COMPANY PROFILE

KTNF ‘Leading the Localization of x86 Servers’

2023

KOREA TECHNOLOGY AND FUTURE

• ?

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Ⅰ KTNF Company INFO.

Ⅱ KTNF Product INFO.

Ⅲ Why KTNF & KTNF Server?

Contents

Ⅰ KTNF Company INFO.

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- QUALITY MANAGEMENT of KTNF
- TECHNICAL SUPPORT of KTNF
- REBRAND PROCESS of KTNF
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VISION of KTNF

Vision Innovative IT Infrastructure Solution Provider with Global Competitiveness

The Company that is READY	'ALL TOGETHER' Culture	Challenge for the FUTURE
The Company that knows what to do and gets ready	The Culture that embraces not only ten steps of one person but also single step of ten people	Challenge on New Technologies continuously for the better Future

KTNF is Korea's leading IT technology company.

Since founded in 2001 under the motto of Korea Technology aNd Future, **KTNF has emerged as a server industry leader with the best technology and expertise**. KTNF is a trusted company that not only provides server circuit and system technology for services optimized for cloud and edge computing environments, but one that also supports your information and technology in response to the rapidly changing fourth industrial revolution environment based on expertise and excellent service.

To become a leader in IT technology in Korea, we will approach our customers with a more active attitude toward our customers. In addition, all KTNF executives and employees are always doing their best to provide better
service and the best information technology.

KTNF will always keep improving our customers based on trust and support and never forget that our growth must come from their support.

KTNF
KOREA TECHNOLOGY AND FUTURE

CEO Joongyeon Lee

NUMBER of KTNF

22
Businesses since 2001

80+
employees

40%
Professional & Specialist

The only
Unique

1
KR company to own design LAB in Taiwan

1
KR company to certify global OS compatibility

The only
Unique

1
KR company to obtain Nutanix certification

55
Innovative Products registered with the PPS*

10+
Patents

1000+
Partners & Customers

* : The Korea Public Procurement Service

HISTORY of KTNF

2001
12 - **KTNF founded**

2002
08 - Factory established (600EA CAPA/month)

2003
01 - K-1100 server verified by Intel for the first time in Korea

2004
02 - ISO 9001 certified

2005
12 - New brand name 'NEO-HERMES' server launched

2006
06 - Security server launched
12 - ISO 14001 certified
Innovation Biz Certification

2007
03 - HQ relocated to Dae-ryung Technotown

2008

2010

2011
10 - Good Design Awards of KIDP*
12 - Selected as KIBO A+ Members by KTFC **

2014
01 - Hidden Champion selected by MOEL***

2015
02 - CCC Certified Factory Review

2016
06 - **Relocated to Ma-gok Bldg.**
10 - Prime Minister Awards

2017
04 - Launched x86 Server for Data center

2018
07 - **Opened R&D branch in Taipei(Taiwan)**
11 - TPC-C International certi.

2019
05 - VMware Ready certified

2020
03 - Redhat Linux Ready certified
07 - Innovation Product certified
10 - Nutanix Ready certified

2021
12 - Launched 2nd Gen. x86 Server

2022
03 - Microsoft OEM
06 - TPCx-AI International certi. World First
06~ VMware & Citrix Ready certified

2023
02 - Redhat Realtime OS certified

* : The Korea Institute of Design Promotion
** : The Korea Technology Finance Corporation
*** : Ministry of Employment and Labor

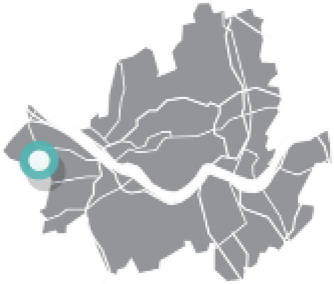
ORGANIZATION of KTNF

6 Divisions, 1 Department, 9 Teams,
1 R&D Brand Office

- President & CEO
  - Auditor General
  - Advisor
  - Biz Division
    - Server Sales Team
    - Technical Support Team
    - Strategy Planning Department
  - R&D Division
    - H/W Development Team
    - S/W Development Team
    - Enclosure Development Team
    - Product Development Team
    - R&D Support Team
    - Branch Office
  - Manufacturing innovation Division
    - Manufacturing Innovation Team
    - Production Technology Team
  - Quality Innovation Division
    - Quality Innovation Part
  - Purchase Strategy Division
    - Purchase Strategy Part
  - Management Support Division
    - Management Support Part

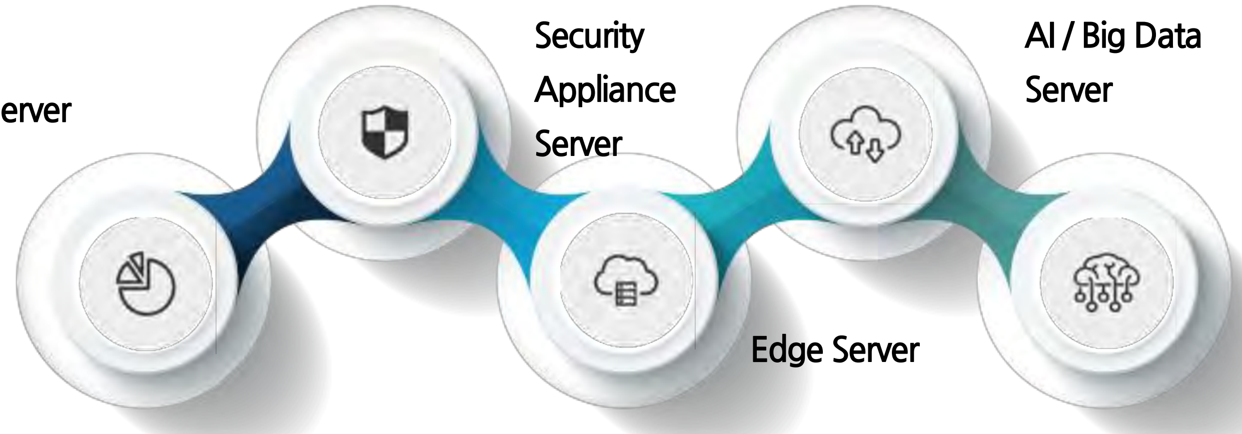
LOCATION

KTNF Bldg. 21, Magokjungang 8-ro
3-gil, 07795, Gangseo-gu, Seoul



BUSINESS of KTNF

Wherever there is data, there is a KTNF server.



Data generation → Save data → Data Analysis → Data consumption

x86 Server

- Self designed & built x86 motherboards and firmwares (BIOS and BMC etc.)
- **Cloud, HCI, HPC and Virtualization Servers**
- High Temperature server for datacenter

Security Appliance Server

- Protect internal systems from external intrusion and threats
- Firewall, IPS, UTM, DB Security, Web Firewall, VPN and Anti-Spam
- IoT Security Module etc.

AI/ Big Data Server

- High-performance GPU servers optimized for AI/ Deep Learning
- GPU servers for data modeling and simulation

Edge Server

- Edge computing optimized for various industrial sites (smart factory, AD*)
- Edge gateway and Edge server
- Rugged Edge server System

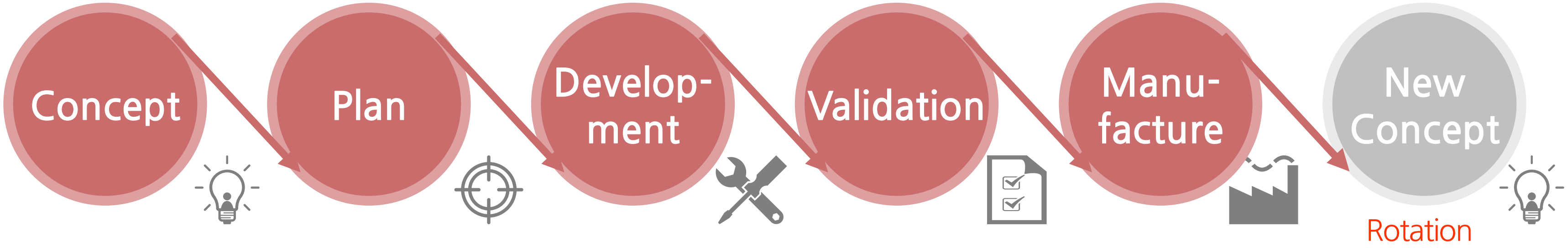
ODM Server

- Develop and manufacture appliance servers optimized for customer needs
- SDN and NFV etc.

