



RAX701 Series (Compact Smart NID)

RAX701 is the RAISECOM Compact Smart NID terminal and it is available for MEF CE access and PTN access in network last miles, include RAX701-GC and RAX701-FC.

RAX701-FC is fast Ethernet version, and includes 2 * 10/100M SFP interface and 1 * 10/100M Combo interface. RAX701-GC is Gigabit Ethernet version, and includes 2 * 100/1000M SFP interface and 1 * 100/1000M Combo interface.

RAX701 series is using the state-of-the-art and cost effective RAISECOM switch chipset .it fully complies with MEF CE2.0 and service SLA monitor as a network performance element. With iTN201 Series, we could supply better and low-cost business and mobile access solution.



RAX701-GC

Highlights >>

Network Security	Upgraded security with port-isolation, basic ACL, broadcast/multicast/DLF storm control, unique port loopback detection, and DHCP Client functionality
Resiliency & Protection	ITU-T G.8031 linear and ITU-T G.8032 ring protection with switching time less than 50ms IEEE 802.1ax Link Aggregation G.8131 linear protection for MPLS-TP in LSP layer and PW layer
MPLS-TP	MPLS-TP compliant to G.8113.1, providing both scalability and service security
MEF Carrier Ethernet	IEEE 802.3ah Link OAM, IEEE 802.1ag end-to-end connectivity OAM and ITU-T Y.1731 end-to-end service and performance, SLA reporting
Management (IPv4 & IPv6)	Auto provisioning based on standard DHCPv4/v6 server and FTP/TFTP server, plug & play, single IP for all the connected remote devices, end to end configuration, Auto-provisioning IPv4/IPv6 are both available, and license control, IPv6 Upload/Download (TFTP), IPv6 Telnet, IPv6 Snmp, IPv6 SSHv2
SAT	Service activation test using Y.1564 up to 8 stream, act as a generator or a reflector Service activation test using RFC2544, act as a generator or a reflector Bidirectional asymmetric bandwidth measurement based Nview management platform IPv4 & IPv6 Y.1564 SAT
QoS	Advanced QoS technology allows stream-marking based on CoS, DSCP; scheduling modes including SP, WRR, SP+WRR; WRED, flow-based mirroring/rate-limit/redirection/VLAN swapping and rewriting; automatic calculation of CBS/PBS base on CIR/PIR under CBS、PBS not configured
Smart Dimension	43.6mm (1.7in), 180mm(7 in),160mm (6.7 in)
TWAMP-Light	Standard IP SLA measurement, include generator and reflector
SLA Portal	B/S architecture, SLA TWAMP KPIs monitor(include FD, FDV, FLR, availability, bandwidth, bandwidth utilization) 1s performance KPIs CSV format file saving
E2E Provisioning	Standard MEF40 architecture, include bandwidth/performance/cos-label profile GUI, standard service modules(ELINE, ELAN, ETREE), and End-to-End configuration based on service
IEEE1588 TC	IEEE1588 TC clock for MBH application

International Headquarters

East-11, Raisecom Building, No.10 Xibeiwang East Road,
Haidian District, Beijing. 100094, China
Tel: +86 10 8288 3305
Fax: +86 10 8288 3056
www.raisecom.com

U.S.A. Headquarters

Address: 3031 N. Rocky Point Drive West Suite 100 Tampa,
Florida 33607 USA
Tel: 1-888-816-4808
Email: sales@raisecominc.com

