, Bypass				Power, Data-access, LAN status & Speed, Bypass		Power, Data-access, LAN status & Speed, Bypass	Power, Data-access, LAN-status & Speed, Bypass
SATA	4 SATA-II connectors				2 SATA-II connectors		3 SATA-II connectors	2 SATA-II connectors
IDE	CF socket & 40-pin IDE connector				CF-socket & 40-pin connector		CF Socket	CF-socket & 40-pin connector
USB	Two USB 2.0 on front panel				Two USB 2.0 on front panel		Two USB 2.0 on front panel	Two USB 2.0 on front panel
VGA	N/A				Internal pin-header		Internal pin-header	Internal pin-header
Power	400W redundant PSU				220W full-range ATX		150W full-range ATX	350W full-range ATX
Height (U)	2				1		1	1
Dimension (WxDxH)	454 x 510 x 88 mm 16.97" x 20.2" x 3.46"				443 x 406 x 44 mm 17.4" x 16.0" x 1.73"		443 x 465 x 44mm 17.4" x 18.3" x 1.73"	443 x 465 x 44 mm 17.4" x 18.3" x 1.73"
PAGE	8-9				10		11	12

REFERENCE TABLE

< x86 Architecture >




MODEL	NAR-5530			NAR-5520				NAR-5522		NAR-5060	
Sub-Model	-926	-920	-624	-412	-612	-812	-1012	-412	-612	-630	-631
Chipset	Intel® Q965			Intel® 945G				Intel® 945G		Intel® 845GV	
CPU (Max.)	Core™ 2 Duo Core™ 2 Quad			Core™ 2 Duo				Core™ 2 Duo		Pentium® 4 2.8GHz	
RAM (Max.)	4GB			4GB				4GB		2GB	
Ethernet											
Fiber	0	0	0	0	0	0	0	0	0	0	0
Copper GbE	9	9	6	4	6	8	10	4	6	4	0
10/100 FE	0	0	0	0	0	0	0	0	0	2	6
Bypass Seg.	3	0	2	2	2	2	2	2	2	0	0
Expansion Slot	One internal PCI-slot			Two PCI-slots on rear panel, optional				Two PCI-slots on rear panel, optional		One internal PCI-slot, two PCI-slots on rear panel	
Storage Device											
HDD	One 3.5" SATA HDD, up to two			One 3.5" SATA HDD, up to two				One 3.5" SATA HDD, up to two		Optional 2.5"/3.5" HDD	
CF	Optional			Optional				Optional		Optional	
DOM	Optional			Optional				Optional		Optional	
DOC	N/A			N/A				N/A		N/A	
Serial Port											
Console	RJ45 on front panel			RJ45 on front panel				RJ45 on front panel		RJ45 on front panel	
LCD module	EZIO-3			EZIO-3				N/A		EZIO-100	
LEDs	Power, Data-access, LAN status & Speed, Bypass			Power, Data-access, LAN status & Speed, Bypass				Power, Data-access, LAN status & Speed, Bypass		Power, Data-access	
SATA	2 SATA-II connectors			2 SATA-II connectors				2 SATA-II connectors		N/A	
IDE	CF-socket & 40-pin connector			CF-socket & 40-pin connector				CF-socket & 40-pin connector		40-pin & 44-pin connector	
USB	Two USB 2.0 on front panel			Two USB 2.0 on front panel				Two USB 2.0 on front panel		Optional	
VGA	Internal pin-header			Internal pin-header				Internal pin-header		Optional	
Power	220W full-range ATX			220W full-range ATX				220W full-range ATX		220W full-range ATX	
Height (U)	1			1				1		1	
Dimension (WxDxH)	443 x 406 x 44mm 17.4" x 16.0" x 1.73"			431.8 x 355.2 x 44 mm 17.0" x 14.0" x 1.73"				431.8 x 355.2 x 44 mm 17.0" x 14.0" x 1.73"		420 x 360 x 44mm 17.0" x 14.0" x 1.73"	
PAGE	13			14				15		16	

REFERENCE TABLE

< x86 Architecture >




MODEL	NAR-2200		NAR-2085		NAR-2090	NAR-2091	NAD-2100	
Sub-Model	-601	-621	-621	-661	-557	-557	-601	-621
Chipset	Intel® 915GME	Intel® 910GMLE	Intel® 852GM		VIA® CN700		Intel® 915GME	Intel® 910GMLE
CPU (Max.)	Intel® Pentium® M, Celeron® M	Intel® Celeron® M 600MHz	Intel® Celeron® M 1.5GHz		VIA® C7 1.5GHz		Intel® Pentium® M, Celeron® M	Intel® Celeron® M 600MHz
RAM (Max.)	2GB		2GB		2GB		2GB	
Ethernet								
Fiber	0	0	0	0	0	0	0	0
Copper GbE	6	4	0	6	0	0	6	4
10/100 FE	0	2	6	0	5	5	0	2
Bypass Seg.	1	1	1	1	1	2	1	1
Expansion Slot	One PCI slot		One MiniPCI and PCI slot		One PCI slot	Two PCI slots	One PCI slot	
Storage Device								
HDD	Optional 2.5"/3.5" IDE/SATA HDD		Optional 2.5"/3.5" IDE HDD		Optional 2.5"/3.5", IDE/SATA HDD		Optional 2.5"/3.5" IDE/SATA HDD	
CF	Optional		Optional		Optional		Optional	
DOM	Optional		Optional		Optional		Optional	
DOC	N/A		N/A		N/A		N/A	
Serial Port								
Console	RJ45 on front panel		RJ45 on front panel		DB9 on front panel		RJ45 on the rear panel	
LCD module	Optional		Optional		EZIO-100		N/A	
LEDs	Power, Data-access, LAN status & Speed, Bypass		Power, Data-access, LAN status & Speed, Bypass		Power, Data-access, LAN status & Speed, Bypass		Power, Data-access, LAN status & Speed, Bypass	
SATA	2 SATA-I connectors		N/A		2 SATA-I connectors		2 SATA-I connectors	
IDE	CF-socket & 40-pin connector		CF-socket, 44-pin & 40-pin connector		CF-socket & 40-pin connector		CF-socket & 40-pin connector	
USB	Two USB 2.0 on front panel		Two USB 2.0 on front panel		Two USB 2.0 on front panel		Two USB 2.0 on rear panel	
VGA	Internal pin-header		Internal pin-header		Internal pin-header		Internal pin-header	
Power	80W full-range AT	65W full-range AT	65W full-range AT		65W full-range AT		84W power adapter	
Height (U)	1		1		1		1	
Dimension (WxDxH)	428 x 255 x 44mm 16.85" x 10.04" x 1.73"		428 x 255 x 44 mm 16.85" x 10.04" x 1.73"		428 x 255 x 44 mm 16.85" x 10.04" x 1.73"		225 x 205 x 50mm 8.96" x 8.07" x 1.97"	
PAGE	17		18		19		20	

REFERENCE TABLE

< x86 Architecture >



MODEL	NAR-2065		NAR-2075		NAD-2074	NAD-2073
Sub-Model	-620	-660	-414	-536	-557	-557
Chipset	Intel® 852GM		VIA® CN700		VIA® CN700	
CPU (Max.)	Intel® Celeron® M 600MHz		VIA® ULV Eden 500MHz	VIA® Eden 1GHz	VIA® C7 1.5GHz	
RAM (Max.)	2GB		2GB		2GB	
Ethernet						
Fiber	0	0	0	0	0	0
Copper GbE	0	6	0	0	0	0
10/100 FE	6	0	4	5	5	5
Bypass Seg.	1	1	0	1	1	1
Expansion Slot	One PCI & one MiniPCI		N/A	N/A	One PCI slot	N/A
Storage Device						
HDD	Optional 2.5"/3.5" IDE HDD		2.5" SATA HDD	2.5" IDE/SATA HDD	One 2.5" IDE/SATA HDD	One 2.5"/3.5" IDE/SATA HDD
CF	Optional		256MB	Optional	Optional	
DOM	Optional		Optional	Optional	Optional	
DOC	N/A		N/A		N/A	
Serial Port						
Console	RJ45 on rear panel		DB9 on rear panel		DB9 on rear panel	
LCD module	N/A		N/A		N/A	
LEDs	Power, Data-access, LAN status & Speed, Bypass		Power, Data-access, LAN status & Speed, Bypass		Power, Data-access, LAN status & Speed, Bypass	
SATA	N/A		1 SATA-I connector	2 SATA-I connectors	2 SATA-I connectors	2 SATA-I connectors
IDE	CF-socket, 44-pin & 40-pin connector		CF-socket	CF-socket & 40-pin connector	CF-socket & 40-pin connector	
USB	Two USB 2.0 on rear panel		Two USB 2.0 on rear panel		Two USB 2.0 on rear panel	
VGA	Internal pin-header		Internal pin-header		Internal pin-header	
Power	60W power adapter		60W power adapter		60W power adapter	
Height (U)	1		1		1	
Dimension (WxDxH)	225 x 205 x 50mm 8.96" x 8.07" x 1.97"		220 x 230 x 44 mm 8.66" x 9.06" x 1.73"		225 x 205 x 50 mm 8.86" x 8.07" x 1.97"	
PAGE	21		22		23	

NAR-7090

2U communication appliance rack-mount server with dual-core dual processors for high-performance application

FEATURE

- Dual Intel® 51XX series CPU with 4M L2 cache/1333MHz FSB
- Flexible removable Ethernet/HDD modules
- Up to fourteen Gigabit Ethernet ports
- Up to three PCI-X expansion slots
- Redundant 400W ATX PSU
- Front access for user-friendly maintenance

SPECIFICATION

CPU Board	- Support Intel® Quad Core™ X53XX/E53XX/L53XX series processors w/ 4MB*2 L2 cache - Intel® Dual Core™ 51XX series processors w/ 4MB L2 cache
System Memory	- Eight FB-DIMM DDR2 667/533 sockets - Supports up to 32GB ECC/registered memory
Ethernet Port	- Two PCI-Express Gigabit Ethernet ports (Intel® 82563) - Eight PCI-Express Gigabit Ethernet ports (Intel® 82571EB) - One flexible Ethernet modules with up to four Gigabit Ethernet ports
Expansion Slot	- Up to three PCI-X expansion slots or - One low profile PCI-X and one PCI-Express x4 slot
Storage Device	- Up to two 3.5" SATA HDD - CompactFlash - Support Disk on Module (DOM)
Serial Port	- One RJ45 connector for system console - One 2x5 pin-connector
LCD Panel	2x16 characters LCD module with 4-buttons
LEDs	LED indicator for power status and storage access
IDE	One CF-socket & one 40-pin connector
USB	Two USB 2.0 ports
VGA	N/A
Power	Full range 400W 1+1 redundant PSU
Dimension	443(W) x 512(D) x 88(H) mm 17.44"(W) x 20.1"(D) x 3.46"(H)
Packing Dimension	24.9"(W) x 24.9"(D) x 8.4"(H) (Subject to change without notice)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity 20% to 90% RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity 5% to 95% RH
Certification	CE/FCC/UL

400W ATX PSU

ORDERING GUIDE

Part No.	Ethernet Interface	EZIO	PCI-X Expansion
NAR-7090-1412	14 Copper GbE ports	Yes	3
NAR-7090-1413	6 Copper + 8 Fiber GbE ports	Yes	3
NAR-7090-1417	10 Copper + 4 fiber GbE ports	Yes	3

NAR-7090

1U communication appliance rack-mount server with 2 PCI-E I/O modules and PCI-X expansion slot