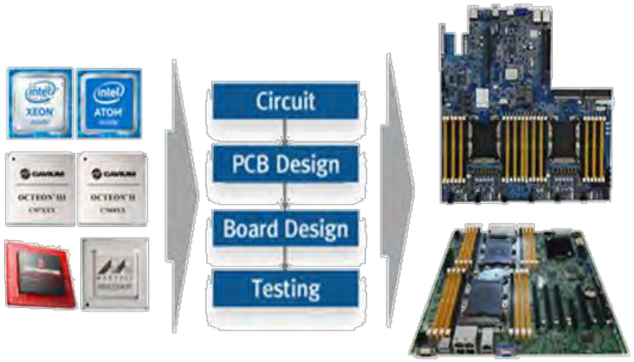
* : Autonomous Driving

R&D of KTNF

Own design and production technology for server systems


Concept
Plan
Develop-ment
Validation
Manu-facture
New Concept
Rotation

- x86 Server Motherboard and Platform Self-Design
- Firmware(BIOS and BMC) and System Enclosure self-development
- Versatile and professional verification capabilities (High speed signal processing and power integrity etc.)
- Collaborate with global & domestic companies such as Intel, Nutanix and Microsoft to prioritize and test the latest technologies
- Continue to carry out national projects with ETRI, KISTI and KETI etc.


intel XEON
intel ATOM
CAVIUM OCTEON III
CAVIUM OCTEON II
Circuit
PCB Design
Board Design
Testing

MANUFACTURING of KTNF

Strict manufacturing process management and quality control

Select parts and bring › Manufacture M/B and inspect › Assemble Server and Inspect › Quality Control and Packing › Shipment

Quality

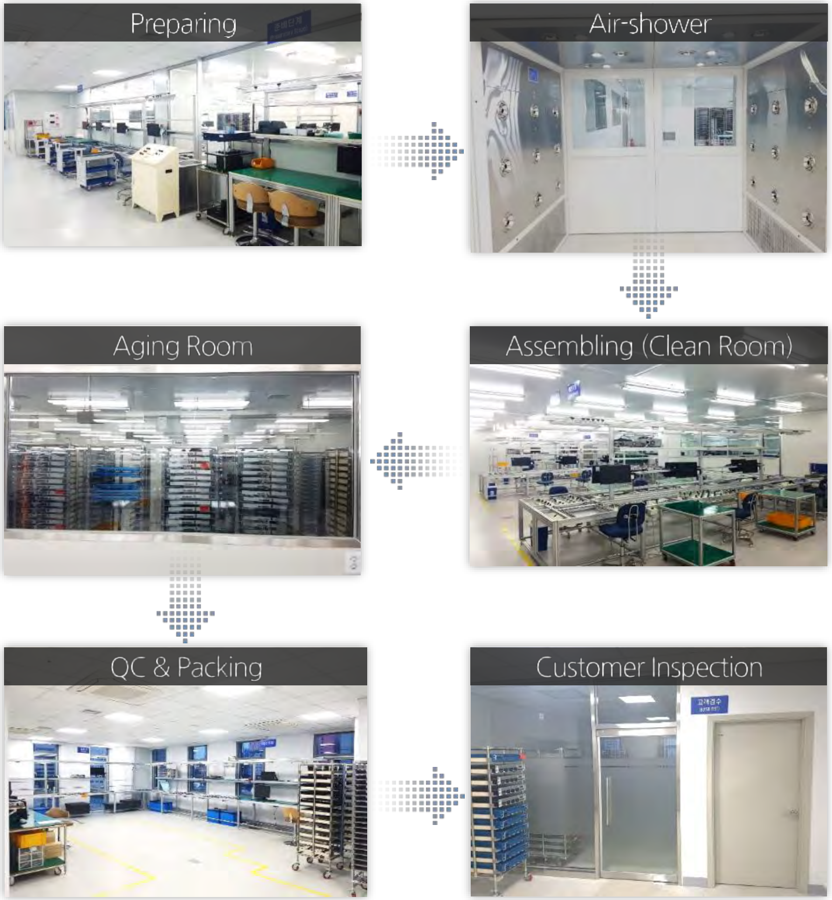
- All Clean Room (Conveyor and cell line)
- Aging Room (400 units aging at the same time)
- 4 Steps Inspection (IQC, LQC, FQC, OQC)

Smart Factory

- Application of Integrated Production Management System(MES, POP)
- Digitalization for all work instruction(eSOP)
- 100K units manufacturing capacity per year

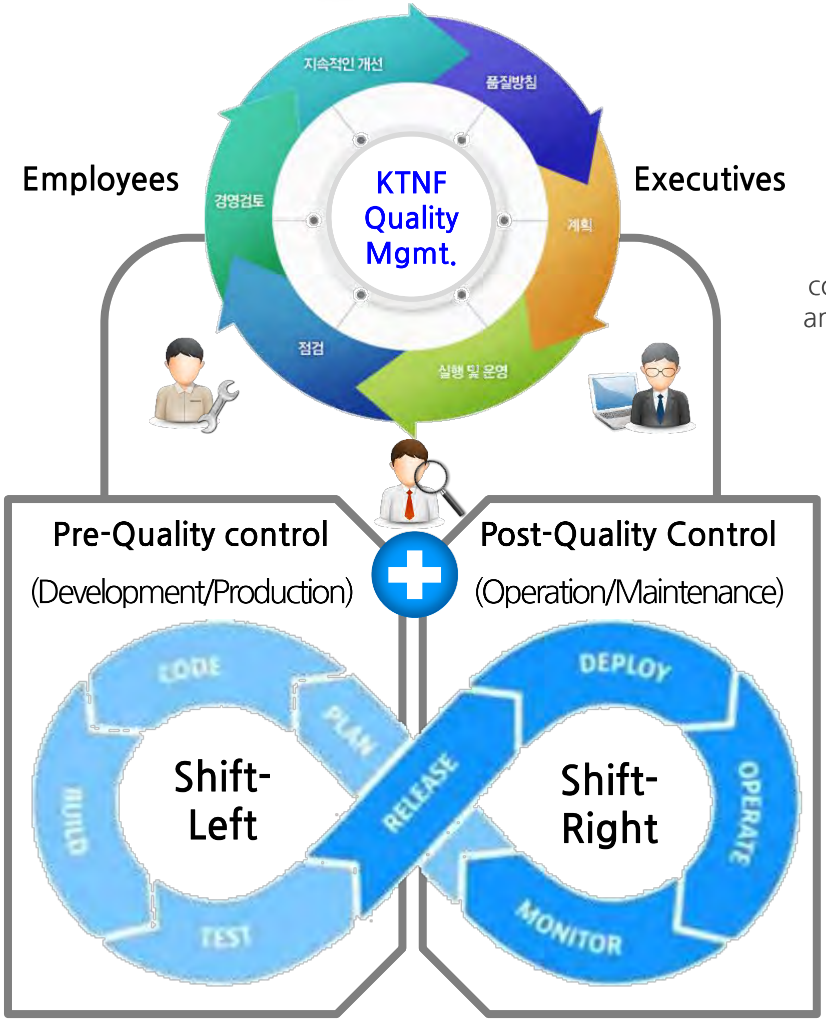
Security

- Tight access control (Only authorized persons can enter)
- Block access from external network


Preparing
Air-shower
Assembling (Clean Room)
Aging Room
QC & Packing
Customer Inspection

QUALITY MANAGEMENT of KTNF

Operate quality Radar for thorough pre- and post-quality management


지속적인 개선
품질방침
계획
실행 및 운영
점검
경영검토
KTNF
Quality
Mgmt.
CODE
PLAN
BUILD
TEST
RELEASE
DEPLOY
OPERATE
MONITOR

Employees

Executives

Pre-Quality control

(Development/Production)

Shift-Left

Post-Quality Control

(Operation/Maintenance)

Shift-Right

constant temperature and humidity chamber

Power consumption test equipment

ESD test equipment

ENA Network Analysis Equipment

- ✓ **High temperature tolerance stability test chamber facilities** (Temperature -40℃ to 100℃, humidity 20-98%)
- ✓ **Power-related reliability verification facilities**
- ✓ **Electrostatic Discharge Resistance Facility Possession**
- ✓ **Ultra high-speed network performance test facilities** (10GbE, 40GbE, 100GbE)
- ✓ **Network analysis facilities**
- ✓ **Power noise, signal analysis facilities**

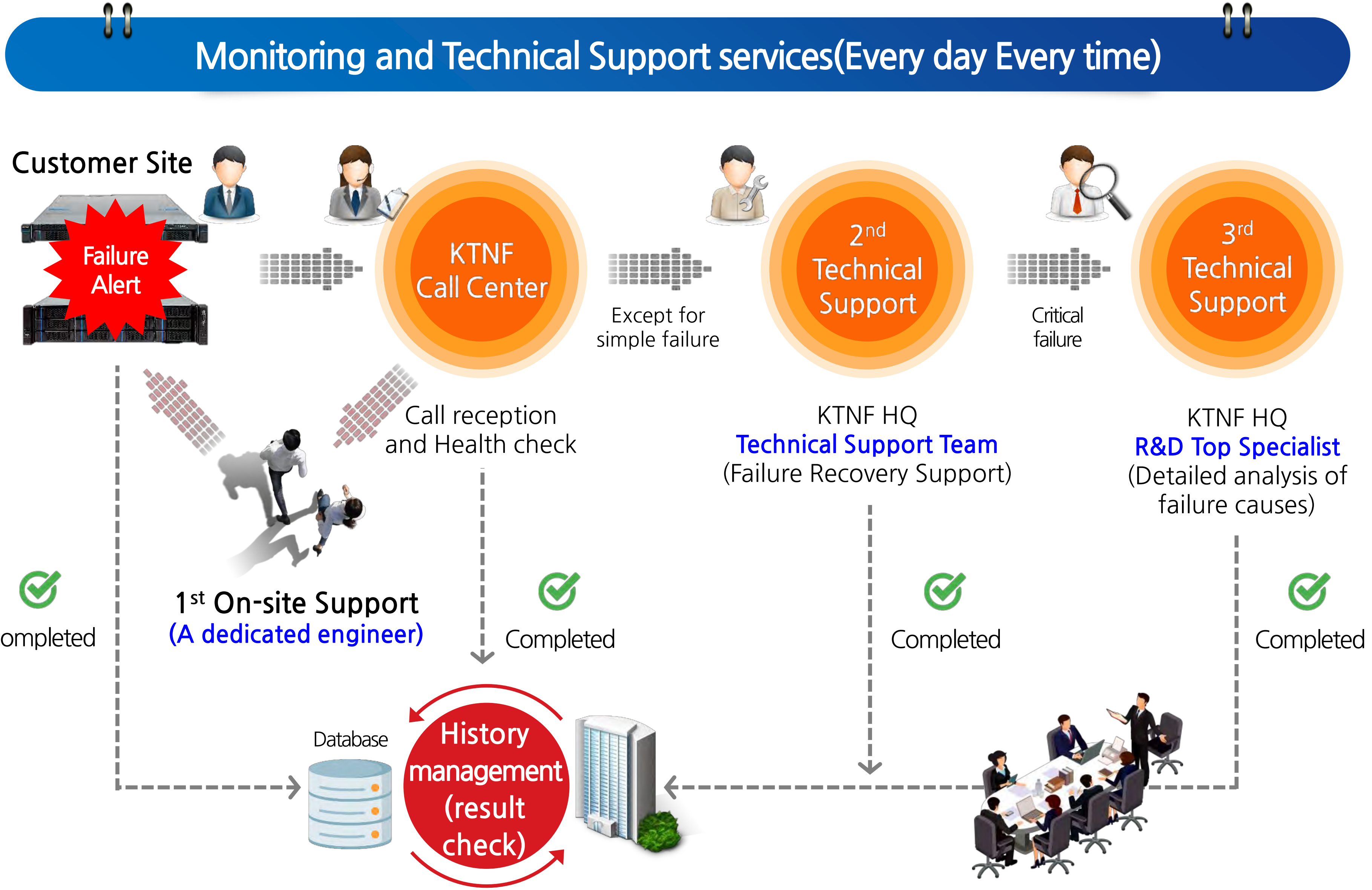
Tektronix DPO7104

Ground conduction/ withstand voltage test

Spirent SPT-N4U equipment

Thermometer

TECHNICAL SUPPORT of KTNF



Monitoring and Technical Support services(Every day Every time)

