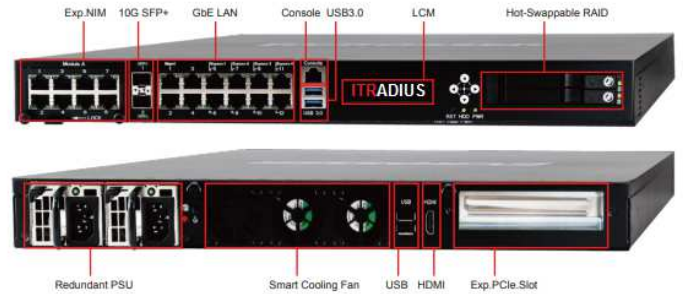


DATASHEET

IT-RC236N1- K2D0T

INTRODUCTION

Multifunctional hardware at the right Price!
The IT-RC236N1-K2D0T Maximizes the diversity and use of applications, bringing together the benefits of the multiple forms of captive portal, AAA server, advertising and other services synchronized and unified with a powerful Intel® 7th Gen CPU Kabylake-S Core™ i7-7700 platform, 32GB of memory and 12x GbE Copper (RJ-45) 2x 10G Fiber (SFP+) and 4-pair LAN bypass.



ESPECIFICATIONS

System	
CPU	Intel® 7th Gen CPU Kabylake-S Core™ i7-7700 Processors
Memory	4 x 288-pin UDIMM DDR4-2400, ECC/non-ECC,(up to 32GB)
BIOS	AMI
WatchDog Timer	Software programmable 1~255 sec.

Video	
Video Interface	HDMI 1.4

Ethernet	
Chipset	Intel® PCH C236
Connector	12x GbE Copper (RJ-45) 2x 10G Fiber (SFP+)
LAN bypass	4-pair

Storage	
mSATA	1 x mSATA socket (support full-size module)
CFast	1 x mSATA socket (support full-size module)
HDD Bay	2 x 2.5" SATA-III Hot-swappable (RAID 0/1)

I/O	
Console port	1 x Serial console (RJ-45)



USB port	2 x USB 3.0 (front-side) 2 x USB 2.0 (rear-side)
LCM	2 x USB 2.0
GPIO	8-bit GPIO (4-In, 4-Out), on-board pin header
Exp. NIM	1 x Exp. NIM(1G/10G/40G, Fiber/Copper/LAN Bypass)
Exp. PCIe slot	1 x Exp. PCIe slot
OPMA slot	1 x OPMA slot (for IPMI 2.0 module, by project)

Power Requirement	
Power Requirement	Redundant ATX PSU (250-300W) 100-240VAC

Software	
OS Support	<ul style="list-style-type: none"> • ITRADIUS v. 1.0 Tempesta.

Mechanical & Environment	
Dimension	440 (W) x 44 (H) x 500 (D) mm
Operating Temp.	0~ 40°C (32~104°F)
Storage Temp.	-20~80°C (-4~176°F)
Relative Humidity	0 to 90% @40°C, non-condensing
Operating Temp.	CE, FCC Class A, RoHS 2, cULus

Packing List	
	• IT-RC236N1-K2D0T series system x 1
	• SATA cable x 2
	• CD utility x 1
	• Console cable (RJ-45 to DB9) x 1
	• USA / EU / JPN / UK / AS / NZS / SA / India power cord x 2
	• Rack bracket x 1
	• Box packing x 1
	• Screw for bracket (for rack + HDD bracket) x 14

TECHNICAL SPECIFICATIONS

- ◆ ITRADIUS v. 1.0 Tempesta.
- ◆ AAA Server (FreeRADIUS V.3.0.10)
- ◆ Supports NAS (Network Access Server) Virtual and Physical.
- ◆ Ability to deploy a captive portal / Hotspot with multiple sites (CoovaChilli rolling release V 1.3.1).
- ◆ Support for local storage on SQL Database.
- ◆ Asynchronous WEB administration.
- ◆ Support for deploying virtual network interfaces,
- ◆ Connectivity over VPN and SSH Tunnels.
- ◆ Certification authority and issue of certificates on demand.
- ◆ VLAN and IP v4 Support.

FUNCTIONAL CHARACTERISTICS

- ◆ Support from various identity providers:
 - Local DB
 - ODBC
 - OPENID
 - LDAP
 - ADC (Microsoft Windows Server version 2003 a 2016)
- ◆ Dictionary system for NAS auto configuration (Network Access Server): HP, CISCO, ARUBA NETWORKS, amongst others.
- ◆ Real time system statistics and status.
- ◆ Automatic subscription updates.
- ◆ Custom system of groups and attributes that Define user properties.