ABN-454

4 port copper w/ Intel® 82571EB

ABN-464

4 port SFP w/ Intel® 82571EB

ABN-458

8 port copper w/ 82571EB

ABN-484

4 port copper w/ Intel® 82571EB
2 programmable bypass segments

ABN-522

2 port SFP+10G card w/ Intel® 82598EB

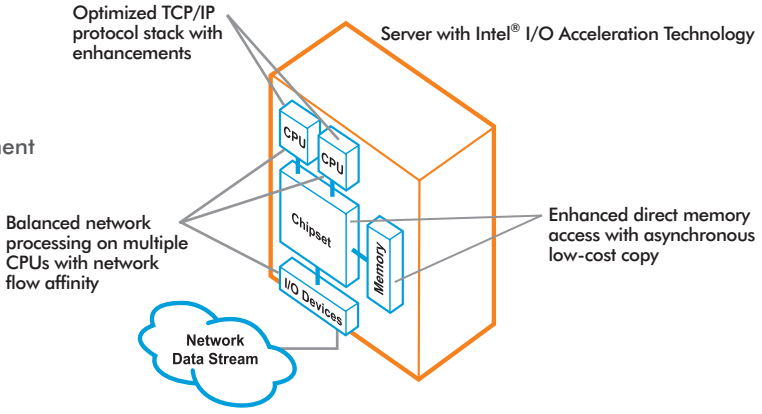
ABA-140

2 mgmt port/1 Console/2USB

NOTE: Fiber Bypass is optional for project base

Processor No	Clock GHz	FSB MHz	L2 Cache	Core Thread	Socket	TDP	Generation
Quad Core ECPD: E5335 / E5345							
X/E/L53XX	1.6~3.0	1333/1066	4M*2	4/4	LGA771	120W 80W 50W	Clovertown Clovertown LV 65nm
Dual Core ECPD: 5130 / 5140 / LV5138 / LV5148							
51XX	106~3.0	1333/1066	4M	2/2	LGA771	115W/65W	Woodcrest WC LV 65nm

Intel® I/O Acceleration Technology (Intel® I/OAT): Accelerates TCP/IP processing, delivers data-movement Efficiencies across the entire server platform, and minimizes system overhead.



NAR-5630

1U communication appliance rack-mount server with up to 10 GbE and 2 bypass segments

FEATURE

- Cost effective dual core system platform with high performance Fiber-optical GbE ports
- Up to ten GbE ports available
- Up to two Gen.-2.0 bypass segments available
- Support dual channel DDR2 667/533 up to 4GB
- Dual-personality for flexible use of fiber-optical (SFP) and copper (RJ45) interface
- Highly integrated system in compact chassis but still supports dual 3.5" HDD installation and/or one removable HDD (optional via project base)

SPECIFICATION

CPU Board	- Supports Intel® Core™ 2 Duo, Pentium® 4, Celeron® and Celeron® D CPU series - Intel® 945G chipset with 1066/800/533 MHz FSB
System Memory	- Dual channel DDR2 with two 240-pin DIMM sockets - Supports DDR2 667/533, un-buffered, none ECC up to 4GB
Ethernet Port	- Two PCI-E x1 GbE interfaces with 2 RJ45 connectors - Four PCI-E x4 GbE interfaces with 4 RJ45 or 2 RJ45 and 2 SFP connectors - Up to 4 PCI-E x4 GbE with RJ45, SFP or dual personality expandable
Bypass feature	Up to 2 Gen.-2.0 bypass segments available
Expansion Slot	- One PCI32 slot for proprietary PCI card and internal installation - Additional PCI-E, PCI-X slot expandable for project
Storage Device	- One 3.5" SATA HDD as default, up to two installable - One compact flash socket for type-I CF card, supports DMA mode - One 40-pin IDE connector supports DOM (Disk on Module) - Removable 3.5" HDD design ready for project based request
Serial Port	- One front accessible RJ45 connector for system console - One internal 2x5 pin-header for connection with EZIO or preferred device
LCD Panel	2x16 characters LCD module with 4 buttons
LEDs	Power status, data access, Ethernet status/speed and bypass status
USB	Two USB 2.0 ports, front accessible
VGA	Build-in on-board 2x5 pin-header
Power	Full-range 220W ATX PSU
Dimension	443 (W) x 406 (D) x 44.5 (H) mm; 17.4" (W) x 16" (D) x 1.73" (H)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity: 20%~90% RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity: 5%~95% RH
Certification	CE/FCC/UL

220W ATX PSU

ORDERING GUIDE

Part No.	PCI-E x1 GbE	PCI-E x4 GbE	Bypass	Dual Personality	EZIO	PCI Slot	PCI-E Slot
NAR-5630-611	2 RJ45	2 RJ45 2 SFP	2	N/A	Yes	1	N/A
NAR-5630-1011	2 RJ45	4 RJ45 4 SFP	2	N/A	Yes	1	1

NAR-5620

1U communication appliance rack-mount server with 2 PCI-E I/O modules and PCI-X expansion slot

FEATURE

- Removable PCI-E Ethernet modules for flexible application request and easy maintenance
- Supports Intel® Core™ Duo and Core™ 2 Duo CPU up to 2.33GHz
- Supports FSB 667 MHz
- Support DDR2 ECC RAM up to 4GB
- Up to Eight Gigabit Ethernet ports
- Support up to 4 bypass segments
- Dual Personality for flexible use of Fiber-optical or copper interface
- One rear accessible PCI-X expansion slot

SPECIFICATION

CPU Board	- Supports Intel® Core™ 2 Duo T7xxx series and Core™ Duo T2xxx - Intel® E3100 chiset with 667 MHz FSB
System Memory	- Two 240-pin DDR2 DIMM sockets - Support DDR2 400 ECC un-buffer RAM up to 4GB
Ethernet Port	Two flexible PCI-E slots for variable Ethernet I/O requirement, details refer to **Ordering Guide**
Expansion Slot	One PCI-X expansion slot available, with real access I/O
Storage Device	- One 3.5" SATA HDD as default - One compact flash socket for type-I CF card
Serial Port	- One front accessible RJ-45 connector for system console - One internal 2X5 pin-header for connection with EZIO or preferred device
LCD Panel	2x16 character LCD module with 4 buttons
LEDs	LED indicators for power status, data access, Ethernet status/ Speed and bypass
USB	Two USB 2.0 ports, front accessible
VGA	No VGA function provide
Power	Full-range 150W ATX PSU
Dimension	443 (W) x 465 (D) x 44 (H) mm; 17.4" (W) x 18.3" (D) x 1.73" (H)
Operating Environment	- Temperature: 0 to 40°C - Humidity: 20%~90% RH
Storage Environment	- Temperature: -20 to 40°C - Humidity: 20%~90% RH
Certification	CE/FCC/UL

ORDERING GUIDE

Part No.	PCI-E Slot-1 module	PCI-E Slot-2 module	10/100M	Bypass	Dual Personality	EZIO	PCI-X Slot
NAR-5620-0810	AKN-454	AKN-433B	Yes, 1	Yes	N/A	Yes	Yes, 1
NAR-5620-0510	AKN-454	N/A	Yes, 1	N/A	Yes	Yes	Yes, 1
NAR-5620-0110	N/A	N/A	Yes, 1	N/A	Yes	Yes	Yes, 1

NAR-5612

1U communication appliance rack-mount server with 2 PCI-E I/O modules and PCI-X expansion slot

FEATURE

- Removable PCI-E Ethernet modules for flexible application request and easy maintenance
- Supports Intel® Celeron® D, Pentium® 4, Pentium® D and Core™ 2 Dual CPUs
- Supports FSB 1066/800/533 MHz
- Support dual channel DDR2 667/533 up to 4GB
- Up to ten Gigabit Ethernet ports
- Supports up to 3 bypass segments
- Dual-personality for flexible use of fiber-optical (SFP) or copper (RJ45) interface
- One rear-accessible PCI-X expansion slot

SPECIFICATION

CPU Board	- Supports Intel® Celeron® D, Pentium® 4, Pentium® D and Core™ 2 Duo CPUs - Intel® 945G chipset with 1066/800/533 MHz FSB
System Memory	- Dual channel DDR2 with two 240-pin DIMM sockets - Supports DDR2 667/533, un-buffered, none ECC up to 4GB
Ethernet Port	Two flexible PCI-E slots for variable Ethernet I/O requirements. Details refer to **"Ethernet Modules" Ordering Guide**
Expansion Slot	One PCI-X expansion slot available, rear access
Storage Device	- One 3.5" SATA HDD as default - One compact flash socket for type-I CF card - Supports DOM (Disk on Module)
Serial Port	- One front accessible RJ45 connector for system console - One internal 2x5 pin-header for connection with EZIO or preferred device
LCD Panel	2x16 characters LCD module with 4 buttons
LEDs	Power status, data access, Ethernet status/speed and bypass
USB	Two USB 2.0 ports, front accessible
VGA	Build in on-board 2x5 pin-header
Power	Full-range 350W ATX PSU
Dimension	443 (W) x 465 (D) x 44 (H) mm; 17.4" (W) x 18.3" (D) x 1.73" (H)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity: 20%~90% RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity: 20%~90% RH
Certification	CE/FCC/UL

ORDERING GUIDE

Part No.	Ethernet	EZIO	PCI-X Expansion
NAR-5612-1120	- 4 PCI32 GbE ports - 2 Ethernet Modules	Yes	1

One PCI-X expansion slot — 350W ATX PSU

Ethernet Modules

Ordering No.

AKN-434B
-PCI-E x1 GbE module with 4 RJ45 interfaces
-2 Gen. 1.0 bypass segments
-For Slot-1

AKN-434D
-PCI-E x1 GbE module with 4 RJ45 interfaces
-1 Gen. 2.0 bypass segment
-For Slot-1

AKN-432B
-PCI-E x1 GbE module with 2 RJ45 interfaces
-1 bypass segment
-For Slot-2

AKN-362
-PCI-E x4 GbE module with 2 dual-personality interfaces
-For Slot-1

AKN-372B
-PCI-E x4 GbE module with 2 RJ45 interfaces
-1 Gen. 1.0 bypass segment
-For Slot-1

AKN-382
-PCI-E x4 GbE module with 2 SFP interfaces
-For Slot-1

NAR-5530

1U communication appliance rack-mount server with quad-core CPU support, up to 9 GbE and 3 bypass segments

FEATURE

- Most cost-effective multi-core system with high performance GbE ports
- Up to Nine Gigabit Ethernet ports available
- Up to three Gen.-2.0* bypass segments
- Supports Intel® Core™ 2 Quad/Core™ 2 Duo, Cedar Mill and most available desktop LGA775 CPUs
- Supports FSB 1066/800 MHz
- Supports dual channel DDR2 800/667/533 up to 4GB
- Highly integrated system in compact chassis but still supports dual 3.5" HDD installation and/or one removable HDD (optional via project base)

SPECIFICATION

CPU Board	- Support Intel® Core™ 2 Quad, Core™ 2 Duo, Ceder Mill and most available desktop CPUs in LGA775 socket - Intel® Q965 chipset with ICH8 and 1066/800 MHz FSB
System Memory	- Dual channel DDR2 with two 240-pin DIMM sockets - Supports DDR2 800/667/533, un-buffered, none ECC up to 4GB
Ethernet Port	- Six PCI-Express x1 Gigabit Ethernet ports with RJ45 via Intel® 82573L - Up to three PCI32 Gigabit Ethernet ports via Intel® 82541PI
Bypass Feature	Up to three Gen.-2.0* bypass segments available
Expansion Slot	- One PCI32 slot for proprietary PCI card and internal installation
Storage Device	- One 3.5" SATA HDD as default, up to two installable - One Compact Flash socket for Type-I CF - Removable 3.5" HDD design ready for project based request
Serial Port	- One front accessible RJ45 connector for system console - One internal 2x5 pin-header for connection with EZIO or preferred device
LCD Panel	2x16 characters LCD module with blue backlight and 4-buttons
LEDs	Power status, data access, Ethernet status/speed and bypass status
USB	Two USB 2.0 ports, front accessible
VGA	Build-in onboard 2x5 pin-header
Power	Full-range 220W PSU
Dimension	443(W) x 406(D) x 44.5(H) mm 17.4"(W) x 16.0"(D) x 1.73"(H)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity 20% to 90% RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity: 5% to 95% RH
Certification	CE/FCC/UL

220W ATX PSU

ORDERING GUIDE

Part No.	PCI-E GbE	PCI32 GbE	Bypass	EZIO	PCI-Slot	PCI-X slot
NAR-5530-0926	6	3	3	Yes	1	N/A
NAR-5530-0920	6	3	N/A	Yes	1	N/A
NAR-5530-0624	6	N/A	2	Yes	1	N/A

*Gen.-2.0 bypass: The latest bypass generation with software programmable Open/Bypass mode by power failure and Next Boot Mode.