Customer Site

Failure Alert

KTNF Call Center

Call reception and Health check

Except for simple failure

2nd Technical Support

KTNF HQ
Technical Support Team
(Failure Recovery Support)

Critical failure

3rd Technical Support

KTNF HQ
R&D Top Specialist
(Detailed analysis of failure causes)

1st On-site Support
(A dedicated engineer)

✓ Completed

✓ Completed

✓ Completed

✓ Completed

Database

History management (result check)

REBRAND PROCESS of KTNF

Provide the optimal system for your successful business

Develops and manufactures servers that customers need

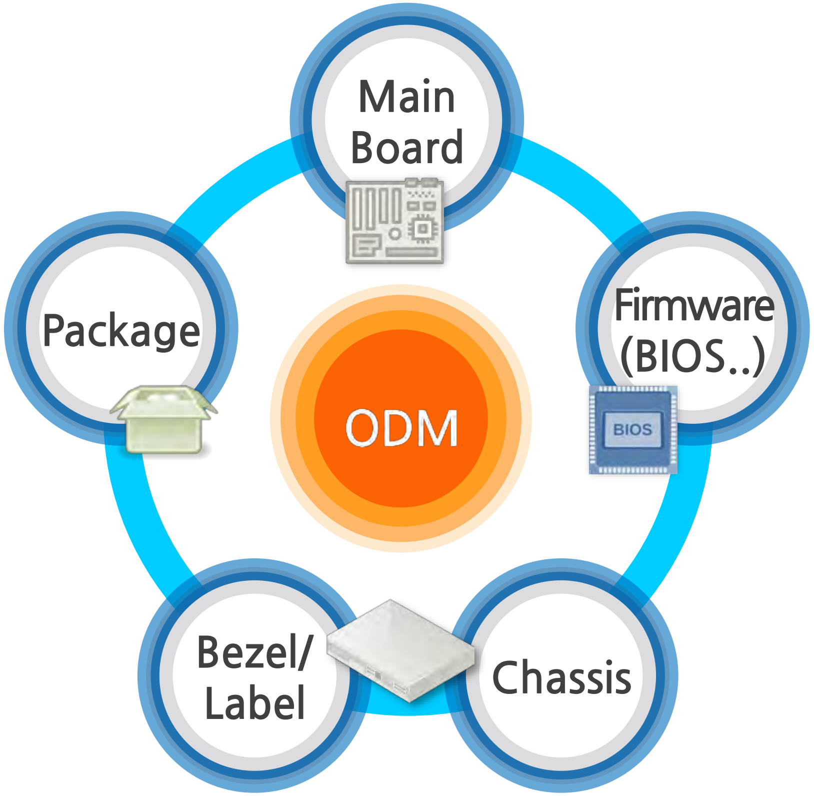
Customer Requirements
KTNF

Customer **Voice** + KTNF **Technology** = **KSF** (Key Success Factors)

- ✓ Gain experience in developing service-optimized appliance servers (Security appliance, all-flash server, server switch, etc.)
- ✓ Reflect customer requirements from design to manufacturing
- ✓ Gain customer product quality through a systematic verification process

KTNF's 5 Methods for Branding Customers

※ From the Mainboard to Original Development Manufacturing


Main Board
Firmware (BIOS..)
BIOS
Chassis
Bezel/ Label
Package
ODM

REFERENCE of KTNF

x86 Server

책임운영기관
행정안전부
국가정보자원관리원

국방통합데이터센터

서울특별시

세종특별자치시

DTaQ
국방기술품질원
Defense Agency for Technology and Quality

세계속의 경기도
Global Inspiration

울산광역시
ULSAN METROPOLITAN CITY

KISA 한국인터넷진흥원

경기도교육정보기록원
Gyeonggi-Do Education Information Archive

DAEGU
대구광역시
DAEGU METROPOLITAN CITY

경기도고양교육지원청

EWP 한국동서발전(주)

SBC 중소기업진흥공단

BDi 부산연구원
BUSAN DEVELOPMENT INSTITUTE

BTP
재단법인
부산테크노파크
BUSAN TECHNO PARK

wp 한국서부발전(주)

DST 대전과학기술대학교
DAEJEON INSTITUTE OF SCIENCE AND TECHNOLOGY

BI MATRIX
Intelligence Solution Provider

한국폐기물재활용공제조합

TTA 한국정보통신기술협회
Telecommunications Technology Association

K-WON
(주)케이원 정보통신

국세청
National Tax Service

금융결제원
Korea Financial Telecommunications & Clearings Institute

기상청
Korea Meteorological Administration

해양수산부
마산지방해양수산청

SK 하이닉스

SAMSUNG
삼성전자

SK telecom

LG U+

NH농협은행

한국전력공사
KOREA ELECTRIC POWER CORPORATION

h·well
국민건강보험
National Health Insurance Corporation

ATTO RESEARCH

신테카바이오
AI Drug Discovery & Development

Network Security Server

AXGATE Security and Beyond
WINS
MONITORAPP
Genians
XN systems Be With The Network!
Pumpkin NETWORKS
AhnLab
SECUI
COMTRUE® Technologies
SOLID WINTECH 쏠리드윈텍
NexG 넥스지
wellconn
secureletter.
COREMAX TECHNOLOGY
스마트어스 SMART US
EASYCERTI (주)이지서티
PrimaryNet (주)프라이머리넷
N&S Network & Security
Creative Convergence ntels
NNSP Next network security Provider
FutureSystems
ROOT Information & Communication
ENTROLINK
DEEPSoft Leading #1 Advanced eMail Solution & anti-spam technology
NetMan®

Overseas customers(Export)

msi (Taiwan)
NUSOFT Internet Security Fighter (Taiwan)
RUGGED TOOLING (Finland)
NetLoad Inc. (USA)

Contents

Ⅱ KTNF Product INFO.

- Product Portfolio
- x86 Server
- Network Security Server
- GPU Server
- Edge Server
- ODM Server

Product Portfolio » Summary

x86 Server

Domestic server systems with self-designed and built x86 motherboards(3 Types Server)

Network Security Server

Network security server systems with high-performance processes
(Firewall, IPS, UTM, VPN, Anti-Spam and Security Solution etc.)

ODM & Edge Server

ODM Server and Edge computing system reflecting customer needs
(Servers for Cloud Edge Computing)

SDS Server

Media Server

Edge Server

High-End

Mid-Range

Low-End

Entry

01⁄ 1 Socket Server

KR320
(Rack 1U)

KR330
(Rack 2U)

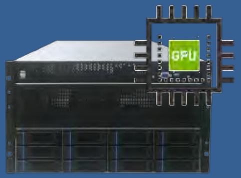
KP320
(Tower)

02⁄ 2 Socket Server

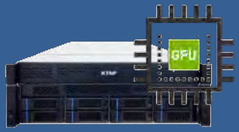
KR570
(Rack 1U)

KR580
(Rack 2U)

