NETWORK APPLIANCES

2021 Edition

iBASE
www.ibase.com.tw

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About IBASE

Core Activities

Design and Manufacturing of Robust Industrial Computing Platforms

Headquarters
Taipei, Taiwan

Founded
February 2000

Chairman
C. S. Lin

Capital
US$58M

Employee
770
(Worldwide)

Stock Quote
TPEx 8050
(Since 2003)

Company Profile

IBASE Technology specializes in the design and manufacture of robust industrial PC products, delivering high quality products and excellent service since its establishment in 2000. IBASE carries out manufacturing and quality control at its own facilities in Taiwan that are certified with ISO 9001, ISO 13485 and ISO 14001 standards. Current offerings comprise x86 and RISC-based industrial motherboards, embedded systems, panel PCs, network appliances and digital signage players. The company is publicly listed in the Taipei Exchange (TPEx: 8050) and is now a leading global provider of innovative industrial and embedded computing solutions.

Branch Office
UK
Herts

Branch Office
China
Shanghai

Branch Office
Japan
Tokyo

100%
Made in Taiwan

Headquarters
Taiwan
Taipei

Manufacturing Sites
Taiwan
Sanchung
Hsinchuang
Pingzhen

Branch Office
USA
Sunnyvale

Branch Office
Italy
Domodossola

Branch Office
Singapore

R&D Capabilities

IBASE's R&D team boasts of talented electronics, layout, system, mechanical hardware, BIOS, firmware as well as software engineers. Half of the team members are seasoned with more than 15 years of experience in their respective fields, while 45 percent carry more than five years of experience. Because of their accumulated expertise, the R&D team is able to design and create new products for the demanding and dynamic market.

R&D, the Core
Competence of IBASE

Experienced R&D in IPC Field

One-Stop R&D Services

H/W, S/W Integration Capabilites
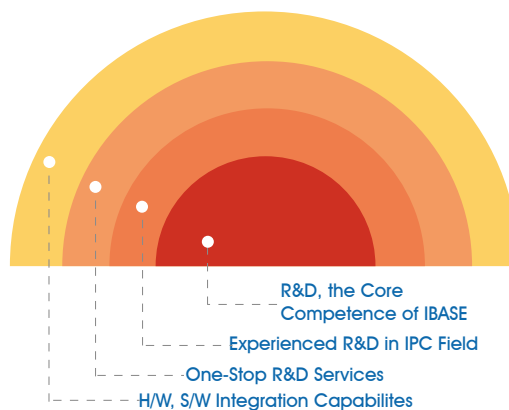
Design⁺, Manufacture⁺, Service⁺

IBASE offers collaborative design, flexible manufacturing and customized services Supports for our customers. Our network computing appliances are the most important building blocks for network and cybersecurity products, such as NGFW, UTM, WAF, ADC, IPS/IDP, LB/QOS, as well as for the Cloud Computing, SD-WAN and SDN/NFV. Aside from off-the-shelf products, we also provide ODM (Original Design Manufacturer) and JDM (Joint Design Manufacturer) services that include board/system design, software design, manufacturing, validation and after-sales service to fully meet customers' expectation. IBASE attaches great importance to research and development, investing heavily in manpower and resources to continuously provide innovative and high-quality products.

| Customer Requirements | Market Trend | Technology Trend | Research for Improvement |

Embedded Controller, BIOS, IPMI, FPGA, CPLD & Embedded OS Designs

Electrical, Mechanical & Thermal Designs

Product Management

Software Design

Hardware Design

Sanchung & Hsinchuang & Pingzhen Manufacturing Sites in Taiwan

Flexible Procurement & Logistics Management

Manufacturing

Logistics

IBASE Manufacturing Sites

SANCHUNG
- Board Production
- Validation

3,140 m² / 950 Ping

HSINCHUANG
- System Assembly
- Validation

6,070 m² / 1,840 Ping

PINGZHEN
- Board Production
- System Assembly
- Validation

15,700 m² / 4,750 Ping

Total Size

268,350 Square-feet
(24,910 m² / 7,540 Ping)

100% Made in Taiwan

Capacity

- SMT Line x 3
- DIP Assembly Line x 2
- System Assembly Line x 4
- Cleanroom x 1
- Burn-in Room x 9
  (4 hours per run)

PCBA
In-house 40K/month + Outsourcing
System Assembly
In-house 10K/month + Outsourcing

Certifications

ISO 9001   ISO 14001   ISO 13485   ISO/TS 16949

CE FC UL CCC EN50155 Ex-Mark EN50061

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Modular Design with High Expandability

The modular design of IBASE's network appliances ensures high expandability and scalable functionality, as well as a reduction in the total cost of ownership. This standard approach allow rapid customization and easy configuration with modules that can be interchangeably combined to meet customers' optimal requirements.

IBASE network appliances offer flexible customization by enabling the same physical slots to Supports different combinations of network interface controller (NIC) modules, HDD trays or empty slot. Advanced LAN bypass features fault-tolerance that prevents single point of failure in the appliance in mission critical networks to ensure essential business communications continue in the event of power outage.

NIC Modules
- Wide choice of network modules
- Optional 1GbE RJ45/SFP, 10GbE SFP+, 25GbE SFP28, 100GbE QSFP28
- Advanced LAN bypass pairs
- Flexible and hot-swappable slots for NIC modules

Data Processing
- Multi-core processing for optimal performance and throughput with Supports for DPDK, VMDq, SR-IOV
- Advanced security and anti-theft protection via TPM for full disk encryption

System Features
- High density I/O ports
- Programmable user self-defined button
- Supports for SATA, SAS, NVMe, M.2, mSATA or Mini PCI-E card for selected products
- Hot-swappable 2.5"/3.5" storage modules

Power Supply Unit (PSU)
- Redundant and hot-swappable power supply units
- AC or DC power supply options

Mounting Kits
- Rack mounting or wall mounting for desktop appliances
- Slide-rail mounting for 1U / 2U rackmount appliances
- DIN-rail mounting for desktop appliances

Advanced LAN Bypass

What is LAN Bypass?

Bypass is a hardware device that provides a fail-safe access port for an in-line monitoring appliance such as an IPS, firewall, WAN optimization device or UTM system. If the appliance loses power, experiences a software failure, or is removed, traffic can no longer flow through the link. The bypass switch removes the point of failure by automatically shunting traffic around the appliance whenever the appliance is incapable of passing traffic. The advantage of using bypass is it keeps network traffic flowing when the in-line appliance fails.

IBASE advanced LAN bypass provides two setting methods. The system developer can decide to use the BIOS or hardware jumper to control the bypass behavior in the system. BIOS control provides flexible usage for further upgrade or modification, and hardware jumper can fix the LAN operation at "Bypass" or "Normal" mode to prevent end users from changing the BIOS setting.

Normal Mode:
Ethernet Port 1 - 4 are in normal mode.
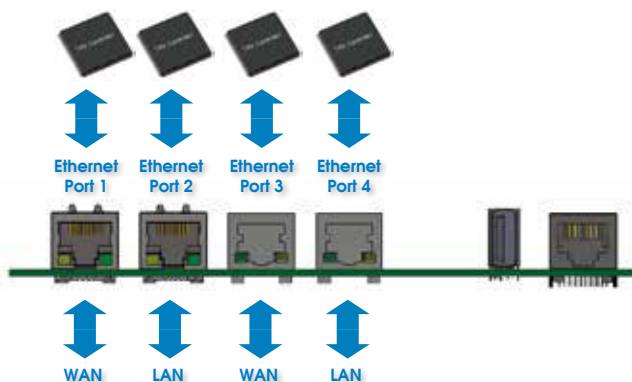
Bypass Mode:
Ethernet Port 3 & 4 are configured, being disconnected from the LAN controller in bypass mode. LAN ports are bridged together in pair.
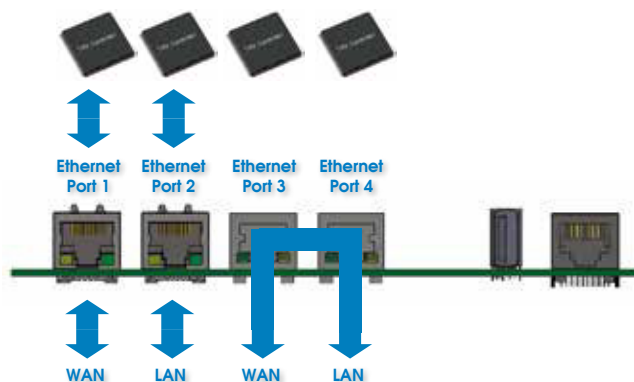
Features:

- LAN bypass or normal mode preset by BIOS
- Independent status control for each bypass segment
- Able to bypass GbE ports on a host system in response to three instances:
  1. System off
  2. System power on (the brief moment before accessing OS)
  3. System on (software request during runtime).
- System reboot during runtime if system hangs without packet loss.
- Software programmable bypass or normal mode.

Your Best Partner

Since its establishment in 2000, IBASE has rapidly grown into a leading provider of industrial computers and network appliances. IBASE leverages its extensive manufacturing experience to produce quality products for both OEM/ODM clients and off-the-shelf market, using the latest Intel® and AMD Processor and technologies to provide the right hardware solution.

To meet tomorrow's every-changing network requirements, IBASE has introduced the modular architecture to create flexible and configurable network platforms that drive down the total cost of ownership and result in shorter time-to-market.

IBASE is a trustworthy partner and has built its reputation through serving clients with well-designed products, cutting-edge solutions and features according to market demands and specific client needs. To this day, IBASE continue to foster an unbreakable relationship, working hand-in-hand with both customers and vendors to form a win-win partnership.

INNOVATION

SHARING

SERVICE

TEAMWORK

EFFICIENCY
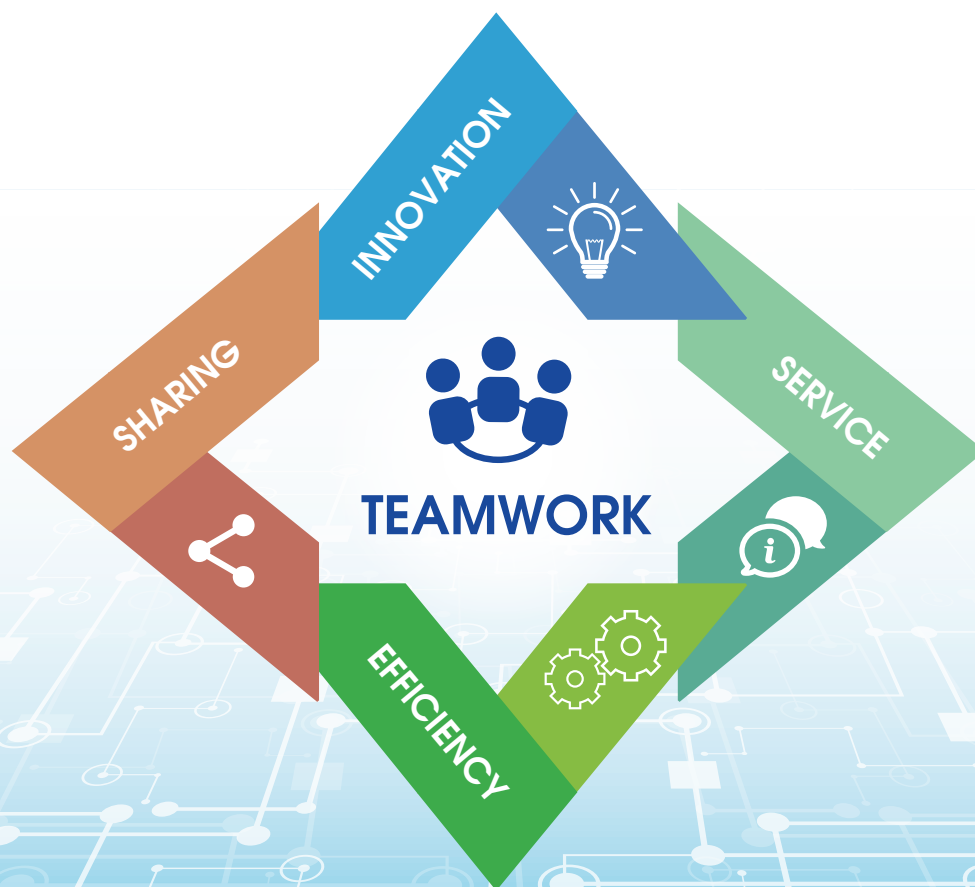
5G Opportunities

With the development of network function virtualization technology, telecom infrastructure from LTE to 5G has undergone drastic changes. Not only the much increased speed, but the innovative edge structure will also dramatically change our life style.

