

Gazelle R102i

Managed Industrial-grade Ethernet Router

Gazelle R102i is a managed industrial-grade Ethernet Router manufactured by Raisecom, which serves as ideal solution for outdoor networking deployment in financial industry, environmental protection, monitoring, transportation, military, utility and residential areas. Gazelle R102i allows up to 4 Ethernet-based devices to simultaneously use a single cellular data account for primary or backup network connectivity to remote sites and devices. By integrating routers, switches, firewalls, VPN, and 3G in one single device, Gazelle R102i provides the high- performance required for concurrent services, including firewall, 3G uplink , encryption for VPNs, cellular Data for mobility, and quality-of-service (QoS) features for optimizing voice and video applications at broadband speeds. The Gazelle R102i can be placed on a desktop or wall-mounted, whereas the Gazelle R102i has an IA design and can be attached to a DIN-rail. Both products use 9 to 48 VDC power inputs with a screw-on design for greater reliability.



Gazelle R102i

Highlights

Sophisticated Network

Networks are secured with port-isolation within individual VLAN, MAC binding, Qos, DHCP Client

Security Assurance

Integrated Network

Support Routing, NAT/PAT,NTP/NAPT,VRRP,DMZ, DNS/DDNS, PPPoE;

Universal tri-band UMTS/HSDPA 850/1900/2100 MHz;

Quad-band GSM 850/900/1800/1900 MHz, WCDMA 850/900/1900/2100 MHz,CDMA2000 450 /800/1900/2100 mhz.

Advanced Security

3G uplink for Primary or Backup;

Support L2TP VPN, Firewall, Anti-DoS, Anti-ARP, Anti-Scanning;

Enhanced Industrial-grade

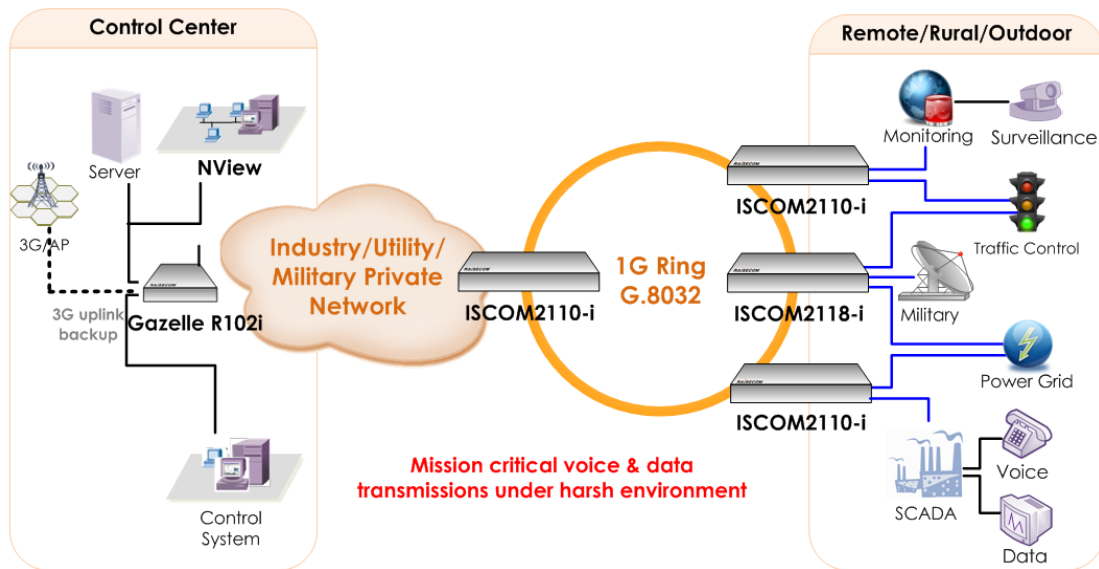
Hardware

Devices are designed and manufactured to adapt to deployments in harsh environments: 1) performances and reliabilities are guaranteed under extreme thermal conditions from -20°C to 70°C; 2) products are also featured to be dust-proof (IP40 level).

Easy Management

Management via Web management, SNMP, Telnet, CLI, SSH.