03⁄ GPU Server



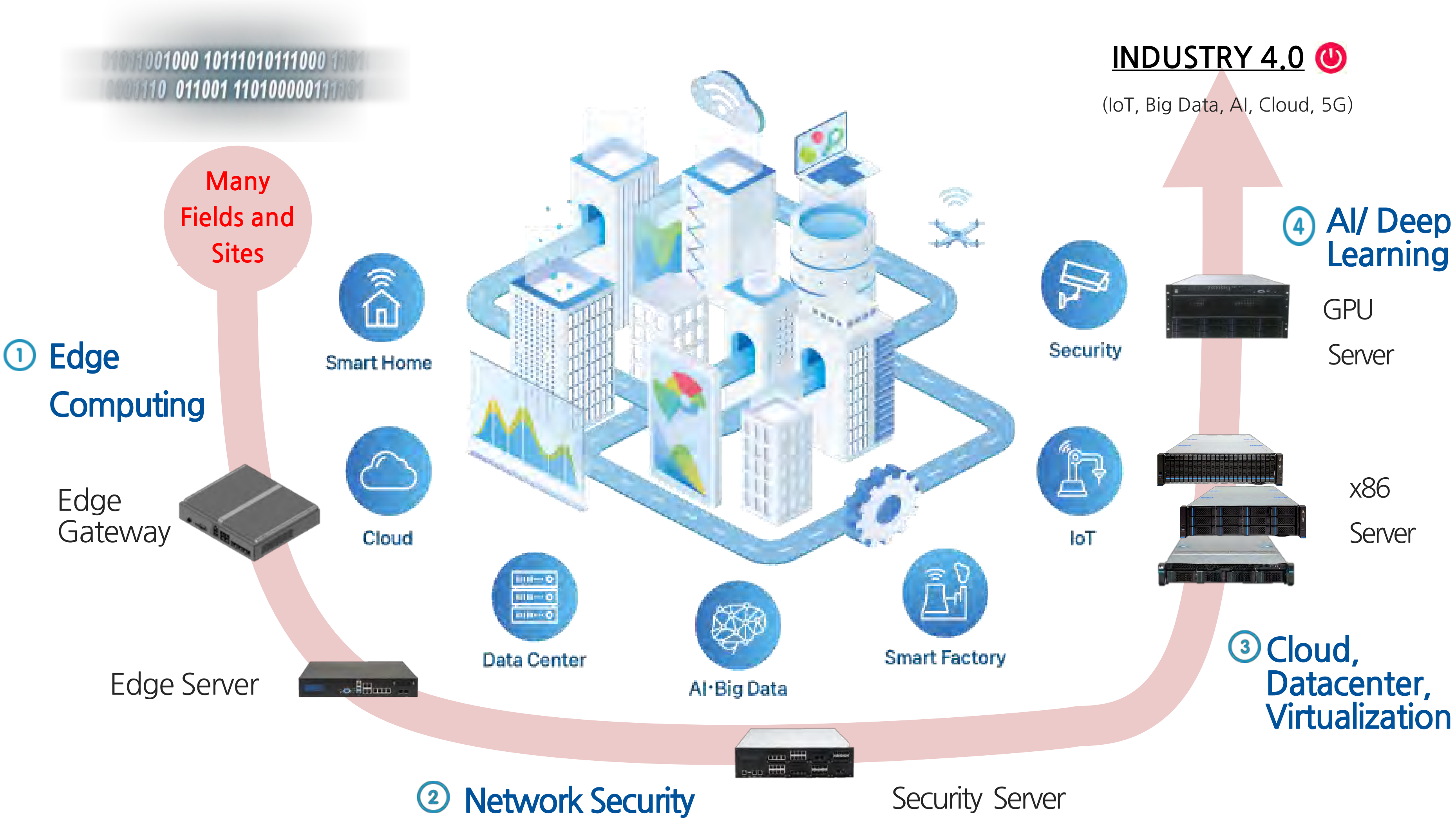
KH590
(8 GPU)



KH591
(4 GPU)

Product Portfolio » Target Market

Anywhere KTNF ON!



INDUSTRY 4.0

(IoT, Big Data, AI, Cloud, 5G)

Many Fields and Sites

① **Edge Computing**

Edge Gateway

Edge Server

② **Network Security**

Security Server

③ **Cloud, Datacenter, Virtualization**

x86 Server

④ **AI/ Deep Learning**

GPU Server

1011001000 10111010111000 1101
0001110 011001 11010000011101
Smart Home
Cloud
Data Center
AI·Big Data
Smart Factory
Security
IoT

Product Portfolio » x86 Server Roadmap

2021 → 2022 → 2023 → 2024

4Socket
(2U System)

(Develop → 2nd Half Launching)

NEW

TBD / Eagle Stream
Intel Xeon(Sapphire Rapids-SP)

2Socket
(2U System)

KR580S1 / Purely Platform
1st&2nd Intel Xeon(Skylake/Cascade-SP)

(MP)

KR580S2, KR581S2 / Whitley Platform
3rd Intel Xeon SP(Ice Lake-SP)

(Develop → 1st Half Launching)

NEW

KR580S3 / Eagle Stream
Intel Xeon(Sapphire Rapids-SP)

KR580S3 / Eagle Stream
Intel Xeon(Emerald Rapids-SP)

2Socket
(1U System)

KR570S1 / Purely Platform
1st&2nd Intel Xeon Scalable Processors

(MP)

KR570S2 / Whitley Platform
3rd Intel Xeon SP(Ice Lake-SP)

(Develop → 1st Half Launching 예정)

NEW

KR570S3 / Eagle Stream
Intel Xeon(Sapphire Rapids-SP)

TBD / Eagle Stream
Intel Xeon(Emerald Rapids-SP)

Product Portfolio » Network Security Server Roadmap

2021 | 2022 | 2023 | 2024

High-End
(2U system)

K2731A / 2 Socket
Cascade Lake, DDR4, 8 x Edge Slot

K2741A / 2 Socket
(Develop) Sapphire Rapids

K2641A / 1 Socket
(Develop) Sapphire Rapids

Mid-Range
(2U system)

K2541A / 1 Socket
Coffee Lake, DDR4, 8 x RJ45 + 4 x SFP + 1x Edge Slot

TBD
(Plan)

K1541A / 1 Socket
Coffee Lake, DDR4, 8 x RJ45 + 4 x SFP + 1x Edge Slot

K1551A / 1 Socket
(Develop) Alder Lake-S

Low-End
(1U system)

K1131A / 1 Socket
Denverton, DDR4, 8 x RJ45 + 1x Edge Slot

K1141A / 1 Socket
(Develop) Parker Ridge

Entry
(1U system)

K1221A / 1 Socket
Apollo Lake, DDR3 SoDIMM, 6 x RJ45 + option Card

K1231A / 1 Socket
(Develop) Alder Lake-N

x86 Server » 2 Socket Server

x86 server with motherboard manufactured by KTNF's own design

High Availability Servers + **High Performance Servers for the Data Center**

KR570S2

KR580S2 / KR581S2

01 Supports **Intel® latest 3rd generation Xeon® Scalable Processor**(Ice Lake SP)

02 Supports up to **32 DDR4 DIMM memory slots**(Up to 8TB, Max. speed 3200 MT/s)

03 Supports **non-volatile Intel® 2nd generation Optane Persistent Memory**

04 Supports **High-performance PCIe Gen4 NVMe SSDs**

05 Supports up to **2 GPGPU mounting** (only PCIe Gen4 GPU and KR580S2 Server)

intel.
xeon
3rd Gen Intel® Xeon®
Scalable Processors

x86 Server » 1 Socket Server

x86 server considering both scalability and economic feasibility for SMB

1 Socket_1U Server ⊕ 1 Socket_2U Server ⊕ 1 Socket_Tower Server

KR320S1

KR330S1

KP320S1

01 Supports Intel® latest Xeon E, Core i, and Pentium processors

02 Supports 4(1U/Tower) or 8(2U) LFF drives and M.2 SSDs for scalability

03 Supports 4 onboard 1Gbe ports and 1(1U) or 3(2U/Tower) expansion slots

04 Supports 4 memory DIMMs and speeds up to 2666 MHz

05 Supports dedicated IPMI ports for management convenience

Econo-
mics
Manage-
ability
Scalabi-
lity

x86 Server » Global Standard OS Compatibility

"The only Korean server to complete the global OS compatibility test & certification"

redhat vmware CITRIX NUTANIX Microsoft

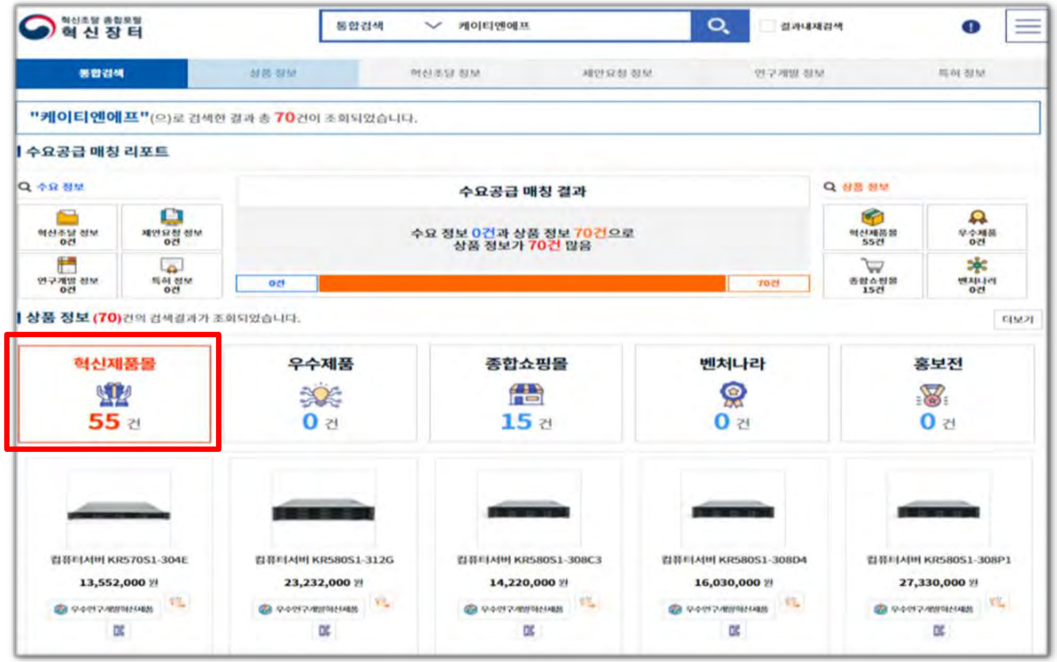
OS	Operating System	Support
Linux	Red Hat Enterprise Linux 7.6 / 7.7 / 7.8 / 7.9 / 8.0 / 8.3 / 8.4 / 8.5 Red Hat Enterprise Realtime 8.5	Red Hat (officially certified)
	SUSE Linux Enterprise Server 15	SUSE
	Ubuntu 18.04 / 20.04 / 22.04	Open Source
	CentOS 7.6 / 7.7 / 7.8 / 7.9 / 8.3 / 8.4 / 8.5	Open Source
Windows	Windows Server 2016 / 2019 / 2022	Microsoft
VMM	VMware ESXi 6.7 U1, U2, U3, ESXi 7.0 U3	VMware (officially certified)
	Windows Hyper-V 2016 / 2019 / 2022	Microsoft
	Red Hat OpenStack15 / 16	Red Hat (officially certified)
	Citrix XenServer 7.x / 8.2	Citrix
	NUTANIX Ready Hardware	NUTANIX (officially certified)
	Bizmerce pentaARK	Bizmerce

x86 Server ≫ Innovative Product

The only Korean server vendor designated as an excellent R&D innovative product

- ✓ **Private contracts** are available in the public market **regardless of the amount**
- ✓ Purchased public institutions **receive additional points in year-end evaluations**

<Link> https://ppi.g2b.go.kr:8914/portal/main.do



혁신조달 종합포털 혁신장터

통합검색 | 케이티엔에프 | 결과내재검색

통합검색 | 상품 정보 | 혁신조달 정보 | 제안요청 정보 | 연구개발 정보 | 특허 정보

"케이티엔에프"(으)로 검색한 결과 총 70건이 조회되었습니다.