Some of the latency sensitive applications, such as AR, VR, video delivery or factory automation, have moved to the edge. The more rugged conditions in the edge environment have posed some challenges on the hardware design, such as extreme temperature requirements, limited space and limited power. Our newly designed INA5606 with Intel's latest Xeon® D processor will satisfy those requirements even with only 450mm in depth.

uCPE SDWAN

SD-WAN Orchestration

SD-WAN Branch

LTE/5G Broadband

MPLS

Internet

SAAS

zendesk Dropbox

salesforce amazon web services

Office 365 Microsoft Azure

MPLS

SD-WAN Enterprise DC
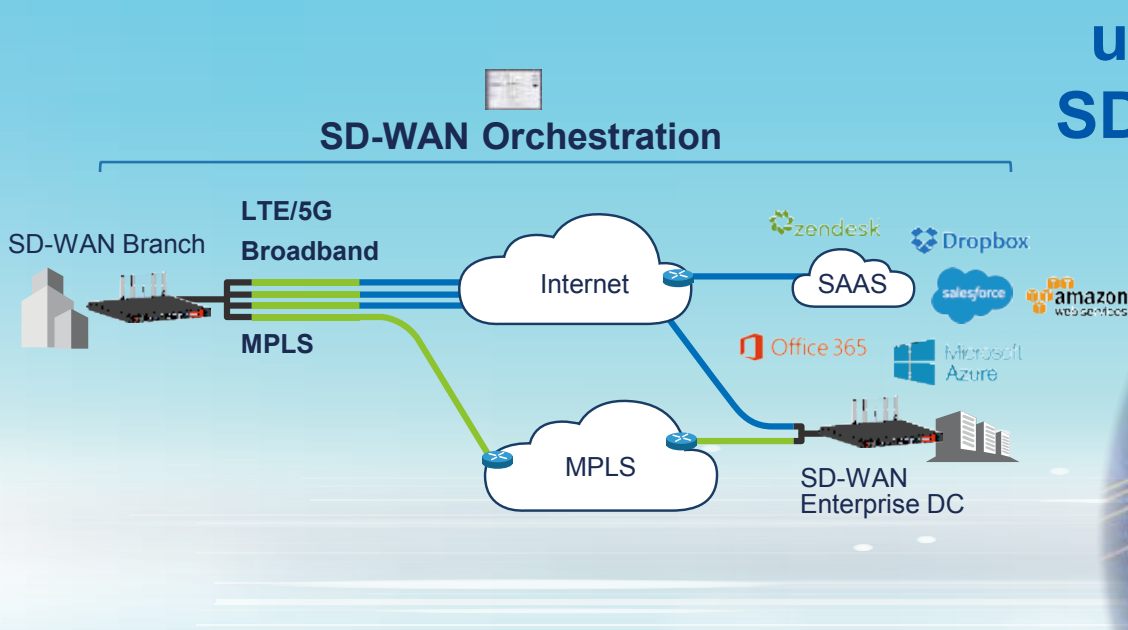
Application Delivery

Application Delivery Controller

Internet Users

CDN

ADC x86

Origin Servers

On the customer's premises, traditional network appliances such as router, firewall, IPS, DDoS have been virtualized as VNFs, ready to be installed as applications in uCPE (Universal Customer Premise Equipment) with SD-WAN as the first commercialized application.

At IBASE, we've been providing network appliances for network security and application optimization for more than a decade, such as our desktop and rackmount product lines. Traditional network appliances in networking, we are extending our product lines by adding uCPE/SD-WAN products, with INA1600 and INA5606 as the first products supporting WiFi 6 and LTE up to Cat20/5G. On top of that, with IBASE's expertise in several IoT vertical markets, we'll also provide MEC (Multi-Access Edge Computing) servers to integrate IoT network requirements with 5G edge infrastructure.

MEC Edge Server

eMBB

5G

mMTC · uRLLC

Edge Cloud

Access CO · Edge DC · Regional DC · Central DC

<1ms · 2-5ms · <10ms

Network Security

Intrusion Prevention Systems

Quality of Experience

Service Chaining

DDoS Protection

Packet Steering

Security

Network Optimization

DPI
10101010
10101010
10101010

Content Caching

Antivirus and AntiSpam

Email Security

Business Strategies

WAN Optimization

Billing & Application

Subscriber Analytics

Network Monitoring

Network Security Applications

By making life easier and supporting faster progress, networking and communication have proved to be crucial elements in the daily lives of people by allowing them to be in constant touch with one another and making the world a small place to live in. IBASE has positioned itself with network hardware solutions such as enterprise level 2U/1U rackmount network computing appliances, desktop network security appliances, networking motherboards and expansion module cards.

We offer high-speed network appliance solutions for different market segments and applications, including enterprise network security, IoT security, advanced threat protection, unified threat management (UTM), firewall, VPN, content filtering, SDN/NFV/SD-WAN, vCPE/uCPE, remote access server, and data management and analytics. Our solutions feature four to 66 high-speed Gigabit Ethernet ports and expansion module cards to provide multi-function & more flexible networking configurations.

Network Management

• Central Portal Management
• Network Monitoring & Analytics

Cloud Computing

• Infrastructure as a service (IaaS)
• Software as a service (SaaS)

SDN & NFV

- SD-WAN
- uCPE

Network Security

- Firewall
- UTM

Cyber Security

- Intrusion Detection Systems
- Encryption/Decryption

Network Appliances Introduction

IBASE's extensive range of network appliances comprise desktop, 1U and 2U rackmount systems that Supports a broad array of powerful Intel® and AMD processors, various combinations of Ethernet modules, inner storage expansion alternatives and redundant power supplies to ensure high availability and serviceability.

Built around the x86 architecture, these high performance networking platforms provide the hardware capabilities for a wide range of network and cyber security applications in various markets including independent software vendors (ISV), small and medium business (SMB), SOHO and enterprise markets, among others.

Enterprise

FWA8800   INA7600

FWA8708

FWA9500

FWA8600

Enterprise & SMB/SME

INA1600   FWA6706D   FWA8506

FWA6706R

INA5606   INA3600

SOHO

AGS102

| uCPE/ SD-WAN | Desktop | 1U Rackmount | 2U Rackmount |

iBASE

Comparison Table

Model		INA5606	INA1600	INA3600
Form Factor		1U Mid-Range uCPE	Desktop	1U Rackmount
CPU		Intel® Xeon® D Processor	AMD Ryzen™ Embedded V1605B/R1505G	Intel® Xeon® Comet Lake-W
Chipset		N/A	N/A	Intel® W480E PCH chipset
System Memory		4x DDR4 DIMMs, Max. 256GB RDIMM or 512GB LRDIMM up to 3200MHz	2x DDR4 SO-DIMMs up to 3200MHz, Max. 32GB (ECC/non-ECC)	2x DDR4 DIMMs up to 2400MHz, 1x DIMMs, Max. 64GB (Non-ECC)
Etherent	On-board	4x GbE RJ45 ports (Intel® i350 AM4) 4x GbE RJ45 ports (Intel® i211) with 2 pair bypass 4x 25 GbE SFP28 ports (Intel® C827)	INA1600V: 4x Intel® I211-AT GbE 1x Intel® i350-AM2 (2x GbE RJ45 or SFP combo ports) INA1600R: 4x Intel® I211-AT GbE	6x Intel® I210-AT GbE
	Bypass	2x segment	1x segment	2x Segment
	NIC Module	1x IBN series (Optional, by SKU)	N/A	1x PCI-E x8 golden finger for NIC module
Expansion		1x PCI-E x16 Expansion slot (Optional, by SKU) 1x M.2(B-Key) Supports USB 3.0 & PCI-E signal 1x mini PCI-E Supports PCI-E & USB 2.0	1x Mini PCI-E slot 1x M.2 slot (B-key 3042, PCI-E(x1) & USB 3.0 signal) 2x Micro SIM for M.2 or Mini PCI-E 4G/LTE module 1x M.2 slot (B/M-key 3080, PCI-E(x2) & USB 3.0 & SATA)	1x PCI-E x8 slot
Storage		1x M.2(B-Key) Supports SATA & PCI-E 2x 2.5" Swappable SATA drive bay	1x 2.5" SATA drive bay 1x 16GB/32GB/64GB eMMc	3x SATA Data connectors 3x SATA Power connectors 3x 2.5" internally
Display		1x VGA (via optional IDN100 IPMI Module)	1x DisplayPort	1x VGA pin-header (via DP to VGA Bridge; CH7517A-BF) 1x LCM
TPM		TPM2.0 (Optional TPM2.0 module)	TPM 2.0	TPM2.0
I/O	Console	1x RJ45	1x RJ45	1x RJ45
	Reset	NA	1x Factory default (GPIO)	1x Factory default (GPIO)
	USB	2x USB 3.0	2x USB 3.0	2x USB 3.1
	LED	Power / HDD / Status	Power / HDD / Status	Power / HDD / Status
Power Supply		Full range 800W CRPS 1+1 redundant power supply	Full range 84W adaptor / 12V	Full range 250 Watt Single AC Power Supply
Dimensions (mm)		443.7(W) x 450(D) x 43.8(H)	250 (W) x 231 (D) x 44 (H)	438(W) x 330(D) x 44(H) ± 0.3mm
Weight		15.0 kg (33 lbs)	5.3 kg (11.68 lbs)	12.0 kg (26.4 lbs)
Operating Temperature		0℃ ~ 40℃ (32℉ ~ 104℉)	0℃ ~ 40℃ (32℉ ~ 104℉)	0℃ ~ 40℃ (32℉ ~ 104℉)
Storage Temperature		-20° ~ 70℃ (-4℉ ~ 158℉)	-20℃ ~ 70℃ (-4℉ ~ 158℉)	-20° ~ 70℃ (-4℉ ~ 158℉)
Relative Humidity		5 ~ 90%	5 ~ 90%	5 ~ 90%
Certification		CE/FCC	CE/FCC	CE/FCC
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Remarks: 1. Specifications are subject to change without prior notice. 2. ODM/OEM is available. 3. For user's manual & datasheet download, visit www.ibase.com.tw.

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Comparison Table

Model	INA7600	FWA9500	FWA8800
Form Factor	2U Rackmount	2U Rackmount	1U Rackmount
CPU	Dual Intel® Xeon® Ice Lake scalable processors, LGA4189	Dual Intel® Xeon® Skylake scalable processors, LGA3647	AMD EPYC™ Embedded 3000 series processor
Chipset	Intel® C621A PCH Chipset	Intel® C624 PCH Chipset	N/A
System Memory	16x DDR4 RDIMMs Up to 3200MHz, Max. 512GB RDIMM	16x DDR4 DIMMs Up to 2666MHz, Max. 512GB RDIMM	4x DDR4 DIMMs Up to 2666MHz; Max. 64GB UDIMM (ECC/non-ECC) or 128GB RDIMM
Etherent — On-board	2x Intel® I210-AT GbE	2x Intel® I210-AT GbE	1x Intel® I210-AT GbE
Etherent — Bypass	Depending on IBN module SKU	Depending on IBN module SKU	Depending on IBN module SKU
Etherent — NIC Module	8x IBN series, Max. 64GbE port	8x IBN series, Max. 64GbE ports	2x IBN series, Max. 16GbE ports
Expansion	1x PCI-E x16 slot (8-lane) 1x M.2 (M-key) Supports SATA3.0 or PCI-E	1x PCI-E x8 slot 1x Mini PCI-E (PCI-E, USB, SATA signal)	1x PCI-E x8 slot
Storage	2x 2.5"or 4x 3.5" swappable SATA drive bay (by SKU) 2x U.2 (PCI-E, SATA signal)	2x 3.5" or 4x 2.5" swapptabel SATA drive bay (optional) 1x M.2 slot (M-Key 2280, PCI-E x2 signal) 1x CF slot	2x 2.5" or 3.5" SATA drive bay (optional) 1x M.2 slot (M-Key 2280, PCI-E x4 & SATA signal)
Display	1x VGA (optional IPMI module) 1x LCM (by SKU#)	1x VGA (via optional IDN100 module) 1x LCM	1x VGA (via optional IDN100 module) 1x LCM
TPM	TPM 2.0	TPM 2.0	TPM 2.0
I/O — Console	1x RJ45	1x RJ45	1x RJ45
I/O — Reset	1x Factory default (GPIO)	1x Factory default (GPIO)	1x Factory default (GPIO)
I/O — USB	2x USB 2.0	2x USB 2.0	2x USB 2.0
I/O — LED	Power / HDD / Status	Power / HDD / Status	Power / HDD / Status
Power Supply	Full range 1200W 1+1 redundant power supply	Full range 800W 1+1 redundant power supply	Full range 250W ATX or 300W 1+1 redundant power supply
Dimensions (mm)	438 (W) x 660 (D) x 88 (H)	438 (W) x 598 (D) x 88 (H)	438 (W) x 500 (D) x 44 (H)
Weight	21.0 kg (46.3 lbs)	20.0 kg (44.1 lbs)	12.0 kg (26.4 lbs)
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)
Storage Temperature	-20° ~ 70°C (-4°F ~ 158°F)	-20° ~ 70°C (-4°F ~ 158°F)	-20° ~ 70°C (-4°F ~ 158°F)
Relative Humidity	5 ~ 90%	5 ~ 90%	5 ~ 90%
Certification	CE/FCC	CE/FCC	CE/FCC
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iBASE