- ◆ Ability to synchronize multiple instances with a master AAA server.
- ◆ Communication methods with the NAS (Network Access Server):
 - External Encryption or authentication Layer:
 - TLS
 - LEAP
 - FAST
 - TTLS
 - EAP (PEAP)
 - Internal Encryption:
 - MSCHAP V.2.0
 - MD5
 - GTC
- ◆ Variations of Captive Portals / Hotspot:
 - Standard Captive Portal: User name and Password (Local DB, ODBC, LDAP y ADC).
 - Direct Step Captive Portal.
 - Captive portal with Access Code (PIN).
 - Captive portal for Phantom users with delegated authority.
 - Captive portal with data Capture (forms).
 - Captive portal with External Sync, (Open ID: Google, Facebook, Twitter).
 - Captive portal with MAC Recognition. (RADA - RADIUS Authenticated Device Access).
 - Captive portal with app verification. (Requires a confirmation of installation of the specific application).
- ◆ Exclusion system of domain names and IP addresses through Garden in ny captive portal methods / Hotspot.

- ◆ Custom theme uploading (CSS) in any Captive portal / Hotspot method.

VALUE ADDED CHARACTERISTICS

- ◆ Integration with External applications through public API, protocol HTTPS in JSON format.
- ◆ Ability to Support embedded and synchronized applications through Python Wheels.
- ◆ On demand advertising injection through **ADFLY**
- ◆ Custom advertising splash system.
- ◆ Custom Widget system for captive portal views.

MITIGATED VULNERABILITIES

- ◆ Out of the way Attacks “Off-path”
<https://arstechnica.com/security/2016/08/linux-bug-leaves-usa-today-other-top-sites-vulnerable-to-serious-hijacking-attacks/>
- ◆ Provides users without privileges unrestricted Access to the root.
<https://arstechnica.com/security/2016/10/most-serious-linux-privilege-escalation-bug-ever-is-under-active-exploit/>
- ◆ An unprivileged user can copy, modify or destroy a hard drive.
<https://threatpost.com/cryptsetup-vulnerability-grants-root-shell-access-on-some-linux-systems/121963/>

- ◆ Unauthorized messages can be sent.
<http://thehackernews.com/2017/02/python-java-ftp-protocol-injection.html?m=1>
- ◆ Avoid Firewall defenses.
<http://thehackernews.com/2017/02/python-java-ftp-protocol-injection.html?m=1>

IDEAL PRODUCT USE:

◆ Hospitals	◆ Internet Kiosks
◆ Libraries	◆ Dorm Rooms
◆ Restaurants	◆ Churches
◆ Coffee shops	◆ Offices
◆ Condominiums	◆ Events
◆ Tourist Attractions	◆ Convention Centers
◆ Airports	◆ Hotels
◆ Stadiums	◆ Public Parks
◆ Universities	◆ Concerts
◆ College Campuses	◆ Movie Theatres
◆ Shopping Centers	◆ Night Clubs
◆ Bus Terminals	◆ Gyms
◆ Internet Service Providers (ISP's)	◆ Any other locations where Captive Portals may be utilized.

USE ORDERING INFORMATION

Ordering Information	
IT-RC236N1-K2D0T	ITRADIUS Networking 1U Rackmount Intel® C236 PCH + Kabylake platform 1 Exp. NIM, 12 GbE LANs + 1 Mgmt., 2 SFP+ Redundant PSU

EXPANSION NIM

Exp. Networking Interface Module

IT-NM1Z1-01C8B

1G Copper x8 (RJ-45, Bypass)



IT-NM1Z1-01C8

1G Copper x8 (RJ-45)



IT-NM1Z1-01F8

1G Fiber x8(SFP)



IT-NM1Z1-01H8B

1G Hybrid x8 (SFP x4 + RJ-45 x4, Bypass)



IT-NM1Z1-01H8

1G Hybrid x8 (SFP x4 + RJ-45 x4)



IT-NM1Z1-10F2

10G Fiber x2 (SFP+)



EXPANSION NIM

Exp. Networking Interface Module

IT-NM1Z1-10F4

1G Copper x8 (RJ-45, Bypass)



IT-NM1Z1-40F1

1G Copper x8 (RJ-45)



IT-NM1Z1-40F2

1G Fiber x8(SFP)



IT-NM1Z1-01C4B

1G Copper x4 (RJ-45, Bypass)



IT-NM1Z1-01C4

1G Copper x4 (RJ-45)



IT-NM1Z1-01F4

1G Fiber x4 (SFP)