수요공급 매칭 리포트

수요 정보: 혁신조달 정보 0건, 제안요청 정보 0건, 연구개발 정보 0건, 특허 정보 0건

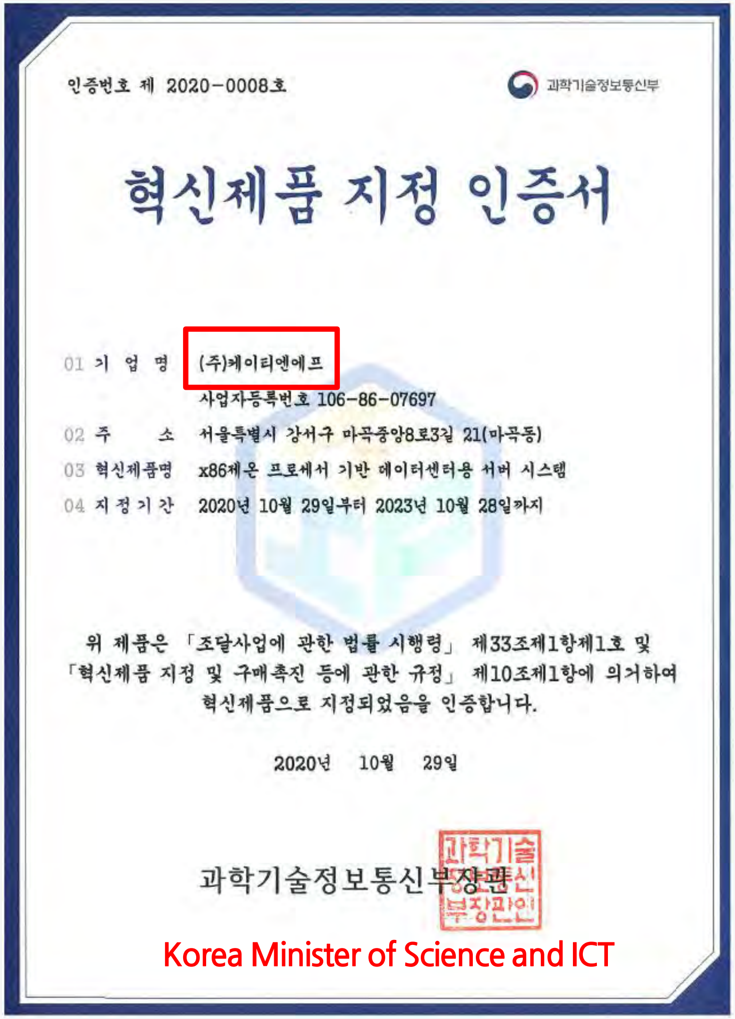
수요공급 매칭 결과: 수요 정보 0건과 상품 정보 70건으로 상품 정보가 70건 많음 (0건 / 70건)

상품 정보: 혁신제품몰 55건, 우수제품 0건, 종합쇼핑몰 15건, 벤처나라 0건

상품 정보 (70)건의 검색결과가 조회되었습니다.

혁신제품몰	우수제품	종합쇼핑몰	벤처나라	홍보전
55 건	0 건	15 건	0 건	0 건

컴퓨터서버 KR570S1-304E	컴퓨터서버 KR580S1-312G	컴퓨터서버 KR580S1-308C3	컴퓨터서버 KR580S1-308D4	컴퓨터서버 KR580S1-308P1
13,552,000 원	23,232,000 원	14,220,000 원	16,030,000 원	27,330,000 원



인증번호 제 2020-0008호

과학기술정보통신부

혁신제품 지정 인증서

01 기 업 명 (주)케이티엔에프
사업자등록번호 106-86-07697
02 주 소 서울특별시 강서구 마곡중앙8로3길 21(마곡동)
03 혁신제품명 x86제온 프로세서 기반 데이터센터용 서버 시스템
04 지 정 기 간 2020년 10월 29일부터 2023년 10월 28일까지

위 제품은 「조달사업에 관한 법률 시행령」 제33조제1항제1호 및 「혁신제품 지정 및 구매촉진 등에 관한 규정」 제10조제1항에 의거하여 혁신제품으로 지정되었음을 인증합니다.

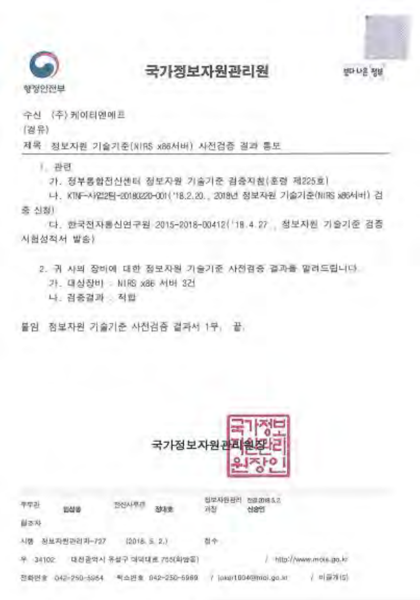
2020년 10월 29일

과학기술정보통신부장관

Korea Minister of Science and ICT

x86 Server » Certification

'18 Information Resources Technology Reference of x86 Server Validation	National Information Resources Service
HPC Hybrid Server (GPGPU) Validation	Telecommunication Technology Association TTA
SPEC jbb 2015 SPEC CPU 2017	Standard Performance Evaluation Corporation
TPCx-AI Certified(Jun. 2022, World First) TPC-C Certified(Nor. 2018)	TPC™
KC Certified	National Radio Research Agency
Standby Power Certified	Korea Energy Agency
High-temperature reliability test(45 °)	Korea Testing Laboratory ktl



행정안전부

국가정보자원관리원

바르게 나은 정부

수신 (주) 케이티엔에프
(경유)
제목 정보자원 기술기준(NIRS x86서버) 사전검증 결과 통보

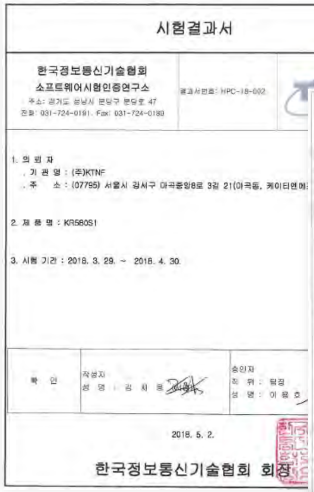
1. 관련
가. 정부통합전산센터 정보자원 기술기준 검증지침(훈령 제225호)
나. KTNF-사업2팀-20180220-001('18.2.20., 2018년 정보자원 기술기준(NIRS x86서버) 검증 신청)
다. 한국전자통신연구원 2015-2018-00412('18.4.27., 정보자원 기술기준 검증 시험성적서 발송)

2. 귀 사의 장비에 대한 정보자원 기술기준 사전검증 결과를 알려드립니다.
가. 대상장비 : NIRS x86 서버 3건
나. 검증결과 : 적합

붙임 정보자원 기술기준 사전검증 결과서 1부. 끝.

국가정보자원관리원장

시행 정보자원관리자-727 (2018. 5. 2.) 접수
우 34102 대전광역시 유성구 대덕대로 755(화암동) / http://www.mois.go.kr
전화번호 042-250-5954 팩스번호 042-250-5989 / jokar1004@moi.go.kr / 비공개(5)



시험결과서

한국정보통신기술협회
소프트웨어시험인증연구소
주소: 경기도 성남시 분당구 분당로 47
전화: 031-724-0191, Fax: 031-724-0189

결과서번호: HPC-18-002

1. 의 뢰 자
. 기 관 명 : (주)KTNF
. 주 소 : (07795) 서울시 강서구 마곡중앙8로 3길 21(마곡동, 케이티엔에프

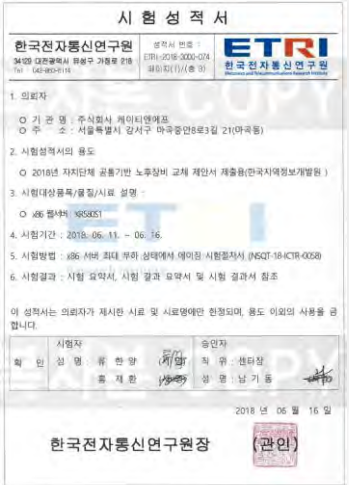
2. 제 품 명 : KR580S1

3. 시험 기간 : 2018. 3. 29. ~ 2018. 4. 30.

확 인	작성자 성 명 : 김 지 용	승인자 직 위 : 팀장 성 명 : 이 용 호

2018. 5. 2.

한국정보통신기술협회 회장



시 험 성 적 서

한국전자통신연구원
34129 대전광역시 유성구 가정로 218
Tel : 042-860-6114

성적서 번호 : ETRI-2018-3000-074
페이지(1)/(총 3)

ETRI 한국전자통신연구원

1. 의뢰자
○ 기 관 명 : 주식회사 케이티엔에프
○ 주 소 : 서울특별시 강서구 마곡중앙8로3길 21(마곡동)

2. 시험성적서의 용도
○ 2018년 자치단체 공통기반 노후장비 교체 제안서 제출용(한국지역정보개발원)

3. 시험대상품목/물질/시료 설명 :
○ x86 웹서버 : KR580S1

4. 시험기간 : 2018. 06. 11. ~ 06. 16.