Comparison Table

Model	FWA8708	FWA8600	FWA8506
Form Factor	1U Rackmount	1U Rackmount	1U Rackmount
CPU	9th or 8th Generation Intel® Xeon®/ Core™ i7/ i5/i3 processors, LGA1151	Intel® Xeon® D-2100 Series	Intel® Atom™ C3758 Processor up to 2.2GHz
Chipset	Intel® C246 or H310 PCH Chipset	N/A	N/A
System Memory	FWA8708-C: 4x DDR4 DIMMs, up to 2666MHz, Max. 64GB UDIMM (ECC/non-ECC) FWA8708-H: 2x DDR4 DIMMs, up to 2666MHz, Max. 32GB UDIMM (Non-ECC)	4x DDR4 DIMMs up to 2666MHz, Max. 128GB RDIMM	2x DDR4 DIMMs up to 2400MHz, Max. 64GB RDIMM, Max. 32GB UDIMM (ECC/non-ECC)
Etherent — On-board	FWA8708-C: 6x Intel® I210AT + 2x Intel® I210IS GbE FWA8708-H: 6x Intel® I211AT GbE	1x Intel® I210-AT GbE	6x Intel® I211-AT GbE 1x Inphi CS4223 for 4x10GbE SFP+
Etherent — Bypass	2x segment	Depending on IBN module SKU	2x segment
Etherent — NIC Module	1x IBN series (for FWA8708-C only)	3x IBN series & 1x IBN-P401Q, Max. 24 GbE ports	N/A
Expansion	FWA8708-C: 1x or 2x PCI-E slot on rear panel 1x Mini PCI-E slot (PCI-E, SATA signal) FWA8708-H: 1x Mini PCI-E slot (SATA signal)	1x PCI-E x8 slot (4-lane)	1x PCI-E x8 slot (4-lane)
Storage	2x 2.5" or 3.5" SATA drive bay (optional) 1x M.2 slot (M-key 2280, PCI-E x4 & SATA signal, FWA8708-C only)	1x or 2x 2.5" SATA drive bay 1x M.2 slot (M-Key 2280, PCI-E x4 & SATA signal)	2x 2.5" SATA drive bays 1x CF slot
Display	1x VGA via pin-header 1x LCM	1x VGA (via optional IDN100 module) 1x LCM	1x LCM
TPM	TPM 2.0	TPM 2.0	TPM 1.2
I/O — Console	1x RJ45	1x RJ45	1x RJ45
I/O — Reset	1x Factory default (GPIO)	1x Factory default (GPIO)	1x Factory default (GPIO)
I/O — USB	2x USB 3.0	2x USB 2.0	2x USB 3.0
I/O — LED	Power / HDD / Status	Power / HDD / Status	Power / HDD / Status
Power Supply	Full range 250W ATX or 300W 1+1 redundant power supply	Full range 250W ATX or 300W 1+1 redundant power supply	Full range 250W ATX power supply
Dimensions (mm)	438 (W) x 422 (D) x 44 (H)	438 (W) x 451 (D) x 44 (H)	438 (W) x 340 (D) x 44 (H)
Weight	9.0 kg (19.84 lbs)	10.0 kg (22.05 lbs)	6.50 kg (14.33 lbs)
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)	0°C ~ 40°C (32°F ~ 104°F)
Storage Temperature	-20° ~ 70°C (-4°F ~ 158°F)	-20° ~ 70°C (-4°F ~ 158°F)	-20° ~ 70°C (-4°F ~ 158°F)
Relative Humidity	5 ~ 90%	5 ~ 90%	5 ~ 90%
Certification	CE/FCC	CE/FCC	CE/FCC
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Comparison Table

Model		FWA6706R	FWA6706D	AGS102
Form Factor		1U Rackmount	Desktop	Desktop
CPU		Intel® Atom™ N3350 Dual-Core SoC 1.1GHz	Intel® Atom™ N3350 Dual-Core SoC 1.1GHz	Intel® Atom™ x7-E3950/x5-E3930 & Pentium® N4200 / Celeron® N3350 Series processors
Chipset		N/A	N/A	N/A
System Memory		2x DDR3L SO-DIMMs up to 1866MHz, Max. 16GB (Non-ECC)	2x DDR3L SO-DIMMs up to 1866MHz, Max. 16GB (Non-ECC)	1x 4GB DDR3L-1866 SO-DIMM, Max. 8GB
Etherent	On-board	6x Intel® I211-AT GbE	6x Intel® I211-AT GbE	2x Intel® I210-IT GbE
	Bypass	1x segment	1x segment	N/A
	NIC Module	N/A	N/A	N/A
Expansion		1x Mini PCI-E (PCI-E & USB signal)	1x Mini PCI-E (PCI-E & USB signal)	1x Mini PCI-E (PCI-E, SATA & USB signal) 1x M.2 slot (E-Key 2230, PCI-E & USB signal) 1x M.2 slot (B-Key 3042, SATA & USB signal)
Storage		1x 2.5" SATA drive bay 1x CF slot	1x 2.5" SATA drive bay 1x CF slot	1x mSATA slot 1x M.2 slot (B-Key 2242, SATA signal)
Display		1x VGA via pin-header 1x LCM	1x VGA via pin-header	1x DVI-I 1x DisplayPort
TPM		TPM 1.2	TPM 1.2	N/A
I/O	Console	1x RJ45	1x RJ45	4x DB-9
	Reset	1x Factory default (GPIO)	1x Factory default (GPIO)	N/A
	USB	2x USB 3.0	2x USB 3.0	4x USB 3.0 1x USB 2.0
	LED	Power / HDD / Status	Power / HDD / Status	Power / HDD / WLAN / WWAN
Power Supply		Full range 65W power supply (Open Frame)	Full range 40W adaptor / 12V	Full range 60W adaptor / 12V
Dimensions (mm)		438 (W) x 180 (D) x 44 (H)	227 (W) x 142 (D) x 44 (H)	160 (W) x 110 (D) x 44 (H)
Weight		3.0 kg (6.62 lbs)	2.0 kg (4.41 lbs)	1.0 kg (2.21 lbs)
Operating Temperature		0℃ ~ 45℃ (32°F ~ 113°F)	0℃ ~ 40℃ (32°F ~ 104°F)	0℃ ~ 45℃ (-40°F ~ 158°F) (12W Max. CPU) -20℃ ~ 60℃ (-4°F ~ 140°F) (6W CPU)
Storage Temperature		-20° ~ 70℃ (-4°F ~ 158°F)	-20° ~ 70℃ (-4°F ~ 158°F)	-40° ~ 85℃ (-40°F~185°F)
Relative Humidity		5 ~ 90%	5 ~ 90%	5 ~ 90%
Certification		CE/FCC	CE/FCC	CE/FCC/CCC
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iBASE

INA5606

Enterprise 1U Mid-Range uCPE/SD-WAN Network Appliance with Intel®
Xeon® D Processor & up to 8x GbE & 4x 25 GbE Ports

Features

- Intel® Xeon® D Processor
- 4x DDR4 DIMMs, Max. 256GB RDIMM or Max. 512GB LRDIMM
- 8x GbE RJ45 with 2 pair bypass & 4x 25GbE SFP28 on board
- 1x M.2 for LTE/5G with dual SIM slot
- 1x mini PCI-E for Wifi/ Wifi 6
- 2x 2.5" SATA/NVMe Swappable HDD/SSD
- Optional 1x PCI-E x16 Expansion Slot (by SKU)
- Optional 1x IBN-NIC Slot (by SKU)
- Optional IPMI 2.0 Module

Specifications

CPU	Intel® Xeon® D Processor
Chipset	NA
Memory	4x DDR4 DIMMs, Max. 256GB RDIMM or 512GB LRDIMM up to 3200MHz
Display	1x VGA (via optional IDN100 IPMI Module)
Ethernet	4x Gbe RJ45 ports (Intel® i350 AM4) 4x Gbe RJ45 ports (Intel® i211) with 2 pair bypass 4x 25 Gbe SFP28 ports (Intel® C827)
Bypass	2x Segment (LAN5/6 & LAN 7/8)
Expansion	1x PCI-E x16 Expansion slot (Optional by SKU) 1x PCI-E x8 Expansion slot(Optional by SKU) 1x M.2(B-Key) supports USB 3.0 & PCI-E signal 1x mini PCI-E supports PCI-E & USB 2.0
IPMI	Optional module; compliant with IPMI 2.0
Storage	1x M.2(B-Key); Supports SATA & PCI-E 2x 2.5" Swappable SATA drive bay
TPM	TPM2.0 (Optional TPM2.0 module)
I/O	3x LED (Power/ HDD/ Status) 1x RJ45 Console Port 1x RJ45 Management Port 2x USB 3.0 Port
Power Supply	Full range 800W CRPS 1+1 Redundant Power Supply
Dimensions	443.7(W) x 450(D) x 43.8(H) mm 17.46" (W) x17.71" (D) x 1.72" (H)
Weight	15 Kg (estimated)
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)
Storage Temperature	-20° ~ 70°C (-4°F ~ 158°F)
Operating Humidity	5 ~ 90%
Certification	CE/FCC

Ordering Information

|	
INA5606-EXP	INA5606-EXP 1U mid-range uCPE Appliance, MBN606 Intel® Xeon® D Processor, 4x DDR4 DIMMs, Max. 8x GbE Ports and 4x 25 GbE SFP28 Ports, 800W CRPS 1+1 Redundant PSU, CPU Cooler, Optional IPMI, 1x PCI-E x16 slot, 2x 2.5" SDD Tray, Barebone without RAM/HDD/SSD
INA5606-NIC	INA5606-NIC 1U mid-range uCPE Appliance, MBN606 Intel® Xeon® D Processor, 4x DDR4 DIMMs, Max. 8x GbE Ports and 4x 25 GbE SFP28 Ports, 800W CRPS 1+1 Redundant PSU, CPU Cooler, Optional IPMI, 1x IBN-NIC slot, 2x 2.5" SDD Tray, Barebone without RAM/HDD/SSD

Accessories

PK1-51	Console cable, 160cm
VGA21A	VGA cable, 40cm
IDN100	IPMI 2.0 module with Ibase proprietary DDR4 SO-DIMM golden finger

Dimensions
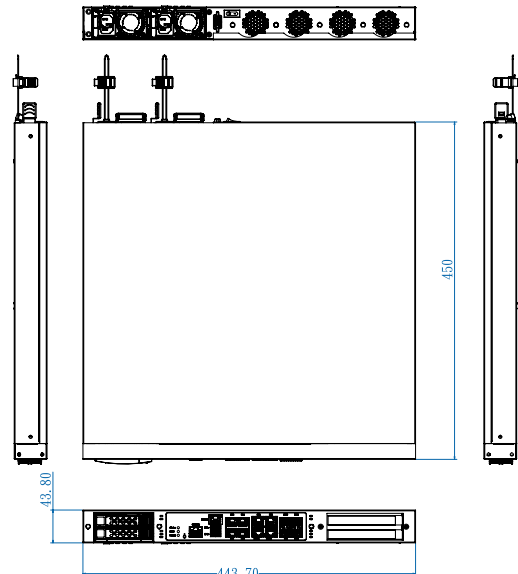
INA1600

uCPE/SD-WAN Appliances

Desktop uCPE/SD-WAN Network Appliance with AMD Ryzen™ Embedded V1605B/R1505G & up to 6x GbE Ports