NAR-5520

1U server with up to ten Gigabit Ethernet ports and two PCI expansion slots

FEATURE

- Scalable from Intel® Core™ 2 Duo processor up to 3.0 GHz
- Up to Ten Gigabit Ethernet ports with two bypass segments
- Two PCI expansion slots
- Non-volatile memory on-board
- Support Compact Flash and Disk on Module (DOM)
- Load factory-Default mechanism
- Front access for user-friendly maintenance
- 2x16 LCD/Keypad for friendly installation and operation interface
- Optional crypto solution

SPECIFICATION

CPU Board	- Supports Intel® Core™ 2 Duo processor up to 3.0 GHz - Intel® 945G chipset with 1066/800/533 MHz FSB
System Memory	- Up to 4GB DDR2 667/533/400 on two DIMM sockets
Ethernet Port	Six PCI-E x1 GbE ports, up to ten ports
Bypass Feature	Up to two Gen.-2.0* bypass segments available
Expansion Slot	Up to two PCI expansion slots, optional
Storage Device	- One 3.5" SATA HDD as default, up to two installable - One compact flash socket for type-I CF card, supports DMA mode - One 40-pin IDE connector supports DOM (Disk on Module) - Removable 3.5" HDD design ready for project based request
Serial Port	- One front accessible RJ45 connector for system console - One internal 2x5 pin-header for connection with EZIO or preferred device
LCD Panel	2x16 characters LCD module with 4 buttons
LEDs	Power status, data access, Ethernet status/speed and bypass status
USB	Two USB 2.0 ports, front accessible
VGA	Build-in on-board 2x5 pin-header
Power	Full-range 220W ATX PSU
Dimension	431.8(W) x 355.2(D) x 44(H) mm 17"(W) x 14"(D) x 1.73"(H)
Packing Dimension	22.4"(W) x 24.4"(D) x 8.7"(H)
Weight	Gross: 11kg (24.23 lbs); Net: 6.4kg (14.1 lbs)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity: 20%~90% RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity: 5%~95% RH
Certification	CE/FCC/UL

ORDERING GUIDE

Part No.	PCI-E GbE	EZIO	PCI Expansion
NAR-5520-412	4 Copper GbE ports	Yes	1
NAR-5520-612	6 Copper GbE ports	Yes	1
NAR-5520-812	8 Copper GbE ports	Yes	1
NAR-5520-812	10 Copper GbE ports	Yes	1

NAR-5522

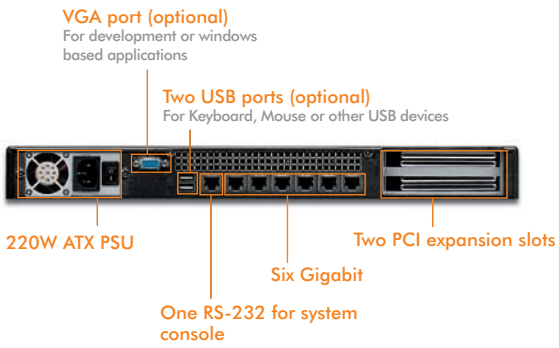
1U server with up to ten Gigabit Ethernet ports and two PCI expansion slots

FEATURE

- Scalable from Intel® Core™ 2 Duo processor up to 3.0 GHz
- Up to Ten Gigabit Ethernet ports with two bypass segments
- Two PCI expansion slots
- Non-volatile memory on-board
- Support Compact Flash and Disk on Module (DOM)
- Load factory-Default mechanism
- Front access for user-friendly maintenance
- Optional crypto solution

SPECIFICATION

CPU Board	- Supports Intel® Core™ 2 Duo processor up to 3.0 GHz - Intel® 945G chipset with 1066/800/533 MHz FSB
System Memory	- Up to 4GB DDR2 667/533/400 on two DIMM sockets
Ethernet Port	Six PCI-E x1 GbE ports
Bypass Feature	Up to two Gen.-2.0* bypass segments available
Expansion Slot	Up to two PCI expansion slots, optional
Storage Device	- One 3.5" SATA HDD as default, up to two installable - One compact flash socket for type-I CF card, supports DMA mode - One 40-pin IDE connector supports DOM (Disk on Module) - Removable 3.5" HDD design ready for project based request
Serial Port	- One front accessible RJ45 connector for system console - One internal 2x5 pin-header for connection with EZIO or preferred device
LEDs	Power status, data access, Ethernet status/speed and bypass status
USB	Two USB 2.0 ports, front accessible
VGA	Build-in on-board 2x5 pin-header
Power	Full-range 220W ATX PSU
Dimension	431.8(W) x 355.2(D) x 44(H) mm 17"(W) x 14"(D) x 1.73"(H)
Packing Dimension	22.4"(W) x 24.4"(D) x 8.7"(H)
Weight	Gross: 11kg (24.23 lbs); Net: 6.4kg (14.1 lbs)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity: 20%~90% RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity: 5%~95% RH
Certification	CE/FCC/UL



ORDERING GUIDE

Part No.	PCI-E GbE	EZIO	PCI Expansion
NAR-5522-412	4 Copper GbE ports	No	2
NAR-5522-612	6 Copper GbE ports	No	2

NAR-5060

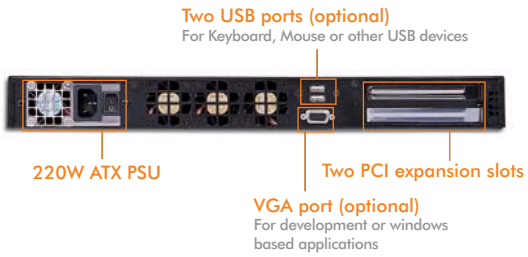
1U server with up to six Gigabit/Fast Ethernet ports and two PCI expansion slots

FEATURE

- Scalable from Intel® Celeron® to Pentium® 2.8 GHz processor
- Up to six GbE/FE supported
- One/two (with backplane) PCI expansion slots
- Non-volatile memory on-board
- Support Compact Flash and Disk on Module (DOM)
- Load Factory-Default mechanism
- Front access for user-friendly maintenance
- 2x16 LCD/keypad for friendly installation and operation interface
- Optional crypto solution

SPECIFICATION

CPU Board	- Supports Intel® P4 processor up to 2.8GHz - Intel® 845GV chipset with 533MHz FSB
System Memory	Up to 2GB DDR 200/266 on two 184-pin DIMM sockets
Ethernet Port	Six 32-bit/33MHz Gigabit/Fast Ethernet ports (Intel® 82541/82551)
PCI Expansion	One PCI exp. slot on-board or two with backplane, support 3.3V/5V
Storage Device	- One 2.5" HDD / 3.5"HDD (optional) - CompactFlash - Disk on Module (DOM)
Serial Port	- One DB9 (for system console) - One 2x5 pin-connector
LCD Panel	2x16 characters LCD module with 4-buttons
LEDs	LED indicators for power status and storage access
IDE	One 40-pin and one 44-pin IDE connectors
USB	Pin header on-board for two USB devices
VGA	Built-in on-board VGA pin-connector
Power	Full-range 220W ATX PSU
Dimension	428.6(W) x 360(D) x 44(H) mm 16.87"(W) x 14.17"(D) x 1.73"(H)
Packing Dimension	22.4"(W) x 24.4"(D) x 8.7"(H)
Weight	Gross: 9.8kg(21.59 lbs); Net: 5.2kg (11.45 lbs)
Operating Environment	- Temperature: 5 to 40°C (67 to 130°F) - Humidity 20% to 90% RH
Storage Environment	- Temperature: 0 to 70°C (58 to 184°F) - Humidity 5% to 95% RH
Certification	CE/FCC/UL



ORDERING GUIDE

Part No.	Ethernet	EZIO	PCI Exp.	Crypto
NAR-5060-630	- 4 Copper GbE - 2 10/100 FE	Yes	1/2	N/A
NAR-5060-631	- 6 10/100 FE	Yes	1/2	N/A

NAR-2200

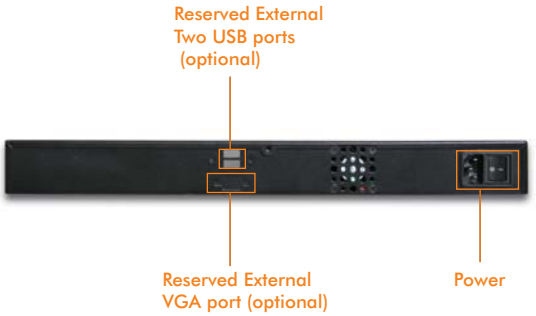
1U server with PCI-Express Gigabit Ethernet, Gen.-2 Bypass and dual channel DDR2 Memory

FEATURE

- Up to Six GbE, 4x PCI-Express x1 with 2x 82541PI(GbE)
- Cost effective system with 2.5/3.5"HDD and Fan-less solution
- High computing performance with low power consumption
- Fulfill most Entry level Rack-mount platform requirement
- Supports Compact Flash and Disk on Module (DOM)
- Generation-2 Bypass function supported (Software control)
- Supports dual channel DDR2 533 up to 2GB

SPECIFICATION

CPU Board	- Support Intel® Celeron® M/Pentium M processors up to 2GHz - Intel® 915GME/910GMLE chipset with 533/400MHz FSB
System Memory	Dual channel 200-pin SODIMM sockets support DDR400/533MHz up to 2GB
Ethernet Port	- 4 PCI-E x1 GbE ports - 2 PCI FE or GbE ports
PCI Expansion	Optional
Storage Device	- CompactFlash - Disk on Module (DOM) - One SATA/IDE 2.5/3.5" HDD
Serial Port	- One RJ45 for system console - One 2x5 pin-connector
LCD Panel	Optional
LEDs	Power status, data access, Ethernet status (LNK/ACT), Ethernet speed (10/100/1000) and bypass
IDE	- One 40-pin IDE connector - Two SATA connectors
USB	Two USB 2.0 ports, front accessible
VGA	Built-in on-board 2x5 pin-header
Power	80W full-range AT
Dimension	428(W) x 255(D) x 44(H)mm 16.83"(W) x 10.04"(D) x 1.73"(H)
Packing Dimension	22.4"(W) x 24.4"(D) x 8.7"(H)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity 20% to 90%RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity 5% to 95%RH
Certification	CE/FCC/UL