5. 시험방법 : x86 서버 최대 부하 상태에서 에이징 시험절차서 (NSQT-18-ICTR-0058)

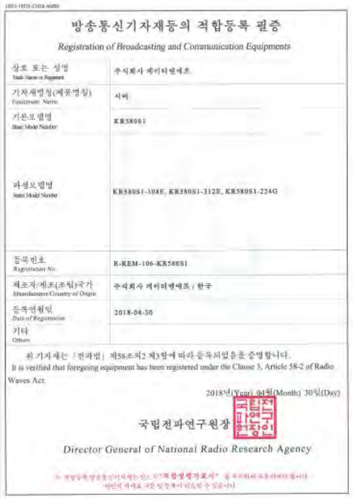
6. 시험결과 : 시험 요약서, 시험 결과 요약서 및 시험 결과서 참조

이 성적서는 의뢰자가 제시한 시료 및 시료명에만 한정되며, 용도 이외의 사용을 금합니다.

확 인	시험자 성 명 : 유 한 양 홍 재 환	승인자 직 위 : 센터장 성 명 : 남 기 동

2018 년 06 월 16 일

한국전자통신연구원장 (관인)



방송통신기자재등의 적합등록 필증

Registration of Broadcasting and Communication Equipments

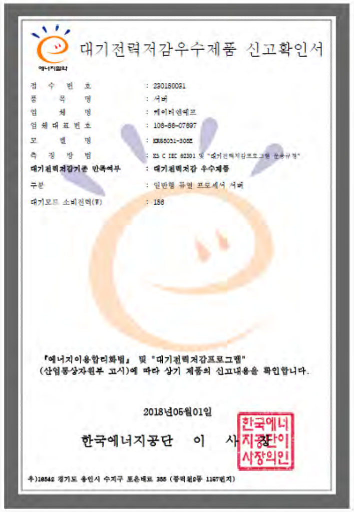
상호 또는 성명 Trade Name or Registrant	주식회사 케이티엔에프
기자재명칭(제품명칭) Equipment Name	서버
기본모델명 Basic Model Number	KR580S1
파생모델명 Series Model Number	KR580S1-308E, KR580S1-312E, KR580S1-224G
등록번호 Registration No.	R-REM-106-KR580S1
제조자/제조(조립)국가 Manufacturer/Country of Origin	주식회사 케이티엔에프 / 한국
등록연월일 Date of Registration	2018-04-30
기타 Others	

위 기자재는 「전파법」 제58조의2 제3항에 따라 등록되었음을 증명합니다.
It is verified that foregoing equipment has been registered under the Clause 3, Article 58-2 of Radio Waves Act.

2018년(Year) 04월(Month) 30일(Day)

국립전파연구원장

Director General of National Radio Research Agency



대기전력저감우수제품 신고확인서

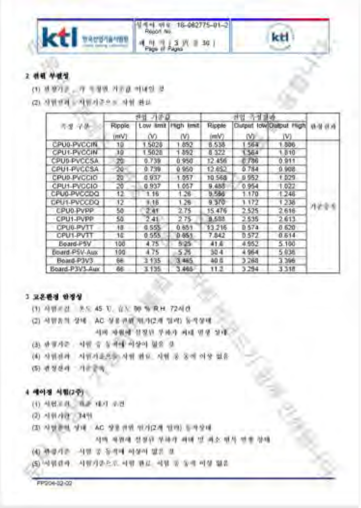
접 수 번 호 : 230180031
품 목 명 : 서버
업 체 명 : 케이티엔에프
업 체 대 표 번 호 : 108-86-07897
모 델 명 : KR580S1-308E
측 정 방 법 : KS C IEC 62301 및 "대기전력저감프로그램 운용규정"
대기전력저감기준 만족여부 : 대기전력저감 우수제품
구분 : 일반형 듀얼 프로세서 서버
대기모드 소비전력(W) : 158

『에너지이용합리화법』 및 "대기전력저감프로그램" (산업통상자원부 고시)에 따라 상기 제품의 신고내용을 확인합니다.

2018년05월01일

한국에너지공단 이 사 장

우)16842 경기도 용인시 수지구 포은대로 388 (풍덕천2동 1167번지)



ktl

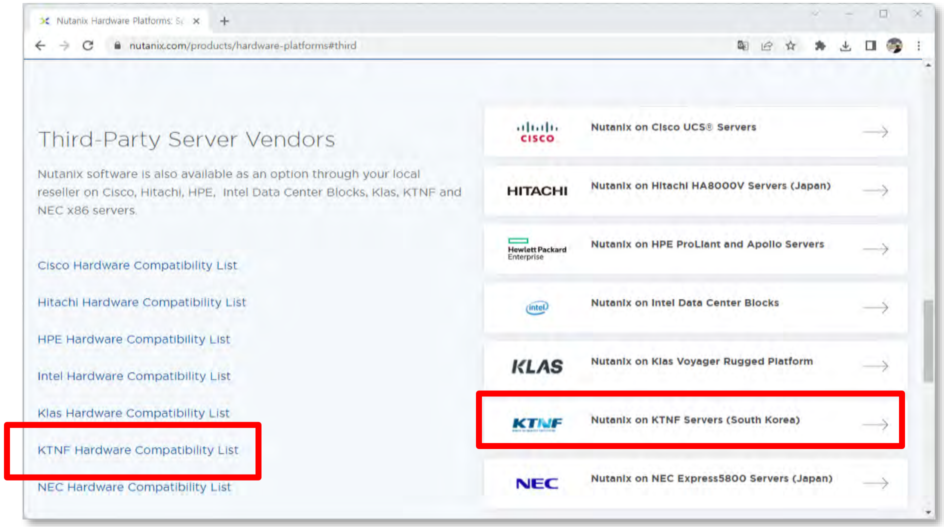
성적서 번호 Report No. 16-082775-01-2
페 이 지 (3) / (총 30) Page of Pages

[illegible]	Ripple (mV)	Low limit (V)	High limit (V)	Ripple (mV)	Output low (V)	Output High (V)	[illegible]
CPU0-PVCCIN	10	1.5020	1.892	8.538	1.564	1.806	
CPU1-PVCCIN	10	1.5020	1.892	8.322	1.564	1.810	
CPU0-PVCCSA	20	0.739	0.950	12.456	0.786	0.911	
CPU1-PVCCSA	20	0.739	0.950	12.652	0.784	0.908	
CPU0-PVCCIO	20	0.937	1.057	10.568	0.952	1.029	
CPU1-PVCCIO	20	0.937	1.057	9.488	0.954	1.022	
CPU0-PVCCDQ	12	1.16	1.26	9.586	1.170	1.246	
CPU1-PVCCDQ	12	1.16	1.26	9.370	1.172	1.238	[illegible]
CPU0-PVPP	50	2.41	2.75	15.476	2.525	2.616	
CPU1-PVPP	50	2.41	2.75	8.588	2.535	2.613	
CPU0-PVTT	10	0.555	0.651	13.216	0.574	0.620	
CPU1-PVTT	10	0.555	0.651	7.842	0.572	0.614	
Board-P5V	100	4.75	5.25	41.6	4.952	5.100	
Board-P5V-Aux	100	4.75	5.25	30.4	4.964	5.036	
Board-P3V3	66	3.135	3.465	40.8	3.268	3.396	
Board-P3V3-Aux	66	3.135	3.465	11.2	3.294	3.318	

FP204-02-02

x86 Server ⨠ Nutanix HCI Solution

The only Korean server company to obtain ‘Nutanix Ready’ certification



Nutanix Hardware Platforms: S
nutanix.com/products/hardware-platforms#third

Third-Party Server Vendors

Nutanix software is also available as an option through your local reseller on Cisco, Hitachi, HPE, Intel Data Center Blocks, Klas, KTNF and NEC x86 servers.

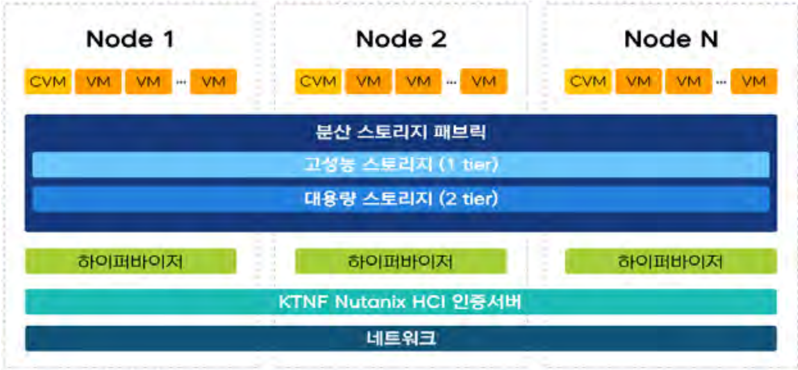
Cisco Hardware Compatibility List
Hitachi Hardware Compatibility List
HPE Hardware Compatibility List
Intel Hardware Compatibility List
Klas Hardware Compatibility List
KTNF Hardware Compatibility List
NEC Hardware Compatibility List

CISCO	Nutanix on Cisco UCS® Servers
HITACHI	Nutanix on Hitachi HA8000V Servers (Japan)
Hewlett Packard Enterprise	Nutanix on HPE ProLiant and Apollo Servers
intel	Nutanix on Intel Data Center Blocks
KLAS	Nutanix on Klas Voyager Rugged Platform
KTNF	Nutanix on KTNF Servers (South Korea)
NEC	Nutanix on NEC Express5800 Servers (Japan)

NUTANIX
READY
AHV
INTEGRATED

KR580 N Series

(308N, 312N, 224N and etc.)