Features

- AMD Ryzen™ Embedded V1605B/R1505G
- 2x DDR4 SO-DIMMs; Max. 32GB (ECC/non-ECC)
- 4x GbE RJ45
- 2x GbE RJ45 or SFP combo ports (for INA1600V only)
- 1x Mini PCI-E slot
- 2x M.2 slot
- Supports WiFi/WiFi 6, LTE/5G, with up to 8 antennas

Specifications

CPU	INA1600V: AMD Ryzen™ Embedded V1605B INA1600R: AMD Ryzen™ Embedded R1505G
Chipset	N/A
Memory	2x DDR4 SO-DIMMs Up to 3200MHz, Max. 32GB (ECC/non-ECC)
Display	1x DisplayPort
Etherent	INA1600V: 4x Intel® I211-AT GbE 1x Intel® i350-AM2 (2x GbE RJ45 or SFP combo ports) INA1600R: 4x Intel® I211-AT GbE
Bypass	1x segment, LAN 1/2
Expansion	1x Mini PCI-E slot 1x M.2 slot (B-key 3042, PCI-E(x1) & USB 3.0 signal) 2x Micro SIM for M.2 or Mini PCI-E 4G/LTE module 1x M.2 slot (B/Mkey 3080, PCI-E(x2) & USB 3.0 & SATA)
IPMI	N/A
Storage	1x 2.5" SATA drive bay 1x 16GB/32GB/64GB eMMc
TPM	TPM 2.0
I/O	3x LED (Status/HDD/Power) 1x Factory default button (GPIO) 1x RJ45 console 2x USB 3.0 1x DisplayPort
Power Supply	Full range 84W adaptor / 12V
Dimensions	250(W) x 231(D) x 44(H) mm 9.84" (W) x 9.09" (D) x 1.73" (H)
Weight	5.3 kg (11.68 lbs)
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)
Storage Temperature	-20°C ~ 70°C (-4°F ~ 158°F)
Operating Humidity	5% ~ 90%
Certification	CE/FCC

Ordering Information

|	
INA1600V	Desktop Appliance, AMD Ryzen™ Embedded V1605B, 2x DDR4 SO-DIMMs, 4x GbE RJ45 w/ 1 Pair of Bypass, 2x GbE RJ45 or SFP combo ports, 84W Adaptor, DisplayPort, Barebone without RAM/HDD/Drive Bay Kit
INA1600R	Desktop Appliance, AMD Ryzen™ Embedded R1505G, 2x DDR4 SO-DIMMs, 4x GbE RJ45 w/ 1 pair of Bypass, 84W Adaptor, DisplayPort, Barebone without RAM/HDD/Drive Bay Kit

Accessories

PK1-51	Console cable, 160cm
2.5" HDD Kit	2.5" HDD bracket

Dimensions
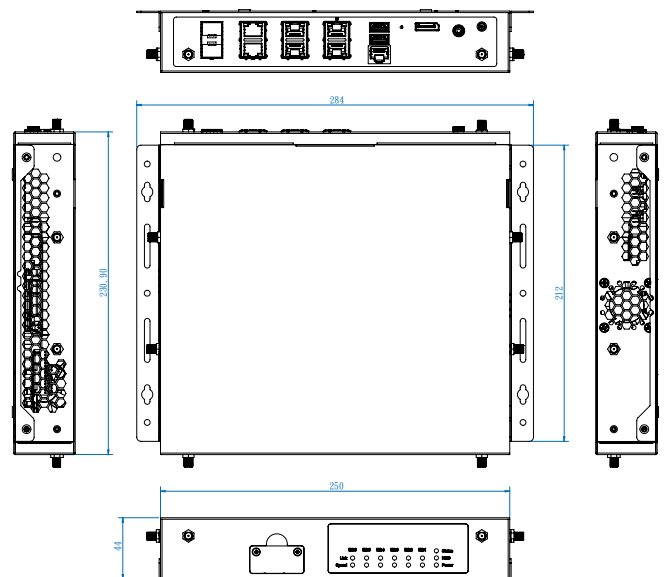
INA7600

Performance 2U Network Appliance with
Dual Intel® Xeon® Ice Lake Scalable Processor & up to 66 GbE Ports

Features

- Dual Intel® Xeon® Scalable Processor (ICL-SP)
- 16x DDR4 RDIMM, Max. 512GB
- 8x or 4x NIC Modules, Max. 64 GbE Ports
- 1x PCI-E x16 Expansion Slot
- Optional IPMI 2.0 Module
- 1200-Watt Redundant Power Supply

Specifications

|	
CPU	Dual LGA4189 Socket for Intel® Xeon® ICL-SP
Chipset	Intel® C621A PCH Chipset
Memory	16x DDR4 RDIMMs up to 3200MHz Max. 512GB
Display	1x VGA (base on optional IPMI module)
Ethernet	2x Intel® I210-AT GbE on IDN901 daughter board 8x or 4x NIC module, Max. 64 GbE ports
Bypass	Via IBN module SKU
Expansion	1x PCI-E x16 slot (8-lane) 1x M.2 (M-key) Supports SATA3.0 or PCI-E
IPMI	Optional module; compliant with IPMI 2.0
Storage	2x 2.5" or 4x 3.5" Swappable SATA drive bay (by SKU) 2x U.2 (PCI-E x4, SATA signal)
TPM	TPM2.0
I/O	1x LCM (by SKU) 3x LED (Power/ HDD/ Status) 1x Factory default button (GPIO) 1x RJ45 console 2x USB 2.0 2x MGMT Ports (LAN2 share with IPMI NC-SI port)
Power Supply	Full range 1200W 1+1 redundant power supply
Dimensions	438 (W) x 660 (D) x 88 (H) mm 17.24" (W) x 25.98" (D) x 3.46" (H)
Weight	21.0 kg (46.3 lbs)
Operating Temperature	0℃ ~ 40℃ (32℉ ~ 104℉)
Storage Temperature	-20° ~ 70℃ (-4℉ ~ 158℉)
Operating Humidity	5 ~ 90%
Certification	CE/FCC

Ordering Information

INA7600-NIC	INA7600-NIC 2U Rackmount Appliance, MBN901 Dual Intel® Xeon® ICL-SP, C621A PCH,16x DDR4 DIMMs, Max. 66 GbE Ports, 800W RPSU, CPU Cooler, optional IPMI, 1x PCI-E x16 slot, 2x U.2 slots.1x iIO2 LCM. Barebone without CPU/RAM/HDD/IBN Card* (Must order 8x IBN-cards)
INA7600-SHQ	INA7600-SHQ 2U Rackmount Appliance, MBN901 Dual Intel® Xeon® ICL-SP, C621A PCH, 16x DDR4 DIMMs, Max. 34 GbE Ports, 800W RPSU, CPU Cooler, optional IPMI, 1x PCI-E x16 slot, 2x U.2 slots. 4x 3.5" HDD Tray. Barebone without CPU/RAM/HDD/IBN Card* (Must order 4x IBN-cards)

* For a complete system, IBN modules & some components must be ordered.

Accessories

PK1-51	Console cable, 160cm
IDN100	IPMI 2.0 module
VGA21A	VGA cable, 40cm

Dimensions
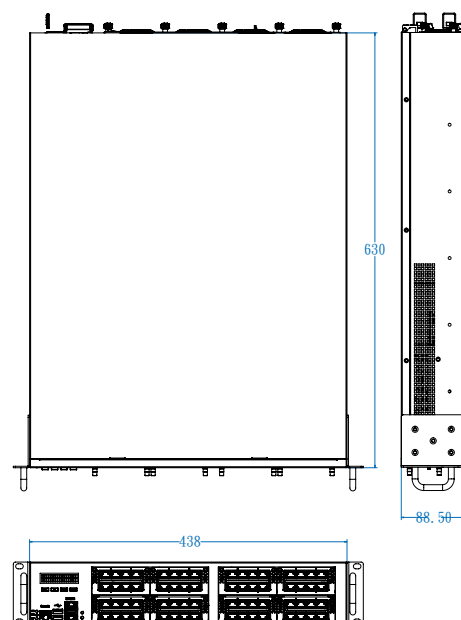
Optional Component BOM

Component BOM	Configuration Options	
Model Kit	Front IOs	Remarks
INA7600 KIT1	INA7600-NIC: 8 NIC slots with internal max. 2x 2.5" drive bay	For a complete system, component BOM, IBN module tray must be ordered.
INA7600 KIT2	INA7600-SHQ: 4 NIC slots with swappable 4x 3.5" driver bay	

Front I/O

INA7600-NIC

INA7600-SHQ

iBASE
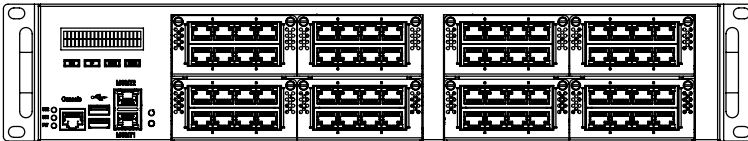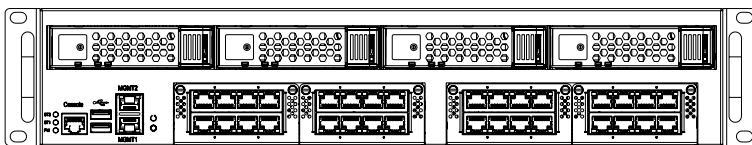
FWA9500

Rackmount Network Appliance

Performance 2U Network Appliance with
Dual Intel® Xeon® Skylake Scalable Processor & up to 66 GbE Ports

Features

- Dual Intel® Xeon® Scalable Processor (SKL-SP)
- 16x DDR4 RDIMM, Max. 512GB
- Max. 8x NIC modules; Max. 64 GbE ports
- Optional IPMI 2.0 module
- 1x PCI-E x8 expansion slot
- 800-watt redundant power supply

Specifications

CPU	Dual LGA3647 sockets for Intel® Xeon® SKL-SP
Chipset	Intel® C624 PCH chipset
Memory	16x DDR4 DIMMs up to 2666MHz, Max. 512GB RDIMM
Display	1x VGA (via optional IDN100 module)
Ethernet	Onboard: 2x Intel® I210-AT GbE NIC module slots: Max. 8x IBN cards, Max. 66 GbE
Bypass	Via IBN module SKU
Expansion	1x PCI-E x8 slot 1x Mini PCI-E (PCI-E, SATA & USB Signal)
IPMI	Optional module, compliant with IPMI 2.0
Storage	Max. 2x 3.5" or 4x 2.5" swappable drive bay 1x M.2 slot (M-key 2280, PCI-E x2 signal) 1x CF socket
TPM	TPM 2.0
I/O	1x LCM 3x LED (Power / HDD / Status) 1x Factory default button (GPIO) 1x RJ45 console 2x USB 2.0 2x MGMT ports (LAN2 share with IPMI NC-SI port)
Power Supply	Full range 800W 1+1 redundant power supply
Dimensions	438 (W) x 600 (D) x 88 (H) mm 17.24" (W) x 23.62"(D) x 3.46" (H)
Weight	20 kg (44.1 lbs)
Operating Temperature	0℃~ 40℃ (32°F~104°F)
Storage Temperature	-20° ~ 70℃ (-4°F~158°F)
Operating Humidity	5% ~ 90%
Certification	CE/FCC

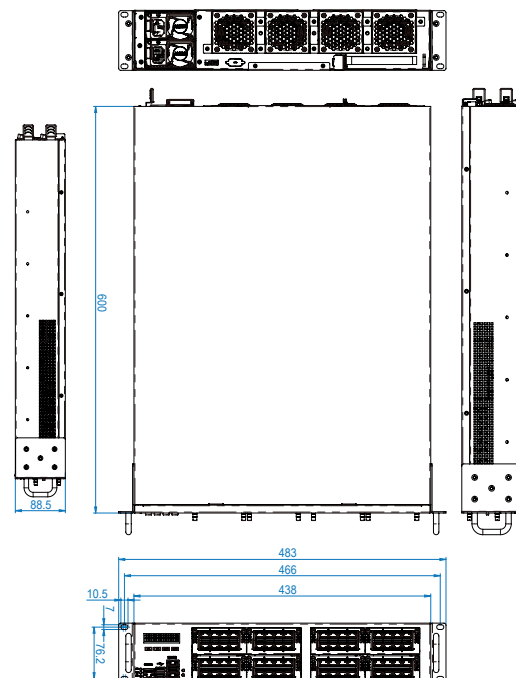## Ordering Information

FWA9500	2U Rackmount Appliance, MBN900 Dual Intel® Xeon® SKL-SP, C624 PCH, 16x DDR4 DIMMs, Max. 66 GbE Ports, 800W RPSU, CPU Cooler, optional IPMI, 1x PCI-E x8 slot, Barebone without CPU/RAM/HDD/ Drive Bay Kit/IBN Card*

* For a complete system, IBN modules & some components must be ordered.