ORDERING GUIDE

Part No.	CPU	Chipset	Ethernet	Bypass	EZIO	PCI Exp.
NAR-2200-621	Intel® ULV Celeron® M 600MHz	910GMLE	4 GbE+2 FE	One bypass seg.	N/A	N/A
NAR-2200-601	Intel® Celeron® M / Pentium® M	915GME	6 GbE	One bypass seg.	N/A	N/A

NAR-2085

1U server with up to six Gigabit/Fast Ethernet ports and Mini-PCI Slot

FEATURE

- Full Intel® solution
- Cost effective system with 3.5"HDD
- High computing performance with low power consumption
- Supports CF, 40/44-pin DOM, Mini-PCI slot
- Load Factory-Default mechanism
- Gen1.5 Bypass Function

SPECIFICATION

CPU Board	- Support Intel® Celeron® M processors up to 1.5GHz - Intel® 852GM chipset with 400MHz FSB
System Memory	- Two 200-pin SODIMM sockets support DDR 266 up to 2GB
Ethernet Port	- 6x Gigabit Ethernet ports via Intel® 82541PI
PCI Expansion	- Support Mini-PCI slot - Standard PCI slot (optional)
Storage Device	- CompactFlash - Disk on Module (DOM) - One IDE 2.5/3.5" HDD
Serial Port	- One RJ45 for system console - One 2x5 pin-connector
LCD Panel	Optional
LEDs	Power status, data access, Ethernet status (LNK/ACT), Ethernet speed (10/100/1000) and bypass
IDE	One 40-pin and one 44-pin IDE connectors
USB	Two USB 2.0 ports, front accessible
VGA	Built-in on-board 2x5 pin-header
Power	65W full-range AT
Dimension	428(W) x 255(D) x 44(H)mm 16.83"(W) x 10.04"(D) x 1.73"(H)
Packing Dimension	22.4"(W) x 24.4"(D) x 8.7"(H)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity 20% to 90%RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity 5% to 95%RH
Certification	CE/FCC/UL

ORDERING GUIDE

Part No.	CPU	Ethernet	Bypass	EZIO	PCI Exp.
NAR-2085-661	Intel® Celeron® M 1.5GHz	6 GbE	One bypass seg.	N/A	MiniPCI
NAR-2085-620	Intel® ULV Celeron® M 600MHz	6 FE	One bypass seg.	N/A	MiniPCI
NAR-2085-461	Intel® Celeron® M 1.5GHz	4 GbE	One bypass seg.	N/A	MiniPCI
NAR-2085-421	Intel® Celeron® M 1.5GHz	4 FE	One bypass seg.	N/A	MiniPCI

NAR-2090/2091

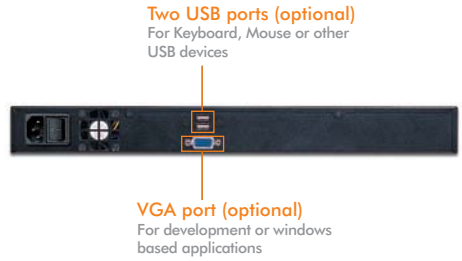
1U communication appliance rack-mount server with up to five Ethernet ports and two PCI expansion slots

FEATURE

- Cost-effective rack-mount solution
- Up to VIA C7 1.5GHz CPU performance
- 256MB memory and SODIMM socket on board
- Two PCI expansion slots supported
- Supports 3.5" HDD, Compact Flash and Disk on Module (DOM)
- Optional bypass function
- Front-side access for user-friendly maintenance
- Optional 2x16 LCD/keypad for installation and operation interface

SPECIFICATION

CPU Board	- Support VIA C7/Eden series processor - VIA CN700 chipset with 400FSB
System Memory	- 256MB memory on board - One DDR2 SODIMM socket, supports up to 2GB
Ethernet Port	- 5x RealTek RTL8100C Fast Ethernet ports - One bypass segment for project base application
PCI Expansion	Two PCI slots (NAR-2091 only)
Storage Device	- CompactFlash - Disk on Module (DOM) - One IDE/SATA 3.5" HDD
Serial Port	- One DB9 for system console - One 2x5 pin-connector
LCD Panel	Optional
LEDs	Power status, data access, Ethernet status (LNK/ACT), Ethernet speed (10/100/1000) and bypass
IDE/SATA	- One 40-pin IDE connector - Two SATA connectors
USB	Two USB 2.0 ports, rear accessible
VGA	Built-in on-board 2x5 pin-header
Power	Full-range AT 65W PSU
Dimension	-(NAR-2090) 428(W) x 255(D) x 44(H) mm 16.85"(W) x 10.04"(D) x 1.73"(H) -(NAR-2091) 428(W) x 344(D) x 44(H) mm 16.85"(W) x 13.54"(D) x 1.73"(H)
Packing Dimension	22.05"(W) x 18.31"(D) x 14.37"(H) (2 in 1 packing)
Weight	-(NAR-2090) NarGross: 8.2kg (18.06 lbs) (2 in 1 packing) Net: 3kg (6.61 lbs) -(NAR-2091) NarGross: 10.8kg (23.79 lbs) (2 in 1 packing) Net: 4.5kg (9.91 lbs)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity: 20% to 90% RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity: 5% to 95% RH
Certification	CE/FCC/UL



ORDERING GUIDE

Part No.	CPU	Ethernet	Bypass	EZIO	PCI Exp.
NAR-2090-547	VIA C7 1.5GHz	5 FE	One segment	N/A	N/A
NAR-2090-557	VIA C7 1.5GHz	5 FE	One segment	Yes	N/A
NAR-2091-547	VIA C7 1.5GHz	5 FE	One segment	N/A	2
NAR-2091-557	VIA C7 1.5GHz	5 FE	One segment	Yes	2

NAD-2100

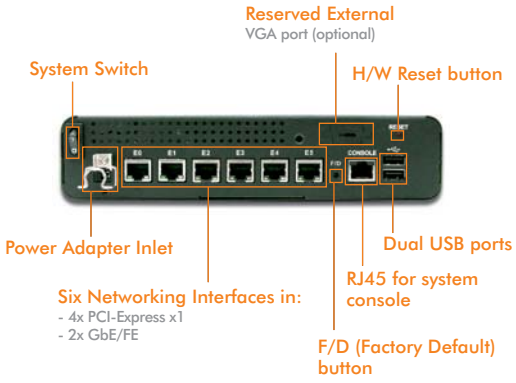
Fanless Intel® desktop communication appliance platform with PCI-Express

FEATURE

- Full Intel® solution
- Cost effective system with 2.5/3.5"HDD and Fanless solution
- High computing performance with low power consumption
- Fulfill most desktop platform requirement
- Up to Six GbE/FE and PCI-Express supported
- Supports Compact Flash and Disk on Module (DOM)
- Generation-2 Bypass function supported (Software control)
- Supports dual channel DDR2 533 up to 2GB

SPECIFICATION

CPU Board	- Support Intel® Celeron® M / Pentium M processors up to 2GHz - Intel® 915GME/910GMLE chipset with 533/400MHz FSB
System Memory	Dual channel 200-pin SODIMM sockets support DDR2 400/533MHz up to 2GB
Ethernet Port	- 4 PCI-E x1 GbE ports - 2 PCI FE or GbE ports
PCI Expansion	Optional
Storage Device	- CompactFlash - Disk on Module (DOM) - One SATA/IDE 2.5/3.5" HDD
Serial Port	- One RJ45 for system console - One 2x5 pin-connector
LCD Panel	N/A
LEDs	Power status, data access, Ethernet status (LNK/ACT), Ethernet speed (10/100/1000) and bypass
IDE/SATA	- One 40-pin IDE connector - Two SATA connectors
USB	Two USB 2.0 ports, rear accessible
VGA	Built-in on-board 2x5 pin-header
Power	84W power adaptor
Dimension	255(W) x 205(D) x 50(H) mm 8.96"(W) x 8.07"(D) x 1.97"(H)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity: 20% to 90% RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity: 5% to 95% RH
Certification	CE/FCC/UL



ORDERING GUIDE

Part No.	CPU	Chipset	Ethernet	Bypass	PCI Exp.
NAD-2100-621 (Fanless)	Intel® ULV Celeron® M 600MHz	910GMLE	4GbE+2FE	One bypass seg.	N/A
NAD-2100-601	Intel® Celeron® M/Pentium® M	915GME	6GbE	One bypass seg.	N/A

NAD-2065

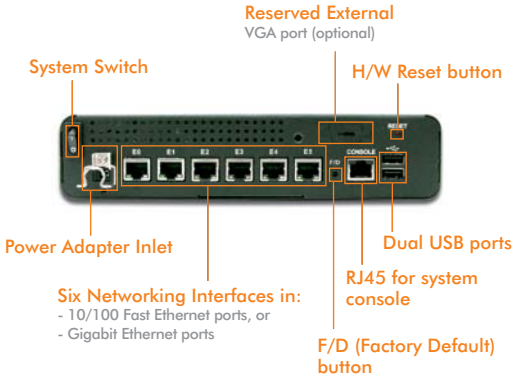
Fanless Intel® desktop communication appliance platform with up to six Ethernet ports

FEATURE

- Outstanding system performance with 512KB cache built-in in CPU
- High cost-effective fan-less desktop solution
- Up to six Gigabit Ethernet ports available
- Supports one Gen.-1.5 bypass segments
- Supports one Compact Flash socket (internal)

SPECIFICATION

CPU Board	- Intel® Celeron® M CPU up to 1.5GHz - Intel® 82852GM chipset with ICH4
System Memory	- Two 200-pin SODIMM socket supports DDR 266 up to 2GB
Ethernet Port	Up to six PCI32 Gigabit Ethernet ports via Intel® 82541PI or 10/100 Fast Ethernet ports via Intel® 82551
Bypass Feature	One Gen.-1.5 bypass segment available
Expansion Slot[2]	- One PCI32 slot for proprietary PCI card - One Mini PCI socket on board
Storage Device	- Support one 3.5" or 2.5" IDE HDD - One onboard Compact Flash socket for Type-I CF
Serial Port	- One RJ45 for system console - One 2x5 pin-connector
LCD Panel	N/A
LEDs	Power status, data access, Ethernet status (LNK/ACT), Ethernet speed (10/100/1000) and bypass
USB	Two USB 2.0 ports, rear accessible
VGA	Built-in on-board 2x5 pin-header
Power	60W power adaptor
Dimension	225(W) x 205(D) x 50(H)mm 8.96"(W) x 8.07"(D) x 1.97"(H)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity 20% to 90%RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity 5% to 95%RH
Certification	CE/FCC/UL



ORDERING GUIDE

Part No.	CPU	Chipset	Ethernet	Bypass	PCI Exp.
NAD-2065-661	Intel® Celeron® M 1.5GHz	915GME	6 GbE	One bypass seg.	MiniPCI
NAD-2065-620	Intel® ULV Celeron® M 600MHz	910GMLE	6 FE	One bypass seg.	MiniPCI
NAD-2065-461	Intel® Celeron® M 1.5GHz	915GME	4 GbE	One bypass seg.	MiniPCI
NAD-2065-420	Intel® ULV Celeron® M 600MHz	910GMLE	4 FE	One bypass seg.	MiniPCI