Node 1
CVM
VM
VM
VM
Node 2
CVM
VM
VM
VM
Node N
CVM
VM
VM
VM
분산 스토리지 패브릭
고성능 스토리지 (1 tier)
대용량 스토리지 (2 tier)
하이퍼바이저
하이퍼바이저
하이퍼바이저
KTNF Nutanix HCI 인증서버
네트워크

01 Support a wide range of product models for your environment

02 Supports different forms of configuration depending on performance

- NVMe / All Flash / Hybrid(SSD + HDD)

03 Supports various NICs including 10GbE and 25GbE

04 Supports configuration of Boot Disk Raid for reliability(Raid 1)

Network Security Server(#1)

Network security server systems with next-generation high-performance processes

High-performance security server with accelerators + **Multiple forms of high-end security server**

K2731A

Security Server in a 2U Rack Form Factor
with Intel Security Accelerator

K1541A

Security Server in a 1U Rack Form Factor
with multiple network configurations

Key Features

- Intel Xeon Scalable Processor 2 Socket Server
- 50% performance improvement over previous generation processors (supports up to 56 cores)
- Built-in Intel security features to deliver high-performance IPSec, SSL, and encryption and compression
- Supports high computing power and fast secure packet processing
- Provides LAN bypass function (no service interruption)

- Supports Intel Xeon-E Processor or 8th Generation Coffee-lake Processor
- Configurable in various forms and optimized for required security performance
- Provides an on-board network interface and additional network slots (Optional)
- Optimized design considering density, performance and scalability
- Provides LAN bypass function

Network Security Server(#2)

Network security server with excellent performance and competitive price

Security server optimized for Mainstream market + **Security server optimized for small businesses**

K2541A

Security Server in a 2U Rack Form Factor that supports a variety of processors depending on performance needs

K1226A

Secure Server in 1U Rack Form Factor with low power consumption and optimal processing power

Key Features

- Supports Intel Coffee Lake Xeon E, Core-i series and Pentium, Celeron Processors
- Designed with a focus on flexible configuration and expansion
- Supports up to 12 onboard LAN (8 x RJ45, 4 x SFP) plus 1 x NIC extra slot and 1 x PCIe slot (available for QAT and RAID Card)
- Provides LAN bypass function (no service interruption)

- Supports Intel Atom and Celeron Processors
- Widely used as VPN / UTM in small office and retail market
- Support for two low-power memory SoDIMMs (up to 8GB)
- Onboard LAN allows basic network configuration (very economical)
- Provides LAN bypass function (no service interruption)

GPU Server

High-performance GPU server for artificial intelligence and big data analysis

Equipped with up to 4 GPU accelerators

Equipped with up to 8 GPU accelerators

3U
Max 4GPU
GPU

KH591S2

5U
Max 8GPU
GPU

KH590S1

01 Self-designed and built x86 motherboards

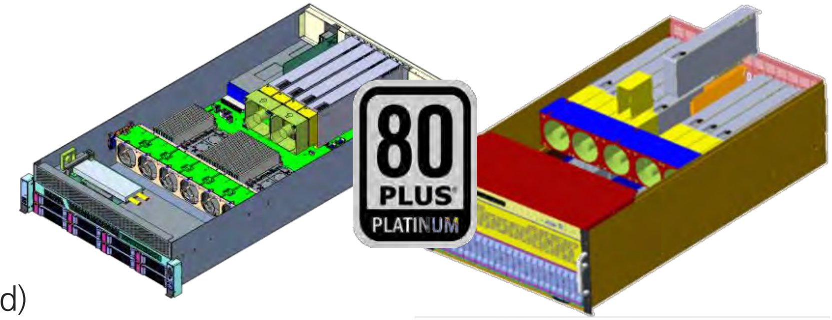
- Supports the latest Intel ® Xeon ® processors
- Supports up to 8 (based on KH591S2) and 24 (based on KH590S1) drives
- Supports '1+1 Redundant Power'

02 Designed considering multi-accelerator topology

- Up to 4 / 8 GPU accelerators per server (GPGPU card)
- Supports multiple accelerator topologies with PCIe switches

03 Design for cooling and temperature control

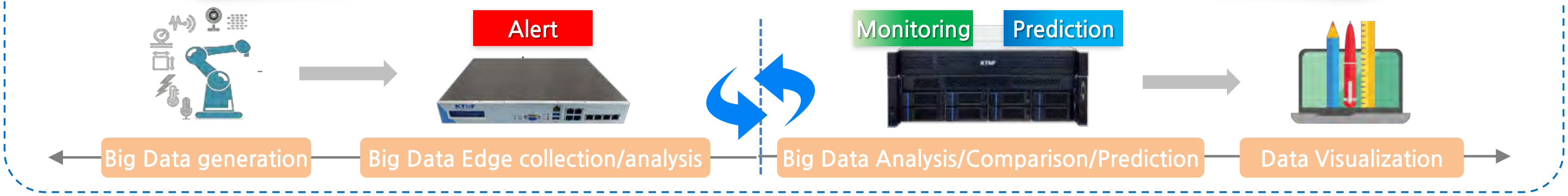
- Computing module placement and cooling structure considering GPU heat and air flow
- Temperature control technology using BIOS and BMC



Hardware Monitoring

Edge Server

The only Korean Edge Server optimized for various edge computing environments


Alert

Monitoring

Prediction

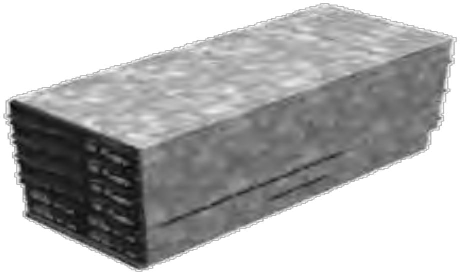
Big Data generation

Big Data Edge collection/analysis

Big Data Analysis/Comparison/Prediction

Data Visualization

Edge server applied to the smart factory market + Rugged Edge Server(National Edge Computing Task)


(Develop)

K1131A(Edge Detector)

- Configuration optimized for on-site data detection, parsing, processing, and algorithm execution
- Intel High Performance Atom C3000 Processor
- Equipped with SATADOM for OS boot and 2.5" SATA HDD/SSD expandability

※ Best Practice - SK hynix(Data collection and analysis from equipment sensors in semiconductor mfg. lines)

Key Features

KTNF Rugged Edge Server System

- KTNF Rugged Edge server that can withstand harsh industrial sites and environments
- Edge server that can be expanded and reconfigured according to the service environment
- Widely used in smart factories, MECs, smart cities and military environments

※ US Army MIL-STD-810G(Operation up to Max 55℃)

ODM Server

"ODM server for continuously growing and increasing cloud companies"

✓ **Global CSPs that operate hyper-scale data centers primarily adopt**

- Representative Cloud Service Provider : Google, Amazon, etc.
- Effect : Reduce costs by deploying servers optimized for business workloads

✓ **Recently, Korea CSPs are also pushing for the adoption of ODM servers**

- The evaluation of ODM servers through foreign manufacturers was suspended due to supply issues

KTNF ODM Server Use Case

#1 - Samsung SDS ODM Server ⊕ **# 2 - SKT and SK Hynix ODM Server**

GC1
SAMSUNG SDS

SDS GC1

- ✓ Developed for Cloud Service Deployment and HPC
- ✓ Optimized servers with proactive review of service workloads
- ✓ Eliminate global vendor dependence and reduce TCO

Media Server

Storage Server

- ✓ SKT : Media Server (Server for mass media service)
- ✓ SK hynix : Validate with the latest server-based storage

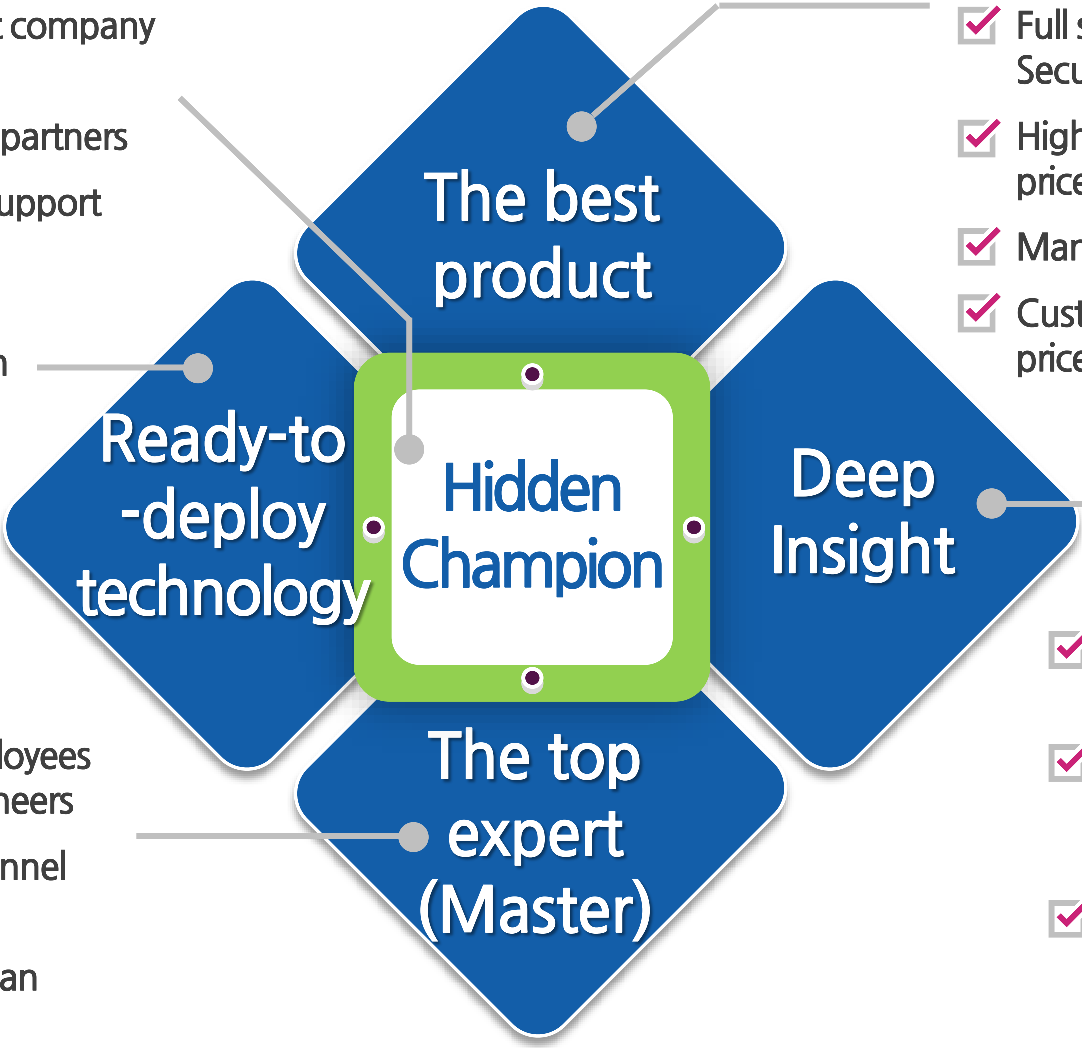
Contents

Ⅲ Why KTNF & KTNF Server?