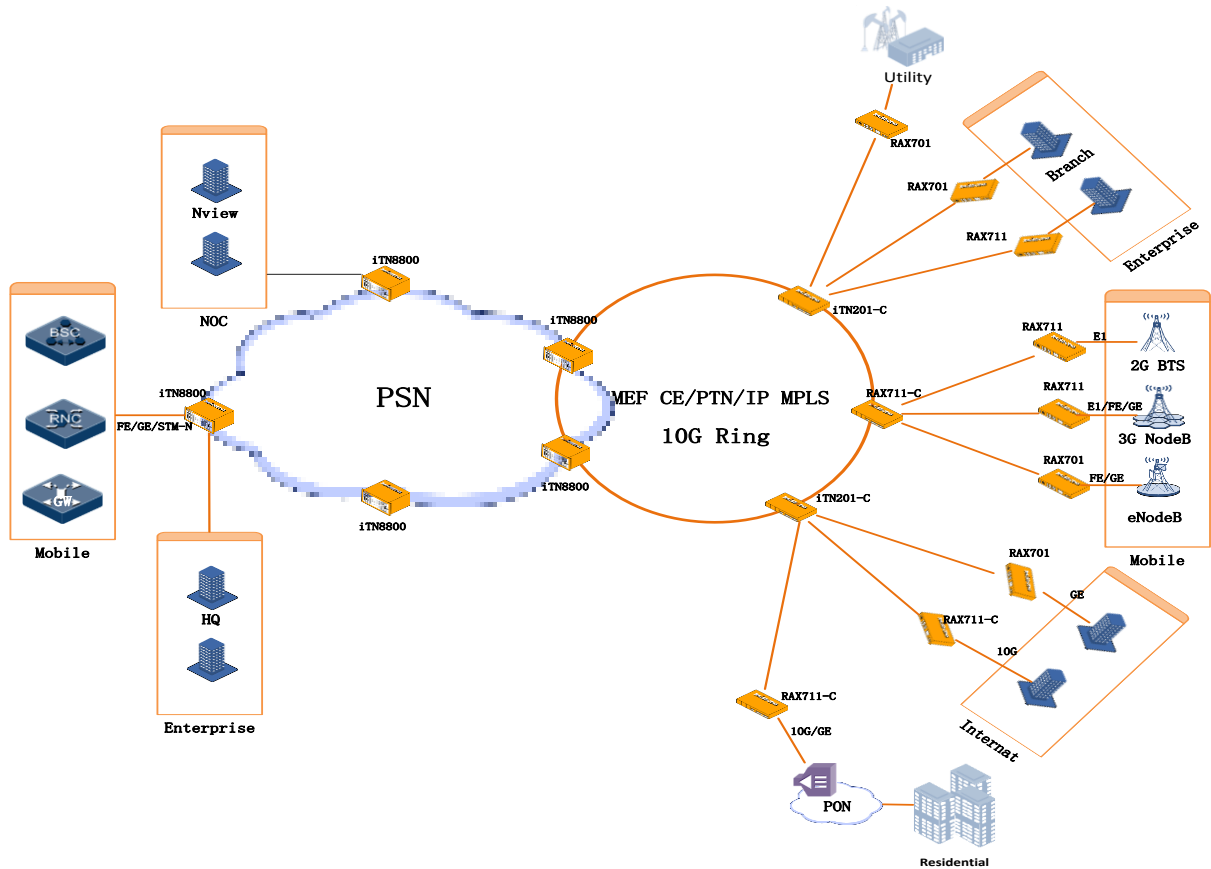
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* means in roadmap.

Application >>



Large Enterprise, Small/Medium Business services Application

RAX701 can work against iTN8000/iTN201-C/*RAX711-C for Small/Medium Business services. It reduces the carrier's CAPEX. Meanwhile, such solution can guarantee Carrier-grade end-to-end SLA (hardware-based) performance monitoring for Ethernet jitter, frame delay and packet loss. Layer2/3 loopback will help for service throughput testing and troubleshooting. RAX701 can supply the MEF CE, MPLS L2VPN service.

New Generation Mobile Backhaul Application

RAX701 is also a significant smart demarcation device for LTE Mobile Backhaul Networks with cost effective solution. Its ring/linear protection complied with G.8032/1 commits to switch over within 50ms and maximum uptime for eNodeB. CFM, Y.1731 will help to report the quality of service for each EVC and interoperate with other vendor's aggregation devices. Establish, turn-up, optimize, monitor and maintain QoS-assured Carrier Ethernet services