NAD-2073/2074

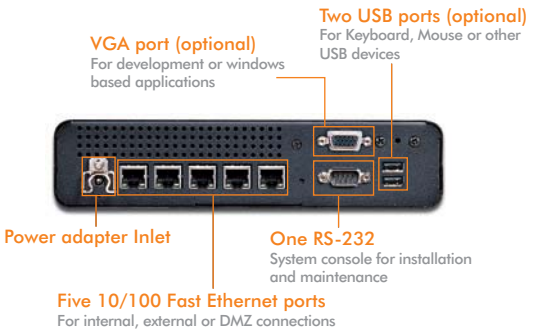
Desktop server with up to five Ethernet ports and one PCI expansion slot

FEATURE

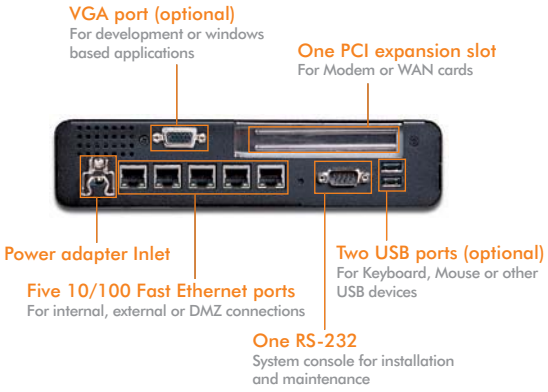
- Cost-effective solution
- Upgradeable to VIA C7 1.5GHz CPU performance
- 256MB memory and SODIMM socket on board
- Support Compact Flash, DOM and 2.5″/3.5″ HDD
- One PCI slot for extended usage (NAD-2074)
- Optional bypass function
- OS: support most updated Linux
- Power adapter solution

SPECIFICATION

CPU Board	- Support VIA V4 Eden/C7 series processor - VIA CN700 chipset with 400FSB
System Memory	- 256MB memory on board - One DDR2 SODIMM socket, supports up to 2GB
Ethernet Port	- 5 x RealTek RTL8100C Fast Ethernet ports (RTL8110S 32-bit GbE for option) - One bypass segment for project base application
PCI Expansion	One PCI slot (NAD-2074 only)
Storage Device	- CompactFlash - Disk on Module (DOM) - One IDE/SATA 3.5″ HDD (NAD-2073 only) / One 2.5″ HDD
Serial Port	- One DB9 for system console - One 2x5 pin-connector
LCD Panel	N/A
LEDs	Power status, data access, Ethernet status (LNK/ACT), Ethernet speed (10/100/1000) and bypass
IDE	- One 40-pin IDE connector - Two SATA connectors
USB	Two USB 2.0 ports, rear acessible
VGA	Built-in on-board 2x5 pin-header
Power	60W power adapter
Dimension	225(W) x 205(D) x 50(H) mm 8.86"(W) x 8.07"(D) x 1.97"(H)
Packing Dimension	13.19"(W) x 12.60"(D) x 13.58"(H) (2 in 1 packing)
Weight	Gross: 4.8kg(10.6 lbs) (2 in 1 packing); Net: 1.2kg(2.6 lbs)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity 20% to 90%RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity 5% to 95%RH
Certification	CE/FCC class B/UL



NAD-2073



NAD-2074

ORDERING GUIDE

Part No.	CPU	Ethernet	Bypass	EZIO	PCI Exp.
NAD-2073-555	VIA C7 1.5GHz	5 FE	N/A	N/A	N/A
NAD-2073-557	VIA C7 1.5GHz	5 FE	One segment	N/A	N/A
NAD-2074-557	VIA C7 1.5GHz	5 FE	One segment	N/A	1

NAD-2075

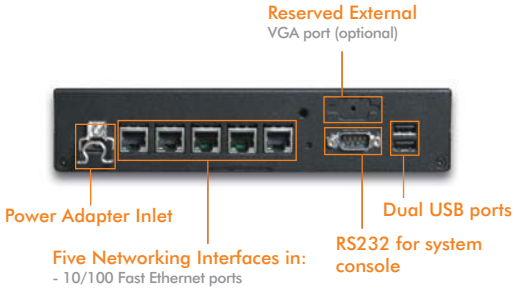
Fanless Desktop communication appliance platform with up to five Ethernet ports

FEATURE

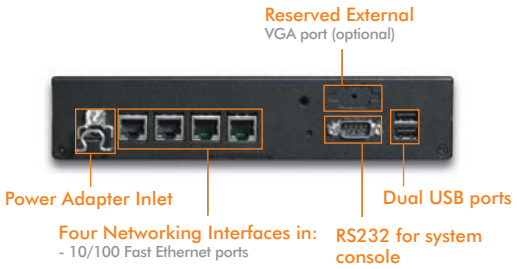
- Competitive pricing with Full configuration Desktop platform
- VIA ULV Eden 500MHz with Fanless solution
- Up to 5 Fast Ethernet ports
- DDRII 256MB memory on board
- Front-side LED indicates for Power, Storage and Ethernet status
- RoHS compliant

SPECIFICATION

CPU Board	- Support VIA ULV Eden 500MHz - VIA CN700 chipset with 400FSB
System Memory	256MB memory on board
Ethernet Port	5x RealTek RTL8100C Fast Ethernet ports
Expansion Slot[2]	N/A
Storage Device	- CompactFlash - Disk on Module (DOM) - One IDE/SATA 2.5" HDD
Serial Port	- One DB9 for system console - One 2x5 pin-connector
LCD Panel	N/A
LEDs	Power, data access and Ethernet status
IDE/SATA	One IDE and two SATA connectors
USB	Two USB 2.0 connectors
VGA	Build-in onboard 2x5 pin-header
Power	60W power adaptor
Dimension	220(W) x 230(D) x 44(H)mm 8.66"(W) x 9.06"(D) x 1.73"(H)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity 20% to 90%RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity 5% to 95%RH
Certification	CE/FCC/UL



NAD-2075-536



NAD-2075-414

ORDERING GUIDE

Part No.	CPU	Ethernet	Bypass	CF
NAD-2075-536	VIA V4 Eden 1GHz	5 FE	One segment	Optional
NAD-2075-414	VIA ULV Eden 500MHz	4 FE	N/A	256MB

ABC-200

High performance IPSec and SSL accelerator PCI-X card with Cavium CN1010X

SPECIFICATION

Crypto Chip	- Cavium CN1010-350BG256-X
PCI Bus	- Compliant with PCI-X 1.0, 64bit/100MHz bus
Algorithm Support	- RSA and Diffie-Hellman - DES/3DES, AES, ARC4 - MD5, SHA-1, HMAC-MD5, HMAC-SHA-1
Protocol Support	- Macro support for IPSec and IKE - Macro support for SSL, TLS and WTLS
Driver Support	- Linux - BSD - VxWorks/Windows
Performance	- 12K 1024bit Diffie Hellman ops/sec - 7K 1024bit RSA operations/sec - Full SSL record throughput 1Gbps (ARC4+MD5) - Full IPSec packet processing 1Gbps (AES/3DES+SHA1)
Dimension	56(W) x 164(L) mm; 2.2"(W) x 6.46"(L)

FEATURE

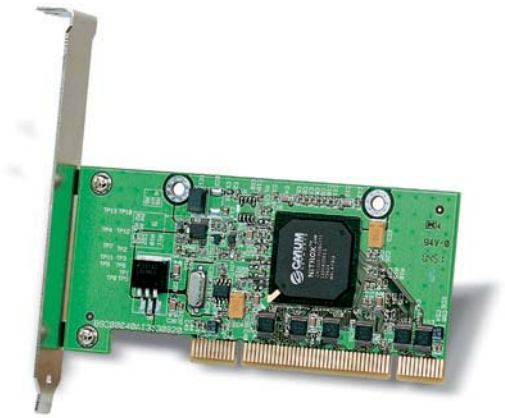
- Support 64-bit/100MHz PCI-X bus
- Multi Algorithm support
- Multi Protocol support: IPSec & SSL
- Support unlimited SSL sessions and IPSec SAs with host memory
- On chip true Random Number Generator
- Software drivers for Linux, BSD and VxWorks

ORDERING GUIDE

Part No.	Description
ABC-200	Crypto accelerator PCI-X card with Cavium CN1010X

ABC-130

High performance IPSec and SSL accelerator PCI card with Cavium CN1010



SPECIFICATION

Crypto Chip	- Cavium CN1010-350BG256
PCI Bus	- 32-bit, 66MHz universal (5V or 3.3V) PCI card
Algorithm Support	- RSA and Diffie-Hellman - DES/3DES, AES, ARC4 - MD5, SHA-1, HMAC-MD5, HMAC-SHA-1
Protocol Support	- Macro support for IPSec and IKE - Macro support for SSL, TLS and WTLS
Driver Support	- Linux - BSD - VxWorks/Windows
Performance	- 12K 1024bit Diffie Hellman ops/sec - 7K 1024bit RSA operations/sec - Full SSL record throughput 1Gbps (ARC4+MD5) - Full IPSec packet processing 1Gbps (AES/3DES+SHA1)
Dimension	56(W) x 120(L) mm; 2.2"(W) x 4.72"(L)

FEATURE

- Universal voltage input, support both +3.3V and +5V
- Multi Algorithm support
- Multi Protocol support: IPSec & SSL
- Support unlimited SSL sessions and IPSec SAs with host memory
- On chip true Random Number Generator
- Software drivers for Linux, BSD and VxWorks

ORDERING GUIDE

Part No.	Description
ABC-130	Crypto accelerator PCI card with Cavium CN1010

ABN-182

Dual-Port 64-bit Gigabit Ethernet Adaptor with Fiber Bypass Function

FEATURE

- Dual MM LC fiber ports with fiber-bypass function
- Switch automatically, and programmable, to bypass mode while power fails and software hangs
- Software control to switch bypass/non-bypass function in software hang and power failure
- Built-in LED for Ethernet status and bypass mode
- PCI-X interface

SPECIFICATION

Ethernet Port	Intel 82546GB high performance dual ports
Bus Type	64bit/133MHz PCI-X, backwards compatible with PCI-64/32
Compliance	- IEEE 802.3ab, 802.3u compliant - IEEE 802.3x flow control supported
Connector	- Two full duplex MM LC connectors - Multi-mode Fiber ports, 850nm, 1.25Gbps.
Watchdog Timer	Built-in watchdog timer to switch to bypass mode for Fiber ports by power failure and software hang
S/W Programmable	- Software programmable to select normal mode or bypass mode - WDT time-out setting
LED Display	- Two LEDs adjacent to each LC fiber connectors to display the status of linking - One on-board LED to show bypass status
Dimension	170(W) x 90(L) mm; 6.69"(W) x 3.54"(L)

ORDERING GUIDE

Part No.	Description
ABN-182	Dual 64-bit Intel® 82546GB Fiber PCI-X card with bypass function

ABN-192

Dual-Port 64-bit Gigabit Ethernet Adaptor with Bypass Function

FEATURE

- Dual 64-bit Gigabit Ethernet ports base on Intel® 82546GB controller
- Supports 133MHz PCI-X bus and backwards compatible with 64/32-bit PCI
- Built-in Watchdog Timer (WDT) to switch Ethernet ports to bypass mode3 by system hang and power failure
- Easy configuration of Normal/Bypass mode and WDT time-out by hardware setting or software programming
- Built with both on-board LED and LED pin-out for LAN status and bypass mode, provides variable LED location for system integration

