



## 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-FC



RAX701-GC

## Highlights >>

<b>Network Security</b>	Upgraded security with port-isolation, basic ACL, broadcast/multicast/DLF storm control, unique port loopback detection, and DHCP Client functionality
<b>Resiliency &amp; Protection</b>	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
<b>MPLS-TP</b>	MPLS-TP compliant to G.8113.1, providing both scalability and service security
<b>Ethernet OAM</b>	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
<b>Management</b>	Zero-Provisioning, Device management and VPN service management in Nview platform with all RAISECOM devices
<b>SAT</b>	Service activation test using Y.1564 up to 8 stream, act as a generator or a reflector
<b>QoS</b>	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
<b>Smart Dimension</b>	43.6mm (1.7in), 180mm(7 in),160mm (6.7 in)
<b>*TWAMP-Light</b>	Standard IP SLA measurement, include generator and reflector
<b>*SLA Portal</b>	B/S architecture, SLA KPIs monitor(include FD, FDV, FLR, availability, bandwidth, bandwidth utilization)
<b>*EZE Provisioning</b>	Standard MEF40 architecture, include bandwidth/performance/coslable profile GUI, standard service modules(ELINE, ELAN, ETREE), and End-to-End configuration based on service
<b>*IEEE1588 TC</b>	IEEE1588 TC clock for MBH application

\* means in roadmap.

## Application >>

### International Headquarters

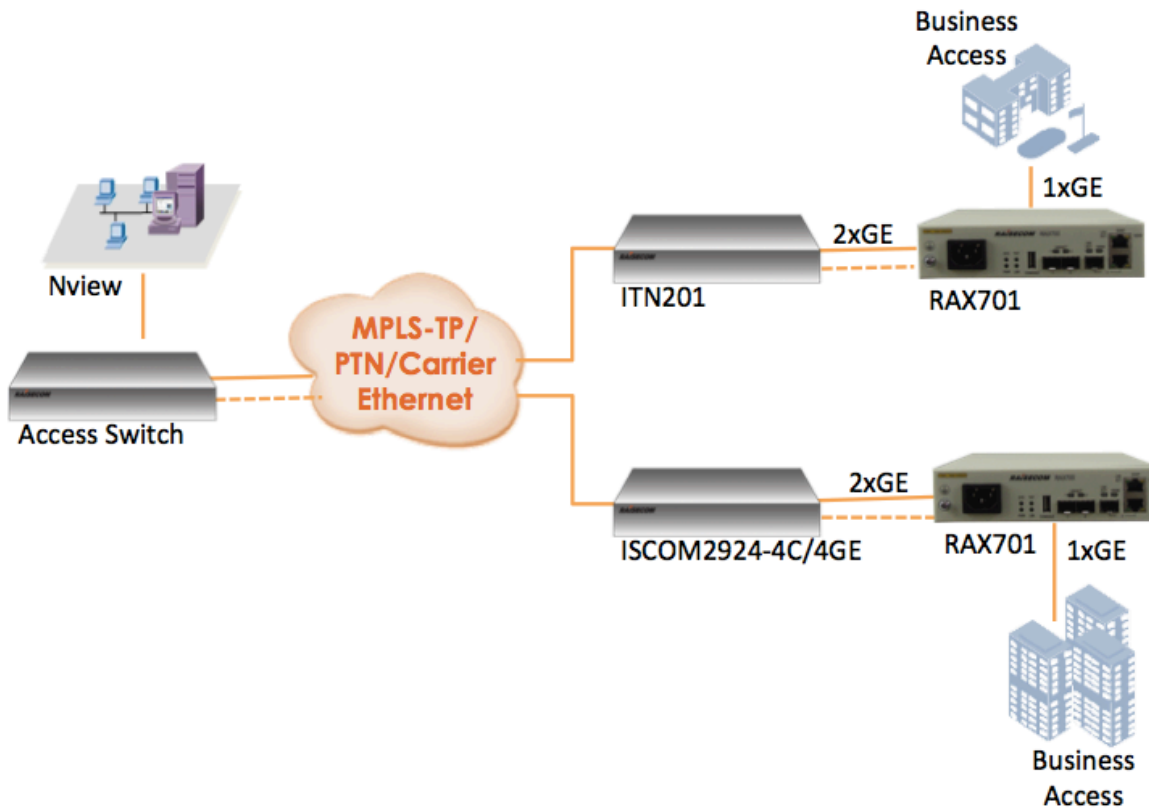
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### Large Enterprise, Small/Medium Business services Application

RAX701 can work with iTN8000/iTN201 device for Small/Medium Business services. It reduces the carrier's CAPEX, while the solution can guarantee Carrier-grade end-to-end SLA (hardware-based) performance monitoring for Ethernet jitter, frame delay and packet loss. Layer2/3 loopback can be utilized 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 >>

<b>Switching Mode</b>	Store and forward mode; Supports jumbo frame
<b>Ethernet</b>	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
<b>IP Services</b>	DHCP client, option 17,61,66,67,150 IPv4, Static management routing
<b>Traffic Management</b>	Service classification per port/VLAN/CoS(DSCP) 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
<b>Security</b>	ACL based on VLAN, CoS, MAC, EtherType, IPv4, IPv6, or user-define RADIUS, TACACS+ Storm control (broadcast, multicast, DLF)
<b>Reliability</b>	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 time less than 50ms Port/VLAN-based Ethernet local loop detection Fault propagation
<b>Ethernet OAM</b>	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 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
<b>Zero-Provisioning</b>	Auto-establishment of management tunnels across L2/L3 networks Easy generation and distribution of massive configuration files using GUI-based toolkit
<b>System Management</b>	Remote management via SNMP v1/v2/v3, Telnet and SSH v1/v2 Local management via console interface MEF 36 compliant MIB

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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

**MPLS-TP** MPLS-TP OAM and APS MPLS L2VPN VPLS

## Specifications >>

<b>Performance</b>	Switching fabric: 6Gbps;
<b>Physical Interface</b>	Management port: 1 console (USB); 1 out band SNMP(RJ45) Client interfaces:1 x FE/GE combo Network interfaces:2 x FE/GE SFP
<b>Power Specs</b>	100 - 240V AC, -36 - -72V DC WP Full load: ≤12W
<b>User Conditions</b>	Operating temperature: -20~60°C; Storage temperature: -25~70°C ; Humidity: 10~90% non-condensing
<b>Dimensions</b>	180(W)mm x 160(D)mm x 43.6(H)mm
<b>Weigh</b>	≤ 2.5Kg

## Compliances >>

<b>Standards &amp; protocols</b>	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 SNMPv1/v2c/v3 CE certified ,UL RoHS compliance EMI Class A MEF6,8,9,10,11,13,14,16,17,20,31,36 CE2.0- compliance
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## Ordering Information >>

<b>RAX701-FC-X</b>	1FE combo and 2FE SFP interface, X = power - AC or DC or WP
<b>RAX701-GC-X</b>	1GE combo and 2GE SFP interface, X = power - AC or DC or WP

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