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Key Features >>

Switching Mode	Store and forward mode; Supports jumbo frame
Ethernet	MTU:12,288 byte Up to 8k MAC Support 4,094VLANs (C-tag), stacked VLANs (QinQ, S-tag) Layer 2 loopback on single and multiple flows Layer 2 control protocol (L2CP) handling IGMP Snooping, MLD Snooping MAC Security Protection Loop detection based on port or port and vlan or IP DHCP v4&v6 snooping MLD snooping
IP Services	DHCP client, option 17,61,66,67,82,150 IPv4&IPv6, Static management routing IPv4&IPv6 IP Address Configuration and Management IPv4&IPv6 Ping, Telnet, NDP IPv4&IPv6 Upload\Download IPv4&IPv6 Snmp, IPv6 SSHv2 IPv4&IPv6 Y.1564 IPv4&IPv6 Tacacs+\Radius IPv4&IPv6 Syslog\Trap IPv4&IPv6 NTP\SNTP IPv4&IPv6 Dying Gasp IPv4&IPv6 ND (host side) IPv4&IPv6 Loopback
Traffic Management	Service classification per port/VLAN/CoS(DSCP) /IP Precedence Support SP, WRR and SP+WRR scheduling modes, and up to 8 queues per port MEF-compliant 3-color policing with color-aware and color-blind mode Bandwidth throttling per port/VLAN/CoS(DSCP), CIR/EIR per flow automatic calculation of CBS,PBS base on CIR,PIR under CBS、PBS not configured
Security	ACL based on VLAN, CoS, MAC, EtherType, IPv4, IPv6, or user-define RADIUS, TACACS+ Storm control (broadcast, multicast, DLF)
Reliability	Link aggregation group (LAG) Interface backup ITU-T G.8031 Ethernet link protection switching (ELPS) and G.8032 Ethernet ring protection switching (ERPS) with the automatic protection switchover

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www.raisecom.com

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time less than 50ms
 Port/VLAN-based Ethernet local loop detection
 Fault propagation

Ethernet OAM

- IEEE 802.3ah EFM-OAM link management
- IEEE 802.1ag connectivity fault management (CFM) with 3.3ms CCM resolution
- ITU-T Y.1731 performance monitoring (PM)
- Hardware-based frame delay (FD) measurement
- Y.1564 include bidirectional mode measurement
- TWAMP-Light (based on hardware ICMP ECHO Relay Timestamp)
- Hardware-based SLA KPIs per port or EVC, which include throughput, delay, jitter, packet loss and availability
- Dying gasp message in case of power failure

Auto -Provisioning

- Auto-establishment of management tunnels across L2/L3 networks
- Easy generation and distribution of massive configuration files using GUI-based toolkit

System Management

- Remote management via SNMP v1/v2/v3, Telnet and SSH v1/v2
- Local management via console interface
- MEF 36 compliant MIB
- KeepAlive, RMON, LLDP, Syslog
- Port/VLAN/CoS-based statistics
- SFP digital diagnostic management (DDM)
- temperature and CPU monitoring
- Voltage and temperature monitoring
- Dual system

Fault Propagation

- From line to client interface fault propagation (user configurable);
- Client interface fault propagation(MEF CE, MPLS TP network)

MPLS-TP

- MPLS-TP OAM and APS MPLS L2VPN VPLS

IEEE 1588

- IEEE1588 TC

Specifications >>

Performance	Switching fabric: 6Gbps;
Physical Interface	Management port: 1 console (USB); 1 out band SNMP(RJ45) Client interfaces:1 x FE/GE combo Network interfaces:2 x FE/GE SFP
Power Specs	100 - 240V AC, -36 - -72V DC WP Full load: ≤12W
User Conditions	Operating temperature: -20~60°C;

Compliances >>

Standards & protocols	IEEE802.3,802.3u IEEE802.3ad Link Aggregation IEEE802.1p,802.1Q VLAN IEEE802.1ad QinQ IEEE802.3ah OAM IEEE802.1ag CFM ITU-T Y.1731 Services OAM ITU-T G.8031 ELPS ITU-T G.8032 ERPS
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Dimensions

Storage temperature: -25~70°C ;
Humidity: 10~90% non-condensing
180(W)mm x 160(D)mm x 43.6(H)mm

Weigh

≤ 2.5Kg

SNMPv1/v2c/v3
CE certified ,UL RoHS compliance
EMI Class A
MEF6,8,9,10,11,13,14,16,17,20,31,36
MEF CE2.0 certification

Ordering Information >>

RAX701-GC-X

1GE combo and 2GE SFP interface, X = power - AC or DC or WP

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