SPECIFICATION

Ethernet Port	Intel® 82546GB high performance dual-port Gigabit Ethernet controller
Bus Type	64bit/133MHz PCI-X
Compliance	- IEEE 802.3 auto-negotiation for 1000BASE-T, 100BASE-TX and 10BASE-T supported - IEEE 802.3x flow control supported
Watchdog Timer	Built in watchdog timer to switch to bypass mode for Ethernet ports by power failure and software hang
S/W Programmable	- S/W programmable to select normal mode or bypass mode - WDT time-out setting
LED Display	- Two LEDs adjacent to each RJ45 port to display Active/Link & 10/100/1000Mbps - One on-board LED to show bypass status
Dimension	197.8(W) x 78(L) mm; 6.9"(W) x 3.07"(L)

ORDERING GUIDE

Part No.	Description
ABN-192	Dual 64-bit intel® 82546GB Gigabit Ethernet PCI-X card with bypass function

ABN-194

Quad-Port 64-bit PCI-X Gigabit Ethernet Adaptor with 2nd Generation Bypass Function

FEATURE

- Configuration of Normal/Bypass mode and WDT time-out period can be deployed by software commands
- Software programmable modes (Bypass, Normal, Open) after reboot
- Two independent bypass segments
- Quad 64-bit Gigabit Ethernet ports based on Intel® 82546GB controllers
- Supports 133MHz PCI-X bus and is backwards compatible with 64/32-bit PCI
- Built-in Watchdog Timer (WDT) to switch Ethernet ports to bypass mode by system hang
- Built with both on-board LED and LED pin-out for LAN status and bypass mode, provides variable LED location for system integration

SPECIFICATION

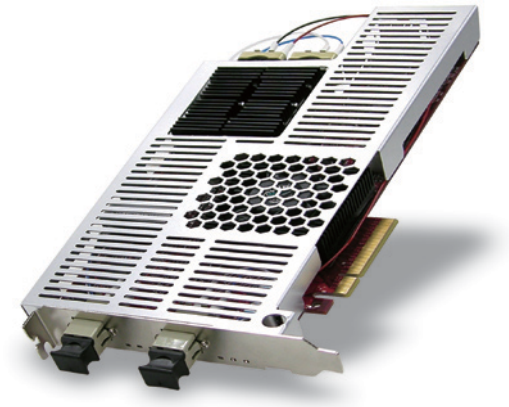
Ethernet Port	Intel® 82546GB high performance dual-port Gigabit Ethernet controller
Bus Type	64bit/133MHz PCI-X, backwards compatible with PCI-64/32
Compliance	- IEEE 802.3 auto-negotiation for 1000BASE-T, 100BASE-TX and 10BASE-T supported - IEEE 802.3x flow control supported
Watchdog Timer	Built in watchdog timer to switching to bypass mode for Ethernet ports by software hang
S/W programmable	- Selection of normal-, bypass- or open mode - WDT time-out setting
LED Display	- Two LEDs adjacent to each RJ45 port to display Active/Link & 10/100/1000Mbps - One on-board LED for each bypass segment to show bypass status
Dimension	167.64(W) x 106.68(L) mm

ORDERING GUIDE

Part No.	Description
ABN-194	Quad-Port 64-bit PCI-X Gigabit Ethernet Adaptor with 2nd Generation Bypass Function

ABN-512

PCI-E x8 Card with Dual 10 Gigabit Fiber Bypass Ports from Intel® 82598EB



FEATURE

- Dual MM LC 10GbE ports with fiber-bypass function
- Switch automatically, and programmable, to bypass mode while power fails and software hangs
- Software control to switch bypass/non-bypass function in software hang and power failure
- Built-in LED for Ethernet status and bypass mode
- PCI-E x8 interface

SPECIFICATION

Ethernet Port	Intel® 82598EB dual 10 Gigabit Fiber ports
Bus Type	PCI-E x8
Compliance	- IEEE 802.3ak compliant - IEEE 802.3x flow control supported - IEEE 802.1q VLAN supported
Connector	- Two full duplex MM LC connectors - Multi-mode Fiber ports, 850nm, 1.25Gbps.
Watchdog Timer	Built-in watchdog timer to switch to bypass mode for Fiber ports by power failure and software hang
S/W programmable	- Selection of normal-, bypass- or open mode - WDT time-out setting
LED Display	- Two LEDs adjacent to each LC fiber connectors to display the status of linking - One on-board LED to show bypass status
Dimension	235(W) x 110(L) mm; 9.25"(W) x 4.33"(L)

ORDERING GUIDE

Part No.	Description
ABN-512	PCI-E x8 card with dual 10 Gigabit Fiber bypass ports from Intel® 82598EB

Accessory

ACCESSORY TABLE

Accessory	Description/Ordering#	NAR-7090	NAR-5630	NAR-5620	NAR-5612	NAR-5530	NAR-5520	NAR-5522	NAR-5060	NAR-2200	NAR-2085	NAR-2090/2091	NAD-2100	NAD-2065	NAD-2073/2074	NAD-2075
Ethernet Cable	CAT.6, Cross-over, orange, 1.8M B7861700	V	V	V	V	V	V	V		V	V	V	V	V	V	V
Ethernet Cable	CAT.6, Straight, grey, 1.8M B7861580	V	V	V	V	V	V	V		V	V	V	V	V	V	V
Ethernet Cable	CAT.5, Cross-over, grey, 2 M B8762200	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
Ethernet Cable	CAT.5, Straight, black, 2 M B7861610	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
VGA Cable	VGA Cable assembly with DB15 Connector, 25cm B786A820						V	V								
VGA Cable	VGA Cable assembly with DB15 Connector, 28cm B6900385								V	V	V	V	V	V	V	V
VGA Cable	VGA Cable assembly with DB15 Connector, 43cm B7864720		V		V	V										
VGA Kit	3.3V PCI VGA Card B4720780			V												
USB Cable	USB cable assembly with dual USB ports B7861800								V							
K/M Y-Cable	10P to PS/2 keyboard/moouse Y-Cable B6900900								V	V		V	V		V	
Null Modem Cable	Null Modem cable with DB9 female connector, 1.2M B7863030								V			V			V	V
Console Cable	Console Cable with RJ45 connector, 1.8M B7864490	V	V	V	V	V				V	V		V	V		
Foot Stand	22mm*22mm square foot stand - black rubber made, 1 piece only B7750030								V				V	V	V	V

ABOUT KiLIN

KiLIN-6000

KiLIN-6005

KiLIN-6020

KiLIN-6030

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 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

REFERENCE TABLE

< MIPS 64 Architecture >

MODEL	KiLIN-6030	KiLIN-6020	KiLIN-6010	KiLIN-6005		KiLIN-6000	
Sub-Model	-4300	-0350	-0350	-1270	-3270	-1270	-3270
Processor	Cavium Octeon CN3860	Cavium Octeon CN3840	Cavium Octeon CN3830	Cavium Octeon CN3120 series		Cavium Octeon CN3120 series	
CPU (Max.)	600MHz, 16 cores	600MHz, 8 cores	600MHz, 4 cores	500MHz, 2 cores		500MHz, 2 cores	
RAM (Max.)	8GB	8GB	8GB	4GB		4GB	
Ethernet							
Fiber	0	0	0	0		0	
Copper GbE	14	8	4	3 or 6		3 or 6	
10/100 FE	2	1	1	1		1	
Expansion Slot	2	1	1	1		1	
Storage Device							
HDD	Two Removable 3.5" HDD	Two 2.5" HDD	Two 2.5" HDD	One 3.5" HDD		N/A	
CF	Optional	Optional	Optional	Optional		Optional	
DOM	N/A	N/A	N/A	N/A		N/A	
DOC	N/A	N/A	N/A	N/A		N/A	
Serial Port							
Console	RJ45 on front Panel	RJ45 on front Panel	RJ45 on front Panel	RJ45 on front Panel		RJ45 on front Panel	
LCD module	EZIO-3	EZIO-3	EZIO-3	EZIO-3		N/A	
LEDs	Power, Storage	Power, Storage	Power, Storage	Power, Storage		Power, Storage	
IDE	Two SATA connectors	Two SATA connectors	Two SATA connectors	Two SATA connectors		Two SATA connectors	
USB	Optional	Optional	Optional	One USB 2.0		One USB 2.0	
VGA	N/A	N/A	N/A	N/A		N/A	
Power	350W 1+1 redundant PSU w/PFC	200W Full-range ATX	200W Full-range ATX	65W Full-range		60W Adapter	
Height (U)	2U	1U	1U	1U		1U	
Dimension (WxDxH)	431 x 394 x 88 mm 16.97" x 15.5" x 3.46"	431 x 394 x 44 mm 16.97" x 15.5" x 1.73"	431 x 394 x 44 mm 16.97" x 15.5" x 1.73"	428 x 255 x 44 mm 16.8" x 10.1" x 1.73"		225 x 205 x 50 mm 8.86" x 8.07" x 1.97"	
PAGE	26	27	28	29		30	

KiLIN-6030/6031

2U rack-mount network server with Cavium Octeon processor and redundant PSU

FEATURE

- MIPS64 Cavium Octeon processor with 16 cores and up to 600MHz
- Security, Regular expression and Decom/ compression functions inside
- Optional COM-Express module supported
- Up to Sixteen Gigabit Ethernet ports with five bypass segments in KiLIN-6030
- Up to Four Gigabit Ethernet and Four Fiber ports with four bypass segments in KiLIN-6031
- SPI4.2 interface for possible 10G solution or additional extensions
- Four DDR2/400 memory slots and 256MB RLDRM on-board
- Up to two PCI-X expansion slots
- Redundant 350W ATX PSU

SPECIFICATION

CPU Board	- Cavium Octeon CN3860 series with security function inside - 16 cores with 400/500/600MHz CPU frequency
System Memory	- Four 240-pin DDR2 DIMM slots - Supports DDR2 667/533/400 up to 8GB - 256MB RLDRAM on-board
Ethernet Port	- Two 64bit/66MHz Gigabit Ethernet ports for management - Four Gigabit Ethernet ports on-board in two bypass segments - Ten Gigabit Ethernet ports from SPI4.2 interface in three bypass segments in KiLIN-6030 - Four fiber ports from SPI4.2 interface in two bypass segments in KiLIN-6031
Expansion Slot	- Up to two PCI-X expansion slots - COM-Express interface alternative with one PCI-X slot
Storage Device	- Two swappable 3.5" SATA HDD, alternative from Octeon carrier board or COM-Express module - CompactFlash socket on-board
Serial Port	- Both of RJ45 connectors from carrier board and COM-Express respectively - One 2x5 pin-connector from carrier board
LCD Panel	2x16 characters LCD module with 4-buttons, option for 6-buttons
LEDs	Power status, data access, Ethernet status/speed and bypass status
IDE	Two SATA connectors from Cavium and two from COM-Express module
USB	Option
VGA	N/A
Power	Full-range 350W 1+1 redundant PSU
Dimension	431(W) x 394(D) x 88(H) mm 16.97"(W) x 15.5"(D) x 3.46"(H)
Packing Dimension	25.98"(W) x 21.93"(D) x 10.23"(H)
Weight	Gross: 18kg (39.65 lbs); Net: 12.5kg (27.53 lbs)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity 20% to 90% RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity 5% to 95% RH
Certification	CE/FCC/UL

ORDERING GUIDE

Part No.	Cavium Processor	Ethernet	EZIO	COM-Express	Bypass Segment
KiLIN-6030-4300	Octeon CN3860-500NSP	14 Copper GbE + 2 management port	Yes	Option	5
KiLIN-6031-2300	Octeon CN3860-500NSP	4 Copper GbE + 4 fiber ports + 2 management ports	Yes	Option	4