Accessories

PK1-51	Console cable, 160cm
IDN100	IPMI 2.0 module
VGA21A	VGA cable, 40cm

Dimensions

Remarks: 1. Specifications are subject to change without prior notice.　2. ODM/OEM is available.　3. For user's manual & datasheet download, visit www.ibase.com.tw.

iBASE 21

Optional Component BOM

| Component BOM	Configuration Options		
Model Kit	Front IOs	Remarks	
FWA9500 KIT1	FWA9500-NIC: 8 NIC slots with internal max. 2x 2.5" drive bay	For a complete system, component BOM, IBN module tray must be ordered.	
FWA9500 KIT2	FWA9500-SHD: 4 NIC slots with swappable 2x 3.5" driver bay		
FWA9500 KIT3	FWA9500-SHQ: 6 NIC slots with swappable 4x 2.5" driver bay		

Front I/O

FWA9500-NIC
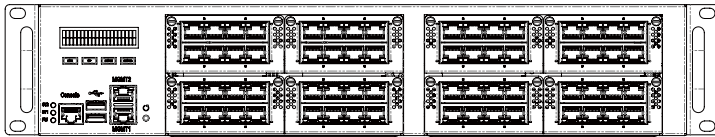
FWA9500-SHD
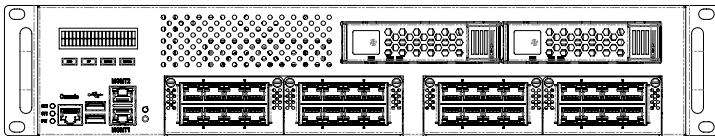
FWA9500-SHQ
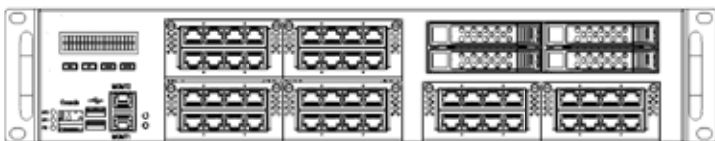
FWA8800

Rackmount Network Appliance

Performance 1U Network Appliance with
AMD EPYC™ Embedded 3000 Series & up to 17 GbE Ports

Features

- AMD EPYC™ Embedded 3000 Series processor
- 4x DDR4 DIMMs; Max. 64GB UDIMM
  (ECC or non-ECC) or 128GB RDIMM
- 2x NIC module slots, Max. 16 GbE Ports
- Optional 2x swappable 2.5" drive bay
- Optional IPMI 2.0 module
- 1x M.2 slot

Specifications

CPU	AMD EPYC™ Embedded 3000 series processor
Chipset	N/A
Memory	4x DDR4 DIMMs up to 2666MHz; Max. 64GB UDIMM (ECC or non-ECC) or 128GB RDIMM
Display	1x VGA (via optional IDN100 module) 1x LCM 2x16 character with 4 keypads
Ethernet	On board: 1x Intel® I210-AT GbE NIC module slots: 2x IBN cards, Max. 16 GbE
Bypass	Depend on IBN modules SKU
Expansion	1x PCI-E x8 slot on rear panel
IPMI	Optionaling module, compatible with IPMI 2.0
Storage	2x 2.5" or 1x 3.5" SATA drive bay 1x M.2 slot (M-key 2280, PCI-E x4 & SATA signal)
TPM	TPM 2.0
I/O	1x LCM 3x LED (Power/ HDD/ Status) 1x Factory default button (GPIO) 1x RJ45 console 2x USB 2.0 1x MGMT (Share with IPMI NC-SI port)
Power Supply	Full range 250W ATX power supply or 300W 1+1 Redundant power supply
Dimensions	438 mm (W) x 500 mm (D) x 44 mm (H) 17.24"(W) x 19.68"(D) x 1.73"(H)
Weight	12kg (26.4 lbs)
Operating Temperature	0℃ ~ 40℃ (32°F ~ 104°F)
Storage Temperature	-20℃ ~ 70℃ (-4°F ~ 158°F)
Operating Humidity	5% ~ 90%
Certification	CE/FCC

Ordering Information

|	
FWA8800-E8	1U Rackmount Appliance, MBN806 AMD EPYC™ Embedded 3201 8C/8T SoC, 4x DDR4 DIMMs, Max. 17 GbE Ports, 250W PSU, CPU Cooler, optional IPMI, 1x PCI-E x8 slot, Barebone without RAM/HDD/Drive Bay Kit/IBN Card*
FWA8800-E8R	1U Rackmount Appliance, MBN806 AMD EPYC™ Embedded 3201 8C/8T SoC, 4x DDR4 DIMMs, Max. 17 GbE Ports, 300W RPSU, CPU Cooler, optional IPMI, 1x PCI-E x8 slot, Barebone without RAM/HDD/Drive Bay Kit/IBN Card*

* For a complete system, IBN modules & some components must be ordered.

Accessories

|	
PK1-51	Console cable, 160cm
VGA21A	VGA cable, 40cm
IDN100	IPMI 2.0 module with Ibase proprietary DDR4 SO-DIMM golden finger

Dimensions
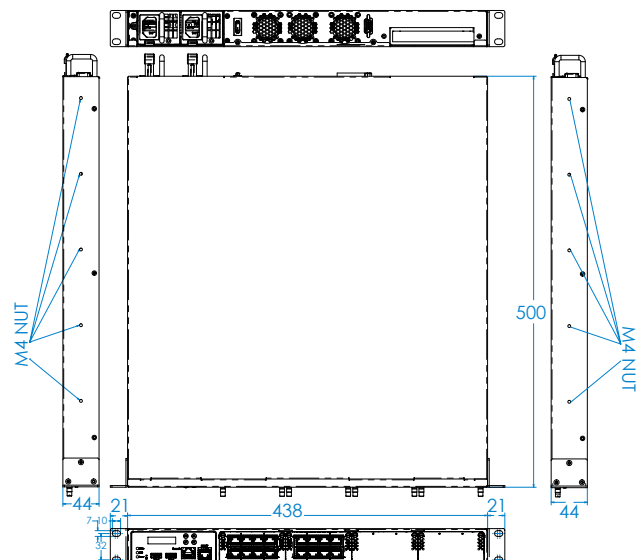
Optional Component BOM

Component BOM		
Option-A	**Option-B**	**Model Kit**
FWA8800-NIC: 2x NIC slots	None	FWA8800 KIT1
	Expansion slot (Option B-2 only)	FWA8800 KIT2
	2x 2.5" drive bays +Expanson slot (Option B-1 + B-2)	FWA8800 KIT3
	1x 3.5"" drive bay+Expansion slot (Option B-1+B-2)(for Single PSU only)	FWA8800 KIT4
FWA8800-SHD: 2x NIC slots + 2x swappable 2.5" drive bay	None	FWA8800 KIT5
	Expansion slot (Option B-2 only)	FWA8800 KIT6

Option B-2

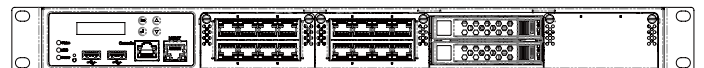Option B-1

Option Area-A
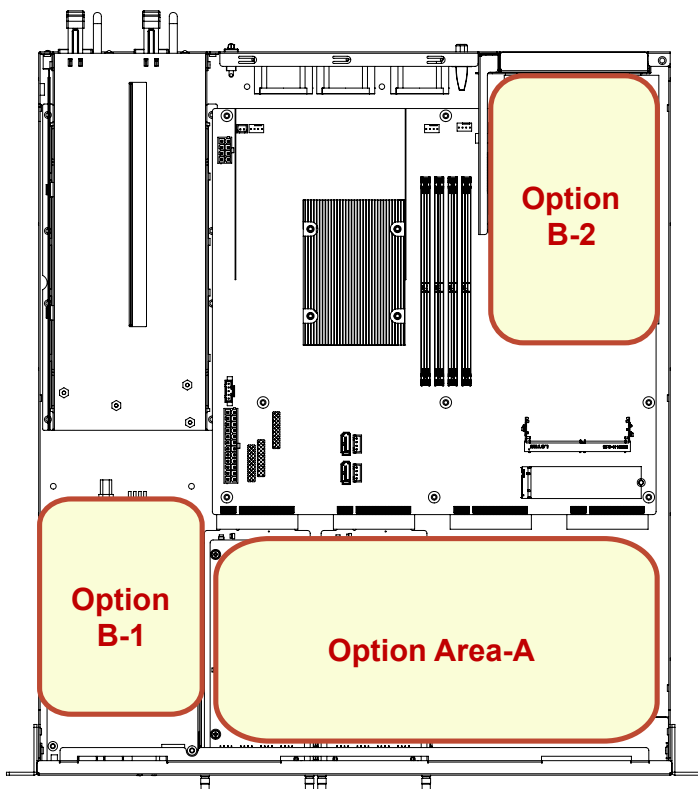
Front I/O

FWA8800-NIC
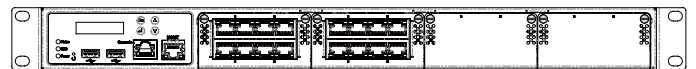
FWA8800-SHD

INA3600

Rackmount Network Appliance

Enterprise 1U Network Appliance with 10th Gen Intel® Xeon® / Core™ i9/i7/i5/i3 Pentium® Gold / Celeron® Processor & up to 14 GbE Ports

NEW

Features

- 10th Gen Intel® Xeon® / Core™ i9/i7/i5/i3 / Pentium® Gold / Celeron® Processor with W480E or H420E PCH (CML-S)
- 2x DDR4 UDIMMs, Max. 64GB (ECC/ Non-ECC)
- 6x RJ45 GbE on board
- Optional NIC slot
- 1x PCI-E x8 Expansion slot
- 250-Watt power supply

Specifications

CPU	INA3600W: LGA1200 Socket for Intel® Xeon® / Core™ i9/i7/i5/i3 / Pentium® Gold / Celeron® processor INA3600H: LGA1200 Socket for Intel® Core™ i9/i7/i5/i3 / Pentium® Gold / Celeron® processor
Chipset	INA3600W: Intel® W480E PCH chipset INA3600H: Intel® H420E PCH chipset
Memory	2x DDR4 UDIMMs Max. 64GB
Display	1x VGA 1x LCM
Ethernet	INA3600W: 6x Intel® I211-AT GbE on board Optional NIC module slot, Max. 8 LAN ports INA3600H: 6x Intel® I211-AT GbE on board Optional NIC module slot, Max. 4 LAN ports
Bypass	2-Segments, LAN3/4 & 5/6
Expansion	1x PCI-E x16 slot (8-lane) for INA3600W
IPMI	N/A
Storage	3x 2.5" SATA drive bay (by SKU)
TPM	TPM2.0
I/O	1x LCM (by SKU) 3x LED (Power/ HDD/ Status) 1x Reset button 1x RJ45 console 2x USB3.1
Power Supply	Full range 250W power supply
Dimensions	438 (W) x 329 (D) x 44 (H) mm 17.24" (W) x12.95" (D) x 1.73" (H)
Weight	9.0 kg (19.84 lbs)
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)
Storage Temperature	-20° ~ 70°C (-4°F ~ 158°F)
Operating Humidity	5 ~ 90%
Certification	CE/FCC

Ordering Information

INA3600W	INA3600W 1U Rackmount Appliance, MBN807W Intel® CML-S, W480E PCH, 2x DDR4 DIMMs, Max. 14 LAN Ports, 250W PSU, CPU Cooler, 1x PCI-E x16 slot, 1x iIO2 LCM. Barebone without CPU/RAM/HDD/IBN Card
INA3600H	INA3600H 1U Rackmount Appliance, MBN807H Intel® CML-S, H420E PCH, 2x DDR4 DIMMs, Max. 10 LAN Ports, 250W PSU, CPU Cooler, 1x PCI-E x16 slot, 1x iIO2 LCM. Barebone without CPU/RAM/HDD/IBN Card