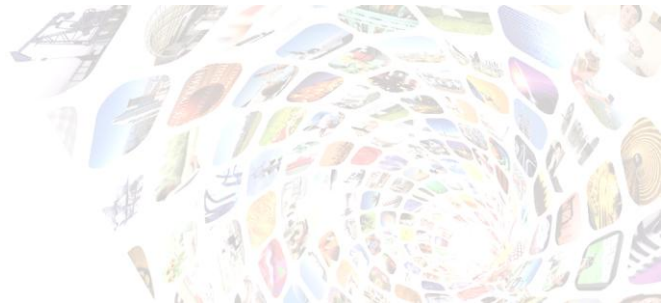
Typical Application



Features

General

Switching Mode	Store and forward mode;
Bandwidth Profile	Rate limit:1,00,000Kbps; Egress per port; Rate limit based on packet type/queue; Increments: 64Kbps (64K-1M), 1Mbps (1-100M), 10Mbps (100-1000M);
VLAN	IEEE 802.1Q VLAN; 16 active VLANs; Port PVID Overviews;
MAC Address Table	IEEE802.1Q 8K MAC address; Add/remove MAC address; View MAC address statistic; Search MAC address; Aging time:15-3,825s; MAC table limit:1-255;
Flow control	IEEE 802.3x in full duplex mode; Back pressure in half duplex mode; Port-based configurations
Port Backup	Support
Transparent Reply	BPDU;



QOS

- CoS/DSCP to queue mapping;
- Port priority override;
- TRUST CoS/DSCP priority;
- Global queue scheduling;
- 4 queues per port;

Advanced

IP Features

- Routing capability - Static & Dynamic routing (RIPv1/v2), OSPF;
- Generic routing encapsulation (GRE);
- Network Address Translation (NAT)/NAPT;
- IGMP Proxy
- Dynamic Host Configuration Protocol (DHCP) server, relay, and client;
- Domain Name System (DNS) Client, Proxy;
- Dynamic Domain Name System (DDNS);
- Access control lists (ACLs);
- Supports load balancing;

Multi-Protocol Supported Support ICMP, IP, TCP, UDP, DHCP, PPP, ARP, Telnet, DNS, SSH, VRRP, HTTP, HTTP;

VRRP Hot backup function: when the Primary link is interrupted, Router can automatically switch to the backup line;

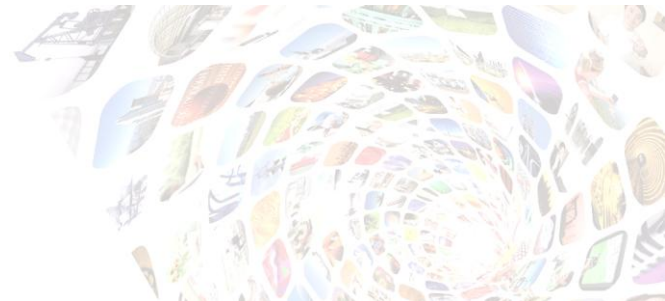
WAN Support WAN port settings, wireless and wired network backup;

Security Features

- Layer 2 Tunneling Protocol (L2TP);
- Maximum of up to 100 IPsec VPN Tunnels;
- Authentication (SHA-1, MD5);
- Manual Key, IKE, PKI (X.509);
- Stateful inspection transparent firewall;
- Dynamic and static port security;
- ACLs;
- Anti-DoS;
- Anti-ARP;
- Anti-Scanning;
- RADIUS;
- Binding of MAC address & port;

3G

- Universal tri-band UMTS/HSDPA 850/1900/2100 MHz;
- Quad-band GSM 850/900/1800/1900 MHz;
- WCDMA 850/900/1900/2100 MHz;
- CDMA2000 450 /800/1900/2100 mhz;
- 3G function Enable and Disable;
- primary or backup network connectivity uplink;



selectable network mode: Automatic/2G only/3G only;
PIN code management;
3G flow management;
3G link quality detection;
Supports flow trigger dial-up and automatic dial-up;
Advanced configuration function: DNS/MTU/NAT configuration;
System message management: working status and equipment's information displayable;
Support CHAP/PAP authentication modes;

Built-in Functions

Real-time clock: provide the local precise time for the system;
Watchdog: ensure system never crash;
Signal strength indicator: signal strength real-time instructions, divided into 3 levels;
The running status indicator: POWER, SYS, 3G network, serial port status indicators;

Maintenance

Debug information output;
PING (Packet Internet Groper);
Telnet Client;

Scheduling

System task scheduling

Software Upgrade

Web/Xmodem/FTP upgrade in BOOTROM FTP/TFTP

System Management

CLI/ARP/Telnet/Console/SSH/SNMP/Web; management;
RAISECOM NMS;
System log;
Hierarchical alarms;
Link alarm per port;
Keepalive report;
Fault pass through;

Time Management

Time zone; Time modification; DST;

Error Tolerance&

System error report;

Redundancy

Industrial-grade

Extended Temp Range

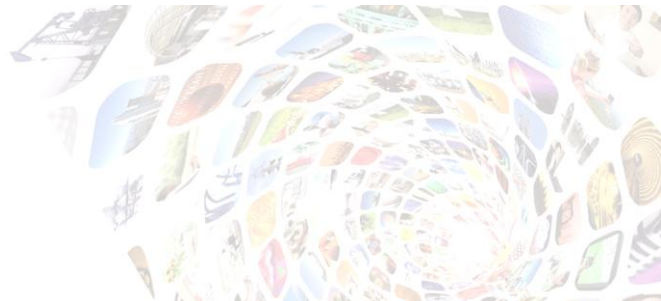
Operating temp:-20~70°C

Dust-proof

IP40 level dust prevention

Lingting-proof

IEC61000-4-2 (Electrostatic discharge ESD): ±8kV Contact Discharge



±15kV air discharge

IEC61000-4-3 (Electromagnetic radiation RS): 20V/m (80~1000MHz)