KiLIN-6020

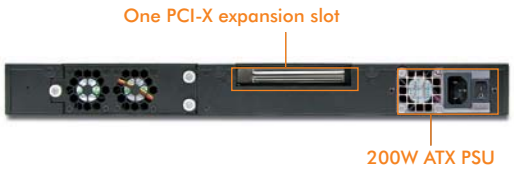
1U rack-mount network server with Cavium Octeon processor and up to eight Gigabit Ethernet ports

FEATURE

- MIPS64 Cavium Octeon processor with 8 cores and up to 600MHz
- Security, Regular expression and Decom/ compression functions inside
- Up to Eight Gigabit Ethernet ports in four bypass segments
- SPI4.2 interface for possible 10G solution or fiber bypass function
- Four DDR2/400 memory slots and 64MB RLDRM on-board
- One PCI-X expansion slot supports

SPECIFICATION

CPU Board	- Cavium Octeon CN3840 series with security function inside - 8 cores with 400/500/600MHz CPU frequency
System Memory	- Four 240-pin DDR2 DIMM slots - Supports DDR2 667/533/400 up to 8GB - 64MB RLDRAM on-board
Ethernet Port	- One 64bit/66MHz Gigabit Ethernet port for management - Four Gigabit Ethernet ports on-board in two bypass segments - Four optional Gigabit Ethernet ports from SPI4.2 interface in two bypass segments, with other options such as 10G interface
Expansion Slot	One PCI-X expansion slot
Storage Device	- Two 2.5" SATA HDD - CompactFlash socket on-board
Serial Port	- One RJ45 connector for system console - One 2x5 pin-connector for LCD or other option
LCD Panel	2x16 characters LCD module with 4-buttons, option for 6-buttons
LEDs	Power status, data access, Ethernet status/speed and bypass status
IDE/SATA	Two SATA connectors
USB	Option
VGA	N/A
Power	Full-range 200W ATX PSU
Dimension	431 (W) x 394 (D) x 44 (H) mm; 16.97" (W) x 15.5" (D) x 1.73" (H)
Weight	Gross: 12kg(26.43 lbs); Net: 7kg(15.42 lbs)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity 20% to 90% RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity 5% to 95% RH
Certification	CE/FCC/UL



ORDERING GUIDE

Part No.	Cavium Processor	Ethernet	EZIO	COM-Express
KiLIN-6020-0351	Octeon CN3860-500 NSP	4 Copper GbE + 1 management port	Yes	N/A
KiLIN-6020-0350	Octeon CN3840-500 NSP	4 Copper GbE + 1 management port	Yes	N/A

KiLIN-6010

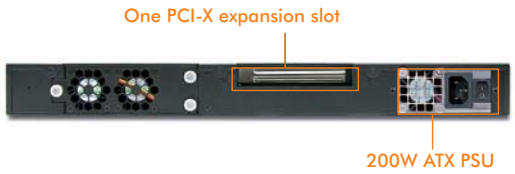
1U rack-mount network server with Cavium Octeon processor and up to four Gigabit Ethernet ports

FEATURE

- MIPS64 Cavium Octeon processor with 4 cores and up to 600MHz
- Security, Regular expression and Decom/ compression functions inside
- Up to Four Gigabit Ethernet ports in two bypass segments
- Four DDR2/400 memory slots on-board
- One PCI-X expansion slot supports

SPECIFICATION

CPU Board	- Cavium Octeon CN3830 series with security function inside - 4 cores with 400/500/600MHz CPU frequency
System Memory	- Four 240-pin DDR2 DIMM slots - Supports DDR2 667/533/400 up to 8GB - Optional RLDRAM for project-base
Ethernet Port	- One 64bit/66MHz Gigabit Ethernet port for management - Four Gigabit Ethernet ports on-board in two bypass segments
Expansion Slot	One PCI-X expansion slot
Storage Device	- Two 2.5" SATA HDD - CompactFlash socket on-board
Serial Port	- One RJ45 connector for system console - One 2x5 pin-connector for LCD or other option
LCD Panel	2x16 characters LCD module with 4-buttons, option for 6-buttons
LEDs	Power status, data access, Ethernet status/speed and bypass status
IDE/SATA	Two SATA connectors
USB	Option
VGA	N/A
Power	Full-range 200W ATX PSU
Dimension	431(W) x 394(D) x 44(H) mm 16.97"(W) x 15.5"(D) x 1.73"(H)
Weight	Gross: 12kg(26.43 lbs); Net: 7kg (15.42 lbs)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity 20% to 90% RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity 5% to 95% RH
Certification	CE/FCC/UL



ORDERING GUIDE

Part No.	Cavium Processor	Ethernet	EZIO	COM-Express
KiLIN-6010-0351	Octeon CN3860-500 NSP	4 Copper GbE + 1 management port	Yes	N/A
KiLIN-6010-0350	Octeon CN3830-500 NSP	4 Copper GbE + 1 management port	Yes	N/A

KiLIN-6005

1U network appliance with Cavium Octeon 31XX series CPU

FEATURE

- MIPS64 Cavium Octeon processor with 2 cores and up to 500MHz
- Security, Regular expression and compression/de-compression functions inside
- Up to Six Gigabit Ethernet ports with one bypass segments
- Two DDR2 667/533 memory slots and option up to 256MB DFA RAM on-board
- Up to one 32bit 3.3V PCI expansion slots
- 65W PSU

SPECIFICATION

CPU Board	- Cavium Octeon CN31XX series with various function inside via different CPU type - 1 or 2 cores with 300/400/500MHz CPU frequency
System Memory	- Two DDR2 667/533 memory slots up to 2GB, - Optional 256MB DFA RAM on-board
Ethernet Port	- One 32bit/33MHz Gigabit Ethernet port for management - Three Gigabit Ethernet ports on-board in one bypass segment - Optional four Gigabit Ethernet ports from switch interface
Expansion Slot	Up to one PCI expansion slots
Storage Device	- Optional one SATA 3.5" HDD, - Compact Flash socket on-board
Serial Port	- One RJ45 connector for system console - One 2x5 pin-connector on board
LCD Panel	2x16 characters LCD module with 4-buttons, option for 6-buttons
LEDs	Power status, data access, Ethernet status/speed and bypass status
IDE	One SATA connectors from M/B
USB	One USB 2.0 port on front panel
VGA	N/A
Power	Full-range 65W
Dimension	428 (W) x 255 (D) x 44 (H) mm; 16.85" (W) x 10.04" (D) x 1.73" (H)
Packing Dimension	22.2" (W) x 16.1" (D) x 15.6" (H) (2 in 1 packing)
Weight	Gross: 8.2kg(18.06 lbs) (2in 1 packing) Net: 3kg(6.61 lbs)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity 20% to 90% RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity 5% to 95% RH
Certification	CE/FCC/UL

System Switch

ORDERING GUIDE

Part No.	Ethernet Interface	EZIO	CF	PCI
KiLIN-6005-1270	- 3 copper Gigabit Ethernet - 1 10/100M Fast Ethernet	Yes	1	1
KiLIN-6005-3270	- 6 copper Gigabit Ethernet - 1 10/100M Fast Ethernet	Yes	1	1

KiLIN-6000 KiLIN™

1U network appliance with Cavium Octeon 31XX series CPU

by Project Based

FEATURE

- MIPS64 Cavium Octeon processor with 2 cores and up to 500MHz
- Security, Regular expression and compression/de-compression functions inside
- Up to Six Gigabit Ethernet ports with one bypass segments
- Two DDR2 667/533 memory slots and option up to 256MB DFA RAM on-board
- Up to one 32bit 3.3V PCI expansion slots
- 65W PSU

SPECIFICATION

CPU Board	- Cavium Octeon CN31XX series with various function inside via different CPU type - 1 or 2 cores with 300/400/500MHz CPU frequency
System Memory	- Two DDR2 667/533 memory slots up to 2GB, - Optional 256MB DFA RAM on-board
Ethernet Port	- One 32bit/33MHz Gigabit Ethernet port for management - Three Gigabit Ethernet ports on-board in one bypass segment - Optional four Gigabit Ethernet ports from switch interface
Expansion Slot	Up to one PCI expansion slots
Storage Device	- Optional one SATA 3.5" HDD, - Compact Flash socket on-board
Serial Port	- One RJ45 connector for system console - One 2x5 pin-connector on board
LCD Panel	2x16 characters LCD module with 4-buttons, option for 6-buttons
LEDs	Power status, data access, Ethernet status/speed and bypass status
IDE	One SATA connectors from M/B
USB	One USB 2.0 port on front panel
VGA	N/A
Power	Full-range 65W
Dimension	428 (W) x 255 (D) x 44 (H) mm; 16.85" (W) x 10.04" (D) x 1.73" (H)
Packing Dimension	22.2" (W) x 16.1" (D) x 15.6" (H) (2 in 1 packing)
Weight	Gross: 8.2kg(18.06 lbs) (2in 1 packing) Net: 3kg(6.61 lbs)
Operating Environment	- Temperature: 5 to 40°C (41 to 104°F) - Humidity 20% to 90% RH
Storage Environment	- Temperature: 0 to 70°C (32 to 158°F) - Humidity 5% to 95% RH
Certification	CE/FCC/UL

Power adapter Inlet

RF-330

Advanced Packet Optimizing card to enhance your x86 server with MIPS multi-core power

FEATURE

- Tremendous packet processing power with up to 16 MIPS64 processor cores
- Rich built-in security features: compression-decompression, encryption-decryption, regular expression, pattern matching, TCP-offload, SSL, IPS, Antivirus and Qos
- Supports both Host Mode for stand-alone system board and Target Mode as a PCI-X add-on card
- Four Copper GbE ports with two Gen.-2[(1)] bypass segments
- Flexible SPI 4.2 interface for variable application expansion
- Optional onboard RLDRAM for high performance pattern matching
- Two Mini-DIMM sockets support ECC registered DDR2 up to 8GB
- Onboard CF-socket for Type-I/II CF card

SPECIFICATION

Processor	Cavium Octeon™ CN38XX series Multi-core MIPS64® SoCs
Form Factor	PCI-X board in proprietary length
System Memory	- Two 244pin Mini-DIMM sockets, support DDR2/667 up to 8GB - Onboard RLDRAM up to 288MB for pattern matching
Ethernet Port	Four RJ45 Gigabit Ethernet ports
Bypass Segment	Two Gen-2 bypass segemtns onboard
Expansion	- One vertical SPI 4.2 interface for connection with 10G/1G modules - Golden finger of 64bit/133MHz PCI-X interface for installation as a PCI-X add-on card
Operating Environment	- Temperature: 5 to 40°C - Humidity 5% to 95%RH
Storage Environment	- Temperature: -20 to 70°C - Humidity 5% to 95% RH

ORDERING GUIDE

Part No.	Cavium Processor	MIPS64 Cores	Ethernet Port	Bypass Segment	RLDRAM
RF-330	CN3860-500	16	4	1	288MB

[(1)]Gen.-2.0 bypass: The latest bypass generation with software programmable Open/Bypass mode by power failure and Next Boot Mode

ABOUT TANC

TANC®

High performance mode card with PMC/XMC interfaces for ATCA system

AdvancedTCA™ (ATCA)

AdvancedTCA™ stands for Advanced Telecom Computing Architecture and was specified by PICMG (PCI Industrial Computer Manufacturers Group) as PICMG 3.x in December, 2002 and then amended by ECN001 in January 2004. It's a blade-based architecture based on high performance switched fabrics, with features designed to support 99.999%+ levels of availability to enable next generation platforms with terabit switching capacity within a single chassis. It is intent of PICMG 3.x family to accommodate a wide variety of switch fabrics in a layered set of specifications that evolves over time along side the evolution of fabric technologies. The specification defines new generation architecture for building high-end "CARRIER GRADE" equipment and includes following subsidiary:

- PICMG 3.0: The base spec covers mechanical, power-, cooling-, interconnect- and RASM properties of AdvancedTCA family of specs.
- PICMG 3.1: Ethernet and Fiber Channel Transport
- PICMG 3.2: InfiniBand Transport
- PICMG 3.3: StarFabric Transport
- PICMG 3.4: PCI-Express Transport
- PICMG 3.5: Advanced Fabric Interconnect / Serial Rapid IO

AdvancedTCA™ achieved a set of standards for building Industrial Standard Based Platforms by choosing to buy hardware as Commercial Off The Shelf or to design, manufacture and support selected elements in house. Through this the development expense, lifecycle costs and time to market risks can be reduced.