Dimensions

330

44

438
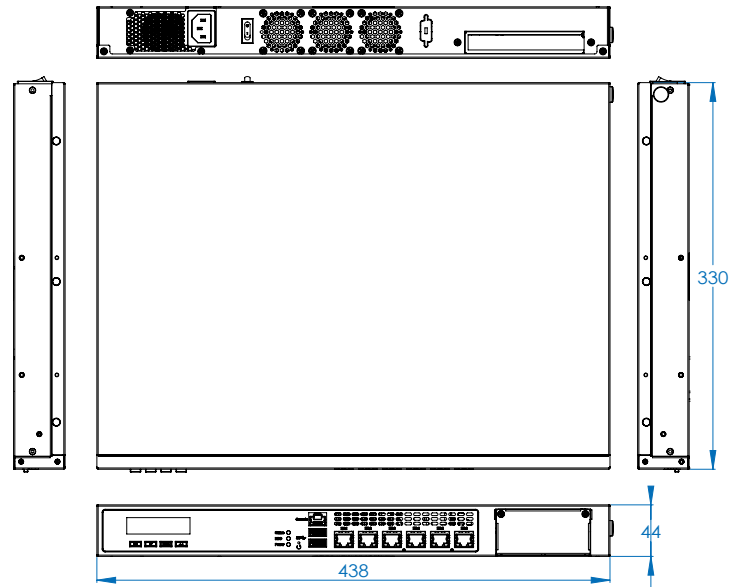
FWA8708

Rackmount Network Appliance

Enterprise 1U Network Appliance with
9th or 8th Gen Intel® Xeon® / Core™ i7/i5/i3 Processor & up to 16 GbE Ports

Features

- 9th or 8th Gen Intel® Xeon® / Core™ i7/i5/i3 Processor with C246 or H310 PCH
- 6x RJ45 GbE + 2x SFP GbE on board
- 4x or 2x DDR4 DIMMs; Max. 64GB (ECC/non-ECC)
- Optional IPMI 2.0 module (for FWA8708-C only)
- Optional NIC slot (for FWA8708-C only)
- 1x Mini PCI-E slot
- 1x M.2 slot (for FWA8708-C only)

Specifications

CPU	FWA8708-C/CR: LGA1151 socket for 9th or 8th Gen Intel® Xeon® / Core™ i7/i5/i3 processors FWA8708-H/HR: LGA1151 socket for 9th or 8th Gen Intel® Core® i7/i5/i3 processors
Chipset	FWA8708-C/CR: Intel® C246 PCH chipset FWA8708-H/HR: Intel® H310 PCH chipset
Memory	FWA8708-C/CR: 4x DDR4 DIMMs, up to 2666MHz, Max. 64GB UDIMM (ECC or non-ECC) FWA8708-H/HR: 2x DDR4 DIMMs, up to 2666MHz, Max. 32GB UDIMM (Non-ECC)
Display	1x VGA via pin-header 1x LCM
Ethernet	FWA8708-C/CR: On board: 6x Intel® I210AT + 2x Intel® I210IS GbE NIC module slot: 1x IBN card, Max. 8x GbE FWA8708-H/HR: On Board: 6x Intel® I211AT GbE
Bypass	2x segment, LAN3/4 & 5/6
Expansion	FWA8708-C/CR: 1 or 2x PCI-E slot on rear panel 1x Mini PCI-E slot (PCI-E, SATA signal) FWA8708-H/HR: 1x Mini PCI-E slot (SATA signal)
IPMI	Optional module, compliant with IPMI 2.0
Storage	2x 2.5" or 3.5" SATA drive bay 1x M.2 slot (M-key 2280, PCI-E x4 & SATA signal)
TPM	TPM 2.0
I/O	3x LED (Power / HDD / Status) 1x Factory default button (GPIO) 1x RJ45 console 2x USB 3.0 1x MGMT (LAN1 share with IPMI NC-SI port)
Power Supply	Full range 250W ATX power supply or 300W 1+1 Redundant power supply
Dimensions	438 mm (W) x 422 mm (D) x 44 mm (H) 17.24"(W) x 16.61"(D) x 1.73"(H)
Weight	9.0 kg (19.84 lbs)
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)
Storage Temperature	-20°C ~ 70°C (-4°F ~ 158°F)
Operating Humidity	5% ~ 90%
Certification	CE/FCC

Ordering Information

|	
FWA8708-C	1U Rackmount Appliance, MBN805C 9th or 8th Gen Intel® Xeon® / Core™ i7/i5/i3 Processors, C246 PCH, 4x DDR4 DIMMs, Max. 16 GbE Ports, 250W PSU, CPU Cooler, optional IPMI, Barebone without RAM/HDD/Drive Bay Kit/IBN Card*
FWA8708-CR	1U Rackmount Appliance, MBN805C 9th or 8th Gen Intel® Xeon® / Core™ i7/i5/i3 Processors, C246 PCH, 4x DDR4 DIMMs, Max. 16 GbE Ports, 300W RPSU, CPU Cooler, optional IPMI, Barebone without RAM/HDD/Drive Bay Kit/IBN Card*
FWA8708-H	1U Rackmount Appliance, MBN805H 9th or 8th Gen Intel® Core™ i7/i5/i3 Processors, H310 PCH, 2x DDR4 DIMMs, Max. 6 GbE Ports, 250W PSU, CPU Cooler, Barebone without RAM/HDD/Drive Bay Kit*
FWA8708-HR	1U Rackmount Appliance, MBN805H 9th or 8th Gen Intel® Core™ i7/i5/i3 Processors, H310 PCH, 2x DDR4 DIMMs, Max. 6 GbE Ports, 300W RPSU, CPU Cooler, Barebone without RAM/HDD/Drive Bay Kit*

*Must Order Component BOM

Accessories

|	
PK1-51	Console cable, 160cm
VGA21A	VGA cable, 40cm
IDN100	IPMI 2.0 module with Ibase proprietary DDR4 SO-DIMM golden finger

Dimensions
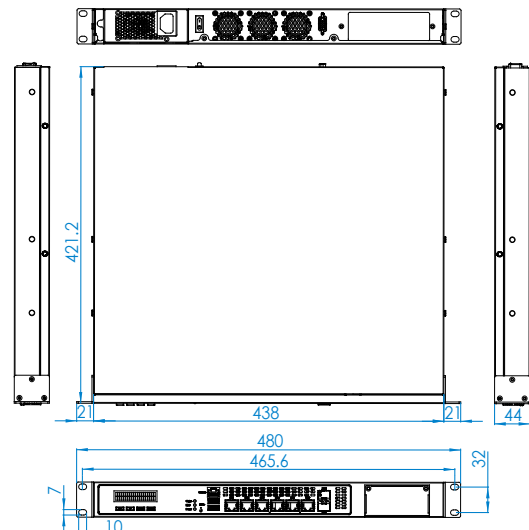
Optional Component BOM

FWA8708 Series Configuration Options		Component BOM
Option Area-A	**Option Area-B**	**Model Kit**
None	None	FWA8408/6 KIT1
	1x 3.5" HDD	FWA8408/6 KIT2
	2x 2.5" HDD	FWA8408/6 KIT3
	1x IBN Module **(for FWA8708-C model only)**	FWA8408 KIT4 (**must order IBN module tray**)
1 x 3.5" HDD	None	FWA8408/6 KIT5
	1x 3.5" HDD	FWA8408/6 KIT6
	1x IBN Module **(for FWA8708-C model only)**	FWA8408 KIT7 (**must order IBN module tray**)
2 x 2.5" HDD	None	FWA8408/6 KIT8
	1x IBN Module **(for FWA8708-C model only)**	FWA8408 KIT9 (**must order IBN module tray**)
1 x Expansion Slot	1x 3.5" HDD	FWA8408/6 KIT10
	2x 2.5" HDD	FWA8408/6 KIT11
	1x IBN Module **(for FWA8708-C model only)**	FWA8408 KIT12 (**must order IBN module tray**)
1 x Expansion Slot+ 2.5" HDD	1x 3.5" HDD	FWA8408/6 KIT13
	1x IBN Module **(for FWA8708-C model only)**	FWA8408 KIT14 (**must order IBN module tray**)
2 x Expansion Slot (for FWA8708-C model only)	None	FWA8408 KIT15
	1x 3.5" HDD	FWA8408 KIT16
	2x 2.5" HDD	FWA8408 KIT17

Compatible Processors

Compatible CPU	Memory	
	ECC	**Non-ECC**
E-2176G (for FWA8708-C only)	V	V
i7-8700	N/A	V
i7-8700T	N/A	V
i5-8500	N/A	V
i5-8500T	N/A	V
i3-8100	V	V
i3-8100T	V	V
G5400	V	V
G5400T	V	V
G4900	V	V
G4900T	V	V
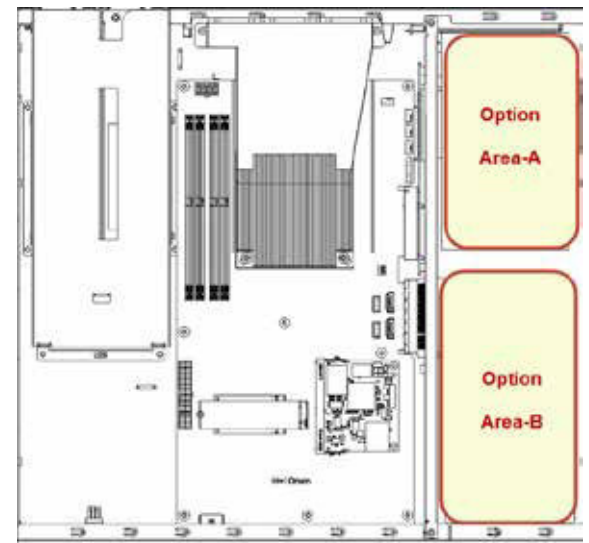
FWA8600

Rackmount Network Appliance

Enterprise 1U Network Appliance with
Intel® Xeon® Processor D-2100 Series & up to 25 GbE Ports

Features

- Verification of Intel® Select Solutions for uCPE with Ubuntu
- Intel® Xeon® Processor D-2100 Series
- 4x DDR4 RDIMMs; Max. 128 GB
- 1x Intel® I210-AT GbE
- 4x NIC modules; Max. 24 GbE ports
- Optional IPMI module
- 1x M.2 slot & optional PCI-E x8 expansion slot (4-lane)

Specifications

CPU	Intel® Xeon® Processor D-2100 (BGA2518)
Chipset	N/A
Memory	4x DDR4 DIMMs up to 2666MHz, Max. 128GB RDIMM
Display	1x VGA (via optional IDN100 module)
Ethernet	On-board: 1x Intel® I210-AT GbE NIC module slots: 3x IBN cards (3rd slot max. 4-port) & 1x IBN-P401Q, Max. 24 GbE
Bypass	Depending on IBN modules SKU
Expansion	1x PCI-E x8 slot (4-lane) on rear panel
IPMI	Optional module, compatible with IPMI 2.0
Storage	1x or 2x 2.5" SATA Drive bay 1x M.2 slot (M-key 2280, PCI-E x4 & SATA signal)
TPM	TPM 2.0
I/O	3x LED (Power / HDD / Status) 1x Factory default button (GPIO) 1x RJ45 console 2x USB 2.0 1x MGMT (Share with IPMI NC-SI port)
Power Supply	Full range 250W ATX power supply or 300W 1+1 Redundant power supply
Dimensions	438 mm (W) x 451 mm (D) x 44 mm (H) 17.24"(W) x 17.76"(D) x 1.73"(H)
Weight	10.0 kg (22.05 lbs)
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)
Storage Temperature	-20°C ~ 70°C (-4°F ~ 158°F)
Operating Humidity	5% ~ 90%
Certification	CE/FCC

Ordering Information

FWA8600	1U Rackmount Appliance, MBN803 Intel® Xeon® Processor D-2100, 4x DDR4 DIMMs,Total Max. 25 GbE Ports, 250W PSU, CPU cooler, optional IPMI, 1x PCI-E x4 slot, Barebone without RAM/HDD/Drive Bay Kit/IBN Card*
FWA8600-RPSU	1U Rackmount Appliance, MBN803 Intel® Xeon® Processor D-21XX, 4x DDR4 DIMMs, Max. 25 GbE Ports, 300W RPSU, CPU cooler, optional IPMI, 1x PCI-E x4 slot, Barebone without RAM/HDD/Drive Bay Kit/IBN Card*

*For a complete system, IBN modules & some components must be ordered.