IEC61000-4-4 (EFT): Power line:±4kV Data line:±2kV

IEC61000-4-5 (Surge): Power line: CM±2kV/DM±1kV Data line:±4kV

IEC61000-4-6 (Conducted RF): 10V (150kHz~80MHz)

IEC61000-4-8 (Frequency Magnetic Field): 100A/m sustained
1000A/m, 1s to 3s

IEC61000-4-9 (PMF): 300A/m

IEC61000-4-10 (Damped Oscillation): 30A/m

IEC61000-4-12/18 (Sasser): CM 2.5kV; DM 1kV

IEC61000-4-16 (Common-Mode Conducted): 30V sustained 300V, 1s

IEC 60870-2-2(shock): Cm

IEC 60721-3-3(shock): Cm

IEC 60721-4-3(shock): Cm

IEC 60870-2-2(Vibration): Cm

IEC 60721-3-3(Vibration): Cm

IEC 60721-4-3(Vibration): Cm

IEEE 1613(Vibration):V.S.3

IEC 60870-2-2(Free fall): Cm

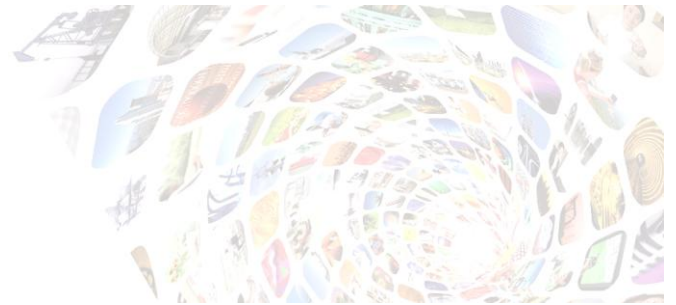
IEC 60721-3-3(Free fall): Cm

IEC 60721-4-3(Free fall): Cm

IEC 60068-2-31(Free fall): Cm

Specifications

Indicators	Power Supply (flashing); System (flashing); 10/100BASE-T: SPEED& LINK/ACT indicators; 3G Status and 3G Signal intensity indicators; TXD,RXD,MODE Serial indicators;	Power Specs	DC : 9V~48V ≤10W (full load)
Port Specs	4x10/100BASE-T, Automatic MDI/MDIX crossover, Auto-negotiation and speed	User Conditions	Storage temp: -40~85°C Operating temp: -20~70°C 3G module:-20~70°C Humidity: 5~95% non-condensing Atmos:86KPa-106KPa
		Installation	Rail/wall mountable
		Dimensions	135(L) x 105(W) x 55(H) mm3
		Weight	0.76kg



auto-sensing half-full duplex,
Switch-mode:
LAN,WAN-DMZ-LAN,WAN-LAN ;
1xRS232/485/422 serial port (DB9
male);
1x RST button;
1Xwireless 3G SMA interface:3G
wireless Antenna;
Management port: 1 console (Type B
mini USB);

Compliances

Standards	
	IEEE802.3-2002
	IEEE802.3 10BaseT
	IEEE802.3 100BaseT
	IEC61000-4-2
	IEC61000-4-3
	IEC61000-4-4
	IEC61000-4-5
	IEC61000-4-6
	IEC61000-4-8
	IEC61000-4-9
	IEC61000-4-10
	IEC 60870-2-2
	IEC 60870-2-2
	IEC 60721-3-3
	IEC 60721-4-3
	IEEE 1613
	IEC 60068-2-31

IEEE 802.1x Security
IEEE 802.1p QoS Prioritization
IEEE 802.3x Flow Control
Fault Management
Static Routing
IGMPv1/v2/v3 Multicast
SNMPv1/v2/v3

Ordering Information



Gazelle R102i-W	4 x 10/100BASE-TX, 1xRS232/485/422 serial port(DB9),built-in 3 G module with SMA interface external antenna; WCDMA(HSPA) 3G system uplink; 9-48VDC power supply;
Gazelle R102i-C	4 x 10/100BASE-TX, 1xRS232/485/422 serial port(DB9),built-in 3 G module with SMA interface external antenna; CDMA2000/EVDO REV.A 3G system uplink; 9-48VDC power supply;
Gazelle R102i-T	4 x 10/100BASE-TX, 1xRS232/485/422 serial port(DB9),built-in 3 G module with SMA interface external antenna; TD-SCDMA(HSPA) 3G system uplink; 9-48VDC power supply;