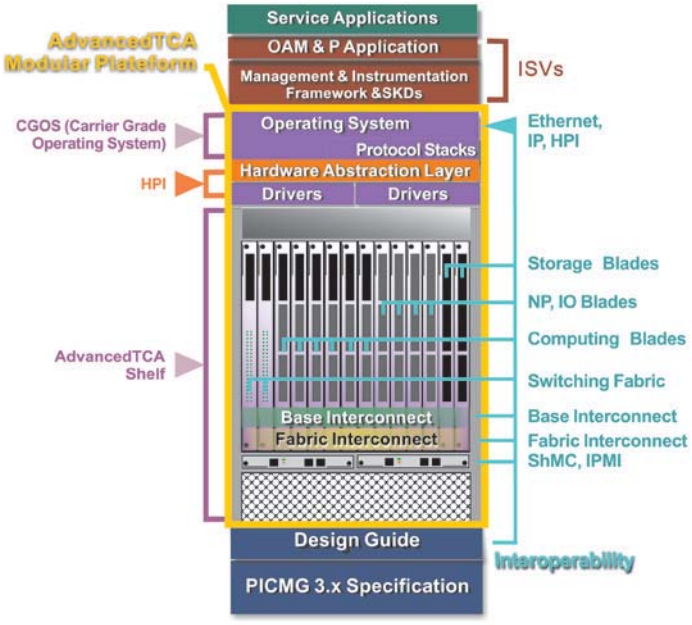
Target Market

The PICMG 3.x specifications are designed to provide an open, multi-vender architecture that is originally aimed at Central Office telecom applications, but its high bandwidth communications capability, unprecedented processor density and extremely robust mechanical and electrical definitions are also attractive for many other market segments such as military communication equipment. In summary, the applications which can take advantage of IP data transportations, like wireless access, Voice/Video over IP as well as high-end Firewall and security application, are typical key target applications for AdvancedTCA™.

Platform Architecture

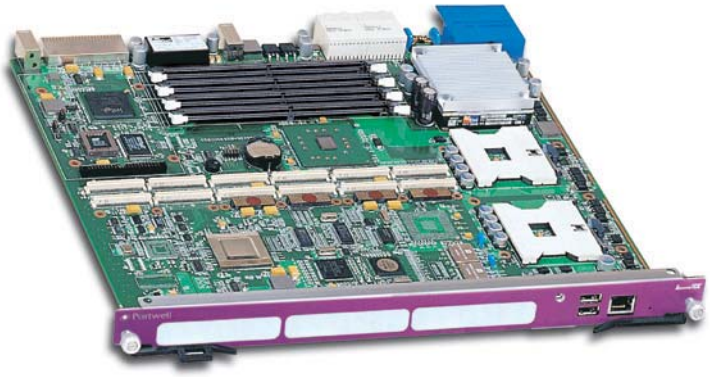
AdvancedTCA™ system consists from standard based modular building blocks with interoperability and includes the following components:

1. AdvancedTCA Shelf - The shelf is built with backplane with preferred star or mesh topology.
2. Front Board - There are two key categories:
   a. Node Card: Storage blades, NP/IO blades and computing blades.
   b. Switching Board: Switching blade supports base and fabric interface.
3 Shelf Manager - Manage/Track the FRU population and common infrastructure of a shelf, especially the power, cooling and interconnect. It enables the System Manager to join in that management/tracking through the System Manager Interface (IPMI).
4. RTM, Rear Transition Module - RTMs are optional for system service. It simplifies servicing of front boards by putting I/O cable assemblies on the RTM. I/O signals from the front board are routed to Zone3 where a user-defined connector mates with the RTM and takes the signals outside the rear of the shelf.



TANC-5320

High performance node card with PMC/XMC interfaces for ATCA system



FEATURE

- High computing power of dual Intel® LV Nocona procewsor with 800MHz FSB
- Intel® E7520 chipset
- Three 64bit/133MHz PMC interfaces
- Two optional PCI-Express XMC interfaces (alternative with PMC interfaces)
- Intelligent Platform Management Controller (IPMC) performs via dual Intelligent Platform Management Bus (IPMB) to enhance system reliability
- Support most major OS

SPECIFICATION

CPU Board	Dual Intel® LV Nocona processor
Chipset	Intel® E7520 chipset with 800MHz FSB
System Memory	Up to 16GB DDR400/DDRII registered memory with ECC support
BIOS	Award BIOS
Ethernet Port	Flexible from three PMC/XMC modules
Storage Devices	- Support one 2.5" HDD at UMDA33/66/100 - One on-board Compact Flash socket - One optional SATA 2.5" HDD from PMC interface
I/O	- One RJ-45 system console - One dual-USB connector - Zone 3 connector for RTM connection
Expansion Interface	- Three 64bit/133MHz PMC interfaces - Two optional PCI-Express XMC interfaces (alternative with two PMC interfaces)
LEDs	Power status, System health, HDD activity
Hardware Monitoring	- Build-in IPMC - Dual IPM Bus (IPMB) provide improved system reliability
Power	- Supports voltage: -48VDC for board - Redundant DC-feed
Dimension	280 (W) x 322.5 (L) mm 11.02" (W) x 12.70" (L)
Operating Environment	- Operating Temperature: 5 to 45°C - Storage Temperature: -20 to 70°C - Relative Humidity: 5% to 90%, non-condensing
Compliance	- Advanced TCA core specification, PICMG 3.0 - IPMI v1.5 - Design for NEBS GR-63-Core Level 3
Certification	- Design for CE/FCC, UL/cUL

ORDERING GUIDE

Part No.	Ethernet Interface	PMC Interface
TANC-5320	- 2 SFP - 4 Copper GbE	1

TANC-5340

ATCA control board with Dual Sossaman CPU

FEATURE

- High performance of dual Intel® Xeon® LV (Sossaman) with 667MHz FSB
- ATCA control node
- 4 Gigabit Ethernet, Two for front connection and two for base channel
- Front access console port and 10/100M management port
- Support major OS

SPECIFICATION

CPU Board	Dual Intel® Xeon LV Sossaman processor
Chipset	Intel® E7520 chipset with 667MHz FSB
System Memory	Up to 16GB DDR400/DDRII registered memory with ECC support
BIOS	Award BIOS
Ethernet Port	Default with 2 Gigabit Ethernet and Flexible from two AMC modules
Storage Devices	- Support one 2.5" HDD at SATA 1.5Gbs - One on-board Compact Flash sock
I/O	- One RJ-45 system console - One dual-USB connector - Zone 3 connector for RTM connection
Expansion Interface	- Two AMC interfaces
LEDs	Power status, System health, HDD activity
Hardware Monitoring	- Build-in IPMC - Dual IPM Bus (IPMB) provide improved system reliability
Power	- Supports voltage: -48VDC for board - Redundant DC-feed
Dimension	280 (W) x 322.5 (L) mm 11.02" (W) x 12.70" (L)
Operating Environment	- Operating Temperature: 5 to 45°C - Storage Temperature: -20 to 70°C - Relative Humidity: 5% to 90%, non-condensing
Compliance	- Advanced TCA core specification, PICMG 3.0 - IPMI v1.5 - Design for NEBS GR-63-Core Level 3
Certification	- Design for CE/FCC, UL/cUL

ORDERING GUIDE

Part No.	Ethernet Interface	AMC Interface
TANC-5340	2 Copper GbE	2

www.portwell.com.tw

Together in Electric Dream!

Portwell, Inc. Headquarters

4F, No. 186, Jian-Yi Rd., Chung-Ho City,
235 Taipei, Taiwan
Tel: +886-2-77318888
Fax: +886-2-82271109
E-mail: info@portwell.com.tw
http: //www.portwell.com.tw

Americas

American Portwell
(Fremount, California)

44200 Christy St.
Fremont, CA 94538, USA
Tel: +1-510-403-3399
Fax: +1-510-403-3184
E-mail: info@portwell.com
http: //www.portwell.com

American Portwell
(Norcross, Georgia)

5555 Oakbrook Parkway, Building 100
Suite 175, Norcross GA 30093, USA
Tel: +1-678-969-9808
Fax: +1-678-969-9816
E-mail: info@portwell.com
http: //www.portwell.com

Japan

Portwell Japan, Inc.
(Tokyo)

〒101-0042 ShowaKanda Build 9F, 10-2
Kanda Higashi Matsushita-cho
Chiyoda-ku, Tokyo, Japan
Tel: +81-3-5298-8071
Fax: +81-3-5298-8072
E-mail: info@portwell.co.jp
http: //www.portwell.co.jp

Portwell Japan, Inc.
(Osaka)

〒540-6128 Twin21 MID Tower 28F,
2-1-61 Shiromi, Chuo-ku,
Osaka-shi, Osaka, Japan
Tel: +81-6-4791-2201
Fax: +81-6-4791-2210
E-mail: info@portwell.co.jp
http: //www.portwell.co.jp

China

Beijing Portwell

4F, Building 5, Qunying Zone,
Chuangye Rd. 8, Shangdi, Haidian
District, Beijing 100085, China
Tel: +86-10-8270-1616
Fax: +86-10-8270-0606
E-mail: info@portwell.com.cn
http: //www.portwell.com.cn

Shanghai Portwell

Room 1908 Yin Fa Mansion,
No. 1068 West Beijing Road,
Shanghai 200041, P.R. China
Tel: +86-21-3222-0505
+86-21-3222-0606
Fax: +86-21-6256-8056
E-mail: info@portwell.com.cn
http: //www.portwell.com.cn

Shenzhen Portwell

Hunting 4th Building 26F
#Modern City, Nanshan District
Shenzhen 518052, China
Tel: +86-755-8621-7695
+86-755-8622-6424
Fax: +86-755-8617-2084
E-mail: info@portwell.com.cn
http: //www.portwell.com.cn

Europe

Portwell, B.V.

Haverstraat 6, Nieuw-Vennep,
2153 GB, Netherlands
Tel: +31-252-620790
Fax: +31-252-621325
E-mail: info@portwell.nl
http: //www.portwell.nl

Portwell (UK) Ltd.

Unit 15, Moorbrook.
Southmead Industrial Estate,
Didcot OX11 7HP, UK
Tel: +44(0)1235-750760
Fax: +44(0)1235-750761
E-mail: info@portwell.co.uk
http: //www.portwell.co.uk

India

Portwell-Laxsons India

Laxsons House, AA2, Walbhat Road,
Goregaon (E), Mumbai - 400 063,
Maharashtra, India
Tel: +91-22-2685-9911
Fax: +91-22-2685-9922
E-mail: info@portwelllaxsons.com
http://www.portwelllaxsons.com

M071228