Accessories

PK1-51	Console cable, 160cm
IDN100	IPMI 2.0 module
VGA21A	VGA cable, 40cm

Dimensions

iBASE
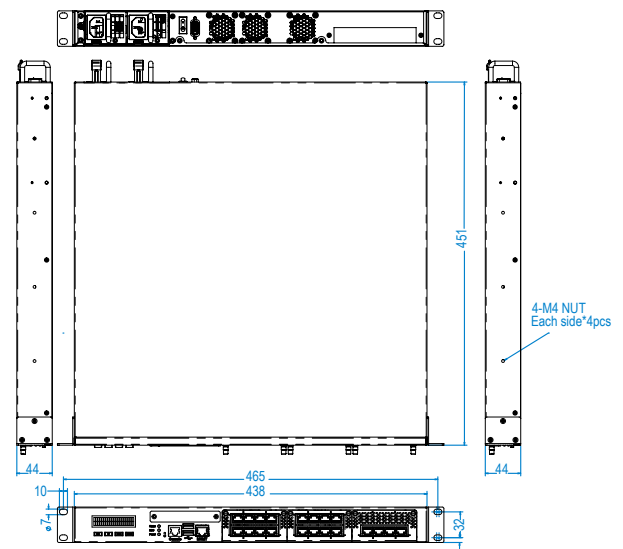
FWA8600

Optional Component BOM

Configuration Options		Component BOM
Front I/O Options	Storage & Expansion Options	Model Kits
FWA8600 & FWA8600-RPSU NIC: 3x IBN cards	None	FWA8600 KIT1
	Expansion slot	FWA8600 KIT2
	1x 2.5" drive + Expansion slot	FWA8600 KIT3
	2x 2.5" drvie bays	FWA8600 KIT4
FWA8600 & FWA8600-RPSU SHD: 2x IBN cards + swappable 2x 2.5" drive bays	None	FWA8600 KIT5
	Expansion slot	FWA8600 KIT6
	1x 2.5" drive + Expansion slot	FWA8600 KIT7
	2x 2.5" drive bays	FWA8600 KIT8
FWA8600 & FWA8600-RPSU SHQ: 1x IBN cards + swappable 4x 2.5" drive bays	None	FWA8600 KIT9
	Expansion slot	FWA8600 KIT10

Front I/O
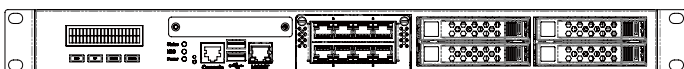
FWA8600-NIC
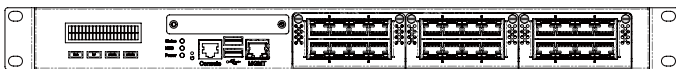
FWA8600-SHD
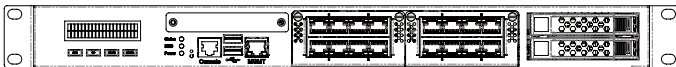
FWA8600-SHQ

FWA8506

Enterprise 1U Network Appliance with
Intel® Atom™ Processor C3000 Series 6 GbE & 4 10GbE Ports

Features

- Intel® Atom™ Processor C3758
- 2x DDR4 DIMMs; Max. 32GB (UDIMM ECC / non-ECC) or 64GB (RDIMM)
- 6x PCI-E GbE RJ45 ports; 2x Advanced LAN Bypass pairs
- 4x 10GbE SFP+ ports
- 1x PCI-E slot, 1x CF slot

Specifications

CPU	Intel® Atom™ Processor C3758 (8 Cores, 2.2GHz)
Chipset	N/A
Memory	2x DDR4 DIMMs up to 2400MHz,Max. 64GB RDIMM, Max. 32GB UDIMM (ECC or non-ECC)
Display	1x LCM
Ethernet	6x Intel® I211-AT GbE 1x Inphi CS4223 for 4x 10GbE
Bypass	2x segment, LAN 3/4 & 5/6
Expansion	1x PCI-E x8 slot (4-lane)
IPMI	N/A
Storage	2x 2.5" SATA drive bay 1x CF slot
TPM	TPM 1.2
I/O	3x LED (Power / HDD / Status) 1x Factory default button (GPIO) 1x RJ45 console 2x USB 3.0
Power Supply	Full range 250W ATX power supply
Dimensions	438 mm (W) x 340 mm (D) x 44 mm (H) 17.24"(W) x 13.38"(D) x 1.73"(H)
Weight	6.50 kg
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)
Storage Temperature	-20°C ~ 70°C (-4°F ~ 158°F)
Operating Humidity	5 ~ 90%
Certification	CE/FCC

Ordering Information

FWA8506	1U Rackmount Appliance, MBN802 Intel® Atom™ Processor C3758, 2x DDR4 DIMMs, 6 GbE RJ45, 4 10GbE SFP+, 250W PSU, CPU Cooler, Barebone without RAM/HDD/Drive Bay Kit*

*Must Order Component BOM

Accessories

PK1-51	Console cable, 160cm

Dimensions

iBASE
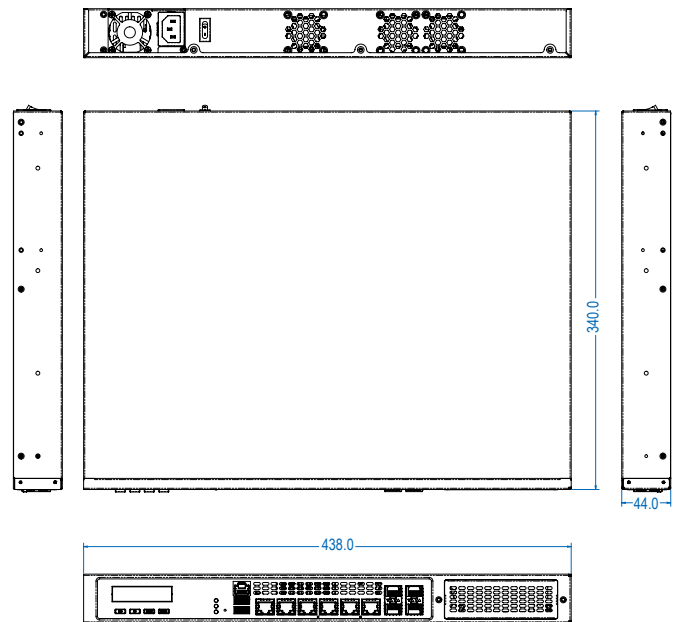
Optional Component BOM

Configuration Options		Component BOM
Option Area-A	Option Area-B	Model Kit
None	None	FWA8506 KIT1
None	1x Expansion Slot	FWA8506 KIT2
None	Swappble 2x 2.5" drive bays	FWA8506 KIT3
2x 2.5" HDD	None	FWA8506 KIT4
2x 2.5" HDD	1x Expansion Slot	FWA8506 KIT5
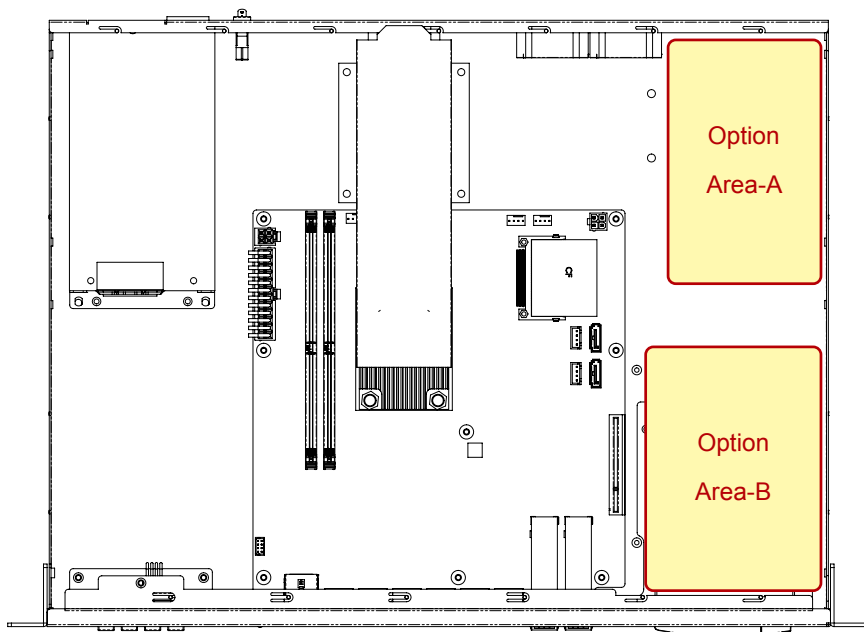
FWA6706R

Rackmount Network Appliance

Entry 1U Network Appliance with
Intel® Celeron® Processor N3350 & 6 GbE Ports

Features

● Intel® Celeron® Processor N3350, Dual-Core 1.1GHz

● 2x DDR3L SO-DIMMs; Max. 16GB (non-ECC)

● 6x PCI-E GbE ports; 1x advanced LAN Bypass pair

● 1x Mini PCI-E slot

● 1x CF slot

Specifications

|	
CPU	Intel® Celeron® Processor N3350, Dual-Core 1.1GHz
Chipset	N/A
Memory	2x DDR3L SO-DIMMs up to 1866MHz, Max. 16GB (Non-ECC)
Display	1x VGA via pin-header 1x LCM
Etherent	6x Intel® I211-AT GbE
Bypass	1x segment, LAN 5/6
Expansion	1x Mini PCI-E slot (PCI-E & USB signal)
IPMI	N/A
Storage	1x 2.5" SATA drive bay 1x CF slot
TPM	TPM 1.2
I/O	1x LCM 3x LED (Power / HDD / Status) 1x Factory default button (GPIO) 1x RJ45 console 2x USB 3.0
Power Supply	Full range 65W open frame
Dimensions	438 mm (W) x 180 mm (D) x 44 mm (H) 17.24" (W) x 7.09" (D) x 1.73" (H)
Weight	3 kg (6.62 lbs)
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)
Storage Temperature	-20° ~ 70°C (-4°F ~ 158°F)
Operating Humidity	5% ~ 90%
Certification	CE/FCC

Ordering Information

FWA6706R	1U Rackmount Appliance, MBN501 Intel® N3350 Dual-Core 1.1GHz, 2x DDR3L SO-DIMMs, Max. 6 GbE Ports, 65W Open Frame, CPU Cooler, Barecone without RAM/HDD

Accessories

PK1-51	Console cable, 160cm
VGA21A	VGA cable, 40cm

Dimensions

iBASE
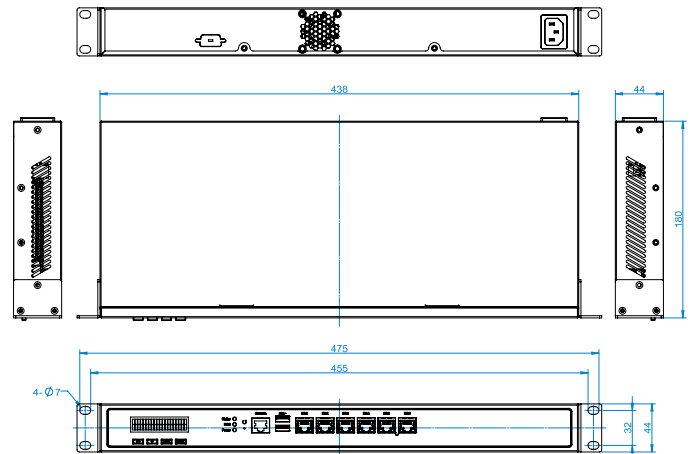
FWA6706D

Compact & Slim Fanless Network Appliance with
Intel® Celeron® Processor N3350 & 6 GbE Ports

Features

- Intel® Celeron® Processor N3350, Dual-Core 1.1GHz
- 2x DDR3L SO-DIMMs; Max. 16 GB (non-ECC)
- 6x PCI-E GbE ports; 1x advanced LAN Bypass pair
- 1x Mini PCI-E slot
- 1x CF slot