- 5 Strategy and Value to Customers
- IT ecosystem growing together
- Advantages of KTNF and PR video

5 Strategy and Value to Customers

Growing from a leader in localization of x86 servers to a global company



Hidden Champion

- ☑ Korea server specialist company since 2001 (22 years)
- ☑ many references and partners
- ☑ systematic technical support

The best product

- ☑ Full server lineup(x86, N/W Security, GPU, Edge, ODM)
- ☑ High performance for the price
- ☑ Many features for the price
- ☑ Customer satisfaction for the price

Ready-to-deploy technology

- ☑ Develops firmware on its own(BIOS, BMC)
- ☑ Global standard OS compatible (certified)
- ☑ Owns server-related patents (10+)

Deep Insight

- ☑ Analyze and predict the latest IT trends
- ☑ Establish a continuous product roadmap (R&D investment)
- ☑ Market & Customer Needs Survey

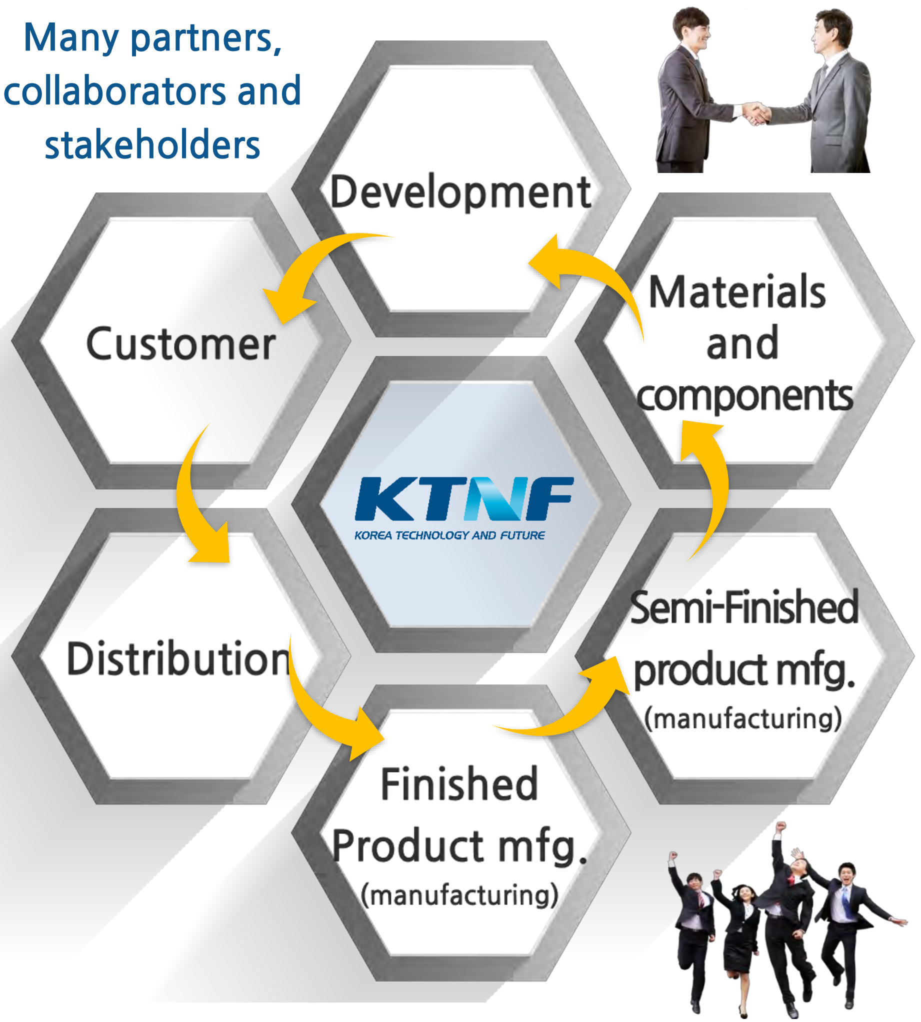
The top expert (Master)

- ☑ Over 40% of all employees are professional engineers
- ☑ Owns HQ R&D personnel and facilities
- ☑ Design center in Taiwan

IT ecosystem growing together

"Continuously fostering the growth & mutual win-win of stakeholders related to the biz"

Many partners, collaborators and stakeholders


Development
Customer
Materials and components
KTNF
KOREA TECHNOLOGY AND FUTURE
Distribution
Semi-Finished product mfg. (manufacturing)
Finished Product mfg. (manufacturing)

KTNF ESG management practices

Environment (Green IT)
Social (Humanity)
Governance (Compliance)

Solar-powered HQ Bldg.

80Plus Platinum for All Products

Continuous social contribution & sharing activities

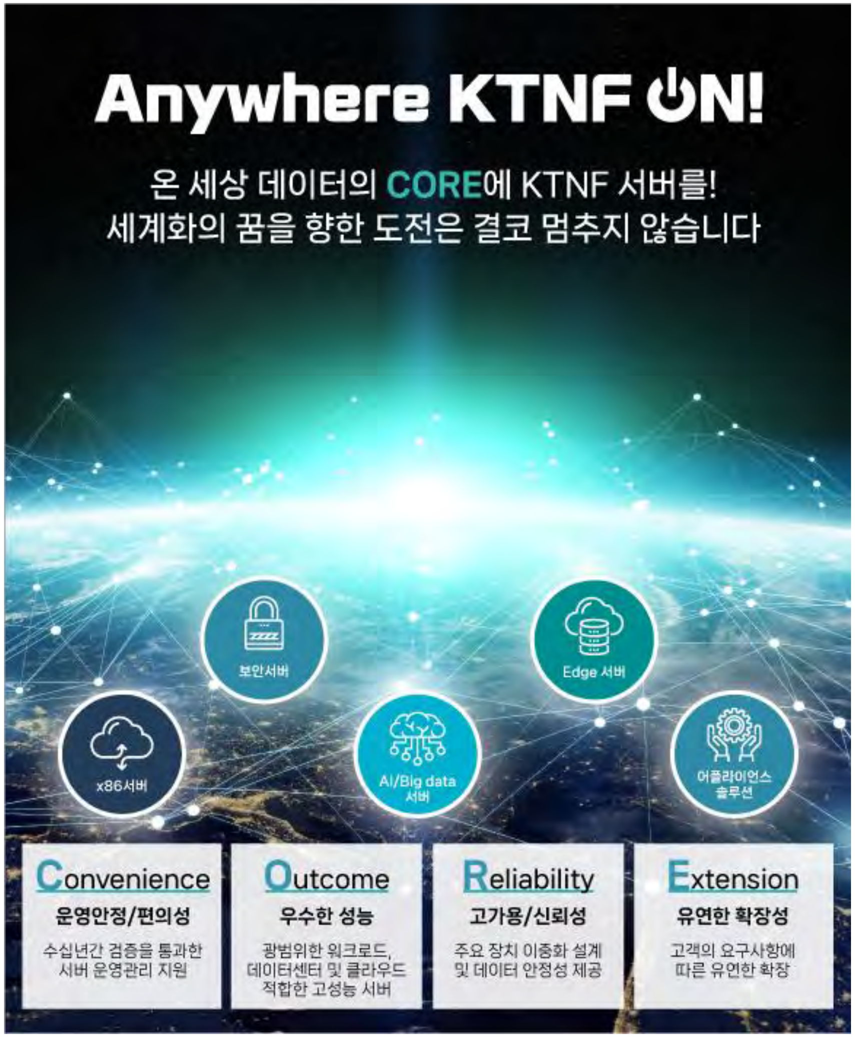
Build an Alliance

intel
NUTANIX
KTNF
SHINSEGAE I&C

2022 KTNF Partner day

Advantages of KTNF & PR video

Maximize business value through KTNF and respond to data center modernization



Anywhere KTNF ON!

온 세상 데이터의 CORE에 KTNF 서버를!
세계화의 꿈을 향한 도전은 결코 멈추지 않습니다

Convenience	Outcome	Reliability	Extension
운영안정/편의성	우수한 성능	고가용/신뢰성	유연한 확장성
수십년간 검증을 통과한 서버 운영관리 지원	광범위한 워크로드, 데이터센터 및 클라우드 적합한 고성능 서버	주요 장치 이중화 설계 및 데이터 안정성 제공	고객의 요구사항에 따른 유연한 확장

Meet the “SMART” KTNF Server

Scalability	Flexibility to expand according to customer needs
Management	Supports convenient operation mgmt(Self-developed Firmware)
Availability	Redundant design of main H/W and online replacement in case of failure
Resilience	Process and respond flexibly to a variety of workloads
Tech support	Systematic and specialized technical support services

KTNF PR Video(Link to be added)

KTNF

Q&A

KOREA TECHNOLOGY AND FUTURE

Anywhere KTNF ON!

Thank you

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KOREA TECHNOLOGY AND FUTURE

KTNF's dreams and challenges toward globalization will never stop