Specifications

|	
CPU	Intel® Celeron® Processor N3350, Dual-Core 1.1GHz
Chipset	N/A
Memory	2x DDR3L SO-DIMMs up to 1866MHz, Max. 16GB (Non-ECC)
Display	1x VGA via pin-header (by project)
Ethernet	6x Intel® I211-AT GbE
Bypass	1x segment, LAN5/6
Expansion	1x Mini PCI-E (PCI-E & USB signal)
IPMI	N/A
Storage	1x 2.5" SATA drive bay 1x CF slot
TPM	TPM 1.2
I/O	3x LED (Power / HDD / Status) 1x Factory default button (GPIO) 1x RJ45 console 2x USB 3.0
Power Supply	Full range 40W power adaptor / 12V
Dimensions	227 mm (W) x 142 mm (D) x 44 mm (H) 8.94"(W) x 5.59"(D) x 1.73"(H)
Weight	2 kg (4.41 lbs)
Operating Temperature	SSD: 0℃ ~ 40℃ (32°F ~ 104°F) HDD: 0℃ ~ 35℃ (32°F ~ 95°F)
Storage Temperature	-20° ~ 70℃ (-4°F ~ 158°F)
Operating Humidity	5% ~ 90%
Certification	CE/FCC

Ordering Information

FWA6706D	Desktop Appliance, Intel® Celeron® Processor N3350, 2x DDR3L SO-DIMMs, 6 GbE Ports, 40W Adaptor, 2.5" HDD Bracket, Barebone without RAM/HDD

Accessories

PK1-51	Console cable, 160cm

Dimensions
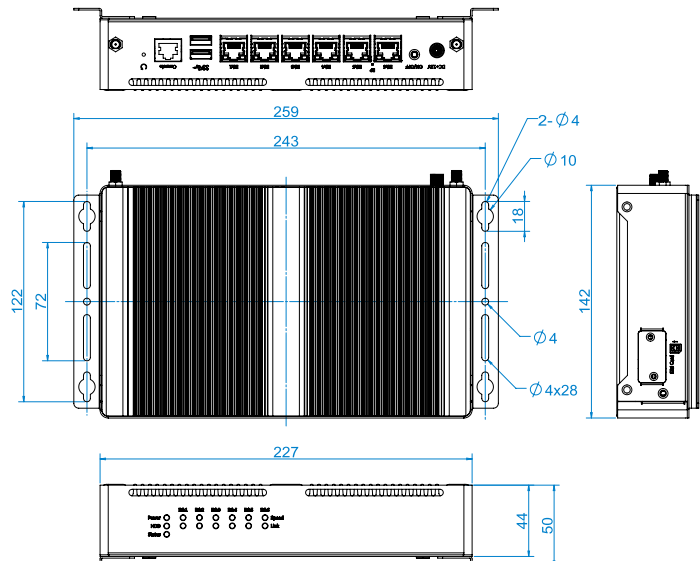
AGS102

Desktop Network Appliance

Ultra-Compact Fanless System with
Intel® Atom™ x7/x5, Pentium® & Celeron® Processors

Features

- Intel® Atom™ x7-E3950/x5-E3940/x5-E3930 & Pentium® N4200 / Celeron® N3350 Series Processors
- GPIO 4-in & 4-out with isolation function
- Over/Under/Reverse voltage protection
- Wide-range operating temperature from -40°C to 70°C
- 9V~36V DC wide-range power input
- Supports DIN-rail mount & wall mount
- AGS102T: 4x RS232/422/485 serial ports
  AGS102: 2x RS232/422/485 and 2x RS232 serial ports
- Rugged and fanless design

Specifications

System Mainboard	IB801/ IB802T (F-1 Stepping)
CPU Type	Intel® Atom™ x7-E3950/x5-E3940/x5-E3930 & Pentium® N4200/ Celeron® N3350 Series Processors
System Speed	Up to 2.5GHz
Memory	1x 4GB DDR3L-1866 SO-DIMM, Max. 8GB
Construction	Aluminum & steel
Chassis Color	Silver & Gray
Rear Panel External I/O	1x DVI-I + 1x DisplayPort connector 4x USB 3.0 ports, 1x USB 2.0 port 2x RJ45 Gigabit Ethernet port 3x LED indicators (HDD, WLAN, WWAN) 1x power button with Green LED (Sliver power button with Green LED for AGS102, Black power button with Blue LED for AGS102T) 1x 3-pin DC-in terminal blo ck for 9V-36V 1x Antenna hole for WLAN module AGS102T: 2x RS232/422/485 ports for COM#3/COM#4 AGS102: 2x RS232 ports for COM#3/COM#4 1x 4-in & 4-out GPIO with isolation
Left Panel External I/O	2x RS232/422/485 ports for COM#1/COM#2 1x Antenna hole for WLAN module 1x Line-out (AGS102 for 2W mono speaker, AGS102T for stereo output)
Right Panel External I/O	1x SIM card slot
Expansion slots	1x Full-size Mini PCI-E socket (USB 2.0 + PCI-E + SATA) 1x 2230 M.2 E-Key socket for WLAN & BT (USB 2.0 + PCI-E) 1x 3042 M.2 B-Key socket for WWAN & SSD (USB 2.0 + SATA)
Storage	1x mSATA socket (Mini-PCI-E) 1x 2242 M.2 B-Key socket for SSD
Mounting	DIN-rail mounting (DIN-rail mount kit included) Desktop or wall mounting (wall mount kit included)
Dimensions	160mm (W) x 110mm (D) x 44mm (H) 6.3" (W) x 4.33" (D) x 1.73" (H)
Weight	1kg
Operating Temperature	-40°C~70°C (-40°F~158°F) (For E-series CPU) -20°C~60°C (-4°F~140°F) (For N-series CPU)
Storage Temperature	-40°C ~ 85°C (-40°F~185°F)
Relative Humidity	5~90% @ 45°C, (non-condensing)
Vibration	Operatiing: 2.0 grms / 5~500Hz / random operation (with IEC 60068-2-64) Non-Operating: 3.0 grms / 5~500Hz / random operation (with IEC 60068-2-64)
Shock	Operating: 30G/11 ms Duration (with MIL-STD-810G) Non-operating: 40G/11 ms Duration (with MIL-STD-810G)
Certification	CE / LVD / FCC Class B / CCC (AGS102 Only) / UL

Ordering Information

AGS102-I50	Intel® Atom™ Processor x7-E3950, 4x COM, 1x 4GB DDR3L industrial-grade memory, 1x 64GB MLC industrial-grade mSATA SSD, w/o power adaptor
AGS102-I40	Intel® Atom™ Processor x5-E3940, 4x COM, 1x 4GB DDR3L industrial-grade memory, 1x 64GB MLC industrial-grade mSATA SSD, w/o power adaptor
AGS102-I30	Intel® Atom™ Processor x5-E3930, 4x COM, 1x 4GB DDR3L industrial-grade memory, 1x 64GB MLC industrial-grade mSATA SSD, w/o power adaptor
AGS102-420	Intel® Pentium® Processor N4200, 4x COM, 1x 4GB DDR3L industrial-grade memory, 1x 64GB MLC industrial-grade mSATA SSD, w/o power adaptor
AGS102-335	Intel® Celeron® Processor N3350, 4x COM, 1x 4GB DDR3L industrial-grade memory, 1x 64GB MLC industrial-grade mSATA SSD, w/o power adaptor
60W power adaptor (optional)	60W (12V@5A) power adaptor, bare wire type Compatible with IEC62368-1/EN62368-1
Optional Accessories	WiFi/BT antenna kit, 4G/LTE antenna kit, GPS antenna kit

Intel® Entry Processor Ultra Low Power Reference Table

Processor Number	Intel® Pentium® Processor – 14 nm Apollo-Lake SoC Platform	Intel® Celeron® Processor – 14 nm Apollo-Lake SoC Platform	Intel® Atom™ Processor – 14nm Apollo-Lake-I SoC Platform		
	N4200	N3350	x7-E3950	x5-E3940	x5-E3930
Base Freq (GHz)	1.1	1.1	1.6	1.6	1.3
Intel® Turbo Boost Technology 2.0 (GHz)	2.5	2.4	2.0	1.8	1.8
Last Level Cache	2M	2M	2M	2M	2M
Cores/Threads	4/4	2/2	4/4	4/4	2/2
Memory Speed (DDR3L)	1866	1600	1866	1866	1866
TDP	6W	6W	12W	9.5W	6.5W

DIN-rail Mounting

Dimensions and Drawing
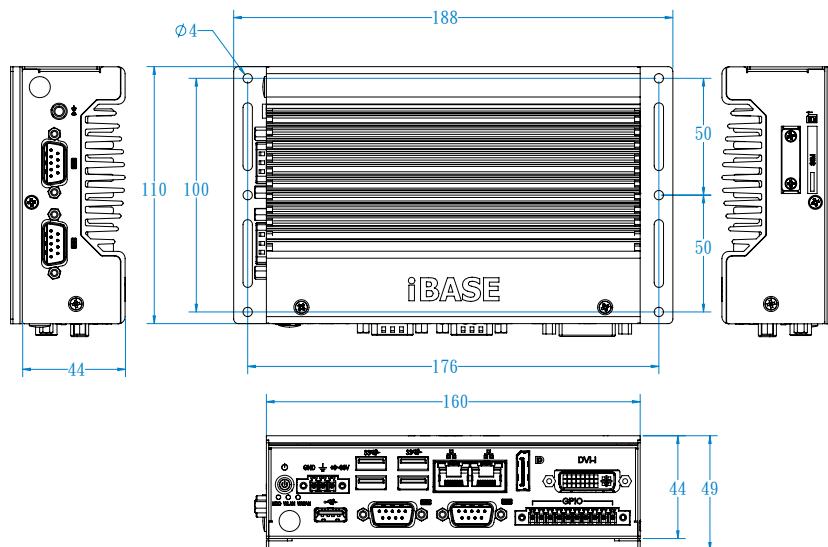
Network Interface Modules

Expansion Module Cards
Fast, Multi-Function & Flexible Networking Modules

Model Name		Port	Interface	Bypass Segment	Controller	Compatible Model
IBN-R420BN		4	GbE RJ45	0	1x Intel® i350-AM4	INA7600 FWA9500 FWA8800 FWA8708 FWA8600 FWA8408
IBN-R420B		4	GbE RJ45	2	1x Intel® i350-AM4	INA7600 FWA9500 FWA8800 FWA8708 FWA8600 FWA8408
IBN-R840N		8	GbE RJ45	0	2x Intel® i350-AM4	INA7600 FWA9500 FWA8800 FWA8708 FWA8600 FWA8408
IBN-R840		8	GbE RJ45	4	2x Intel® i350-AM4	INA7600 FWA9500 FWA8800 FWA8708 FWA8600 FWA8408
IBN-S400		4	GbE SFP	0	1x Intel® i350-AM4	INA7600 FWA9500 FWA8800 FWA8708 FWA8600 FWA8408
IBN-S800		8	GbE SFP	0	2x Intel® i350-AM4	INA7600 FWA9500 FWA8800 FWA8708 FWA8600 FWA8408
IBN-S420QSX		4	GbE SFP	2	Intel® i350-AM4	INA7600 FWA9500 FWA8800 FWA8708 FWA8600 FWA8408
IBN-S420DSX		2	GbE SFP	1	Intel® i350-AM2	INA7600 FWA9500 FWA8800 FWA8708 FWA8600 FWA8408

iBASE

Remarks: 1. Specifications are subject to change without prior notice.   2. ODM/OEM is available.   3. For user's manual & datasheet download, visit www.ibase.com.tw.

Network Interface Modules

Expansion Module Cards
Fast, Multi-Function, Flexible Networking Modules

Model Name		Port	Interface	Bypass Segment	Controller	Compatible Model
IBN-P400Q		4	10GbE SFP+	0	Intel® XL710-BM1	INA7600 FWA9500 FWA8800 FWA8708 FWA8600 FWA8408
IBN-P400D		2	10GbE SFP+	0	Intel® X710-BM2	INA7600 FWA9500 FWA8800 FWA8708 FWA8600 FWA8408
IBN-P401Q		4	10GbE SFP+	0	INPHI PHY WPCS4223C	FWA9500 FWA8600
IBN-P420QSR		4	10GbE SFP+	2	Intel® XL710-BM1	INA7600 FWA9500 FWA8800 FWA8708 FWA8600 FWA8408
IBN-P420DSR		2	10GbE SFP+	1	Intel® X710-BM2	INA7600 FWA9500 FWA8800 FWA8708 FWA8600 FWA8408
IBN-F200		2	25GbE SFP28	0	Intel® XXV710-AM2	INA7600 FWA9500 FWA8800 FWA8600 FWA8408
IBN-C200		2	100G QSFP28	1	TBD	INA7600 FWA8600

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