

# Preconfigured Audio/Video Bridging System



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## RSB-K24C

### Gateway Security Appliance (Router) with 24 Port VLAN Configurable switch and Rack Mount Bracket

Computer networks are increasingly sharing the same physical wire with audio/video and control nets, thanks to the availability of affordable IP networking gear. But, unlike computer data, which can tolerate a certain level of unpredictable latency, video streaming, audio streaming, and control systems cannot. These sophisticated networks require highly stable transmission at the level of robustness of an enterprise network, to ensure that packets carrying audio and video streams arrive in time, and that IP-based controls won't lose critical command packets.

The Pakedge Audio-Video Bridging (AVB) product line solves these issues with minimal configuration required. The Pakedge AVB products pre-configure the security appliance (router) and switch, effectively dividing the network into four separate subnets (VLANs) to manage traffic, broadcast, and priority for all devices, based on color-coded ports. The simplicity of this solution enables custom installers to focus on quick, quality installation, and avoid the complexity of an enterprise-level configuration

#### Key Benefits:

- Preconfigured Enterprise-Class VLAN "out-of-the-box" solution at a fraction of the Cost
- Color Coded Ports for AV devices, Controls and Computers for simple fast installations
- Integrated Pakedge Quality-of-Service, QoS to ensure jitter-free audio video streaming
- Stackable with additional Pakedge switches for the largest of systems
- AV Rack mountable- Clean Face, Fanless and cables from the back
- Flexible with unlimited customizations with an Advanced Setting login (additional support offered by Fortinet if needed)
- Internet Gateway Security with annual Antivirus/Antispam and Intrusion Prevention Service (IPS) subscriptions
- Preconfigured Secure Guest Network
- 24 Port Managed Gigabit Switch with Configurable VLAN Port Association

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## Package Contents:

**RT-50V** - Audio-Video Bridging Router

**SW24-GBVC** - Audio-Video Bridging Switch

**VLAN Port Configuration Overlay Labels**

**RMB-FG** - Rackmount Bracket

**Power supply AC/DC** (for RT-50V)

**2 x Power Cables** (US, EUR, UK, AUS/NZ, IT or IN/SA)

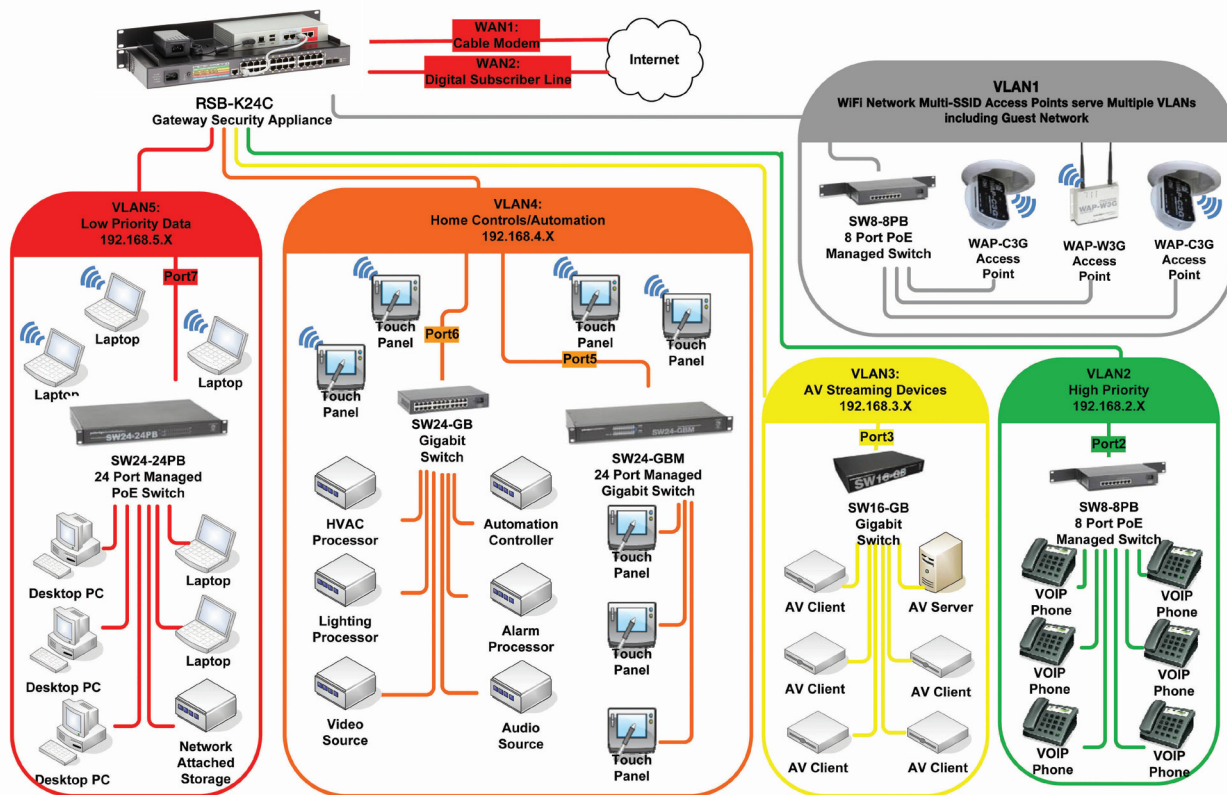
**Console Serial Cable**

**Gray CAT5E Cable** (Switch port 1 to Router Ports 1, 2 or 3)

**Red CAT5E Cable** (WAN 1 Port to Internet Connection)

**User Manual**

# RSB-K24C Suggested Network Configuration



## Product Overview

### RT-50V – Audio-Video Bridging Router

- Preconfigured to separate network into 4 separate sub-nets (VLANs) to prevent broadcast issues between sub-systems such as VOIP phones, video streaming, home automation controls, and computer data
- Robust, reliable, high performance, versatile, enterprise-grade security appliance based on Application Specific Integrated Circuit (ASIC) design
- Vendor advanced support subscription available with antivirus, anti-spam, and Intrusion Prevention Service
- Dual WAN interfaces supports redundancy
- 3 Internal Switch Ports
- Unrestricted number of users
- Up to 20 VPN tunnels
- Preconfigured Secure Guest Network



### SW24-GBVC – Audio-Video Bridging Switch

- 24 Configurable 10/100/1000Mbps Gigabit Ethernet VLAN ports
- Overlay Labels to Re-associate ports to a VLAN
- Two SFP port for optional fiber connections
- QoS also color coded for priority to Internet
- Store-and-forward forwarding scheme
- Error packet filtering
- FCC Class A, CE, VCCI. Meets RoHS



### RMB-FG – Router Rack-mount Bracket

- Simple installation, all mounting hardware included
- Fits the router and power supply for the RT-50
- Fits standard 19" 1U AV rack
- Clean front face with cables that exit from the back

### RT-50V:

#### HARDWARE SPECIFICATIONS

LAN / WAN / DMZ interfaces 3 / 2 / NA

#### NETWORKING FEATURES

DHCP/PPPoE Client/Server

1:1 NAT

Static/Dynamic Routing\*

Traffic shaping

Radius, LDAP, Active Dir

Local DB

User group support

#### SYSTEM PERFORMANCE

Firewall/VPN 3DES 50/48 Mbps

Concurrent sessions 25

New sessions/second 2

Site-site IPSec VPN tunnels 20

Antivirus throughput 19

#### SECURITY FEATURES

Gateway antivirus protection

(virus, spyware, Trojan)

Integrated IPS (signature & anomaly)

Integrated URL filtering

Integrated spam filtering

VPN (IPSec, SSL, PPTP)

VOIP Security (H323, SIP)

#### MECHANICAL

Dimensions (dimensions are approximate)

Router: 8.5" x 6" x 1.5", L x W x H

Power Supply: 4.5" x 2.5" x 1.5" L x W x H

Optional: Rackmount Bracket –

19" x 8" x 1.75" L x W x H

#### OPTIONAL SUBSCRIPTION SERVICES

Automatic and scheduled

Antivirus and IPS updates

URL categorizing

Anti-spam RBL/SURBL

#### CERTIFICATIONS

ICSA: Firewall, IPSec, SSL, Antivirus, IPS

#### COMPLIANCE

FCC Class A, Part 15, UL/CUL, C Tick, CE,

VCCI

#### POWER REQUIREMENTS

120/240 VAC 50/60 Hz

#### ENVIRONMENTAL

Temperature Range:

Operating: -10°C to 50°C (14°F to 132°F)

Storage: -40°C to 70°C (-40°F to 158°F)

Humidity: 5% ~ 95% typical

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### SW24-GBVC

#### NETWORK STANDARDS COMPATIBILITY

IEEE 802.3i 10BASE-T

IEEE 802.3u 100BASE-TX, 100BASE-FX

IEEE 802.3ab 1000BASE-T

IEEE 802.3z 1000BASE-X

IEEE 802.3x flow control

#### PHYSICAL INTERFACE

RJ45 Connectors for 10BASE-T, 100BASE-TX, and

1000BASE T (Auto Uplink™ on all ports): 24 ports

Small form-factor pluggable (SFP) modules for fiber

Gigabit Ethernet interfaces (2 slots)

RS232 console port – RJ45 8-pin plug to 9-hole DB9 plug

#### LEDs

Blue LED's for Speed, Link, Activity and Power

#### PHYSICAL SPECIFICATIONS

Dimensions (w x d x h):

440 x 205 x 43 mm (17.3 x 8.1 x 1.6 in)

Weight: 2.27 kg (5.0 lbs)

#### ENVIRONMENTAL SPECIFICATIONS

Operating temperature: 0° to 55° C (32° to 131°F)

Storage temperature: 20° to 70° C (4° to 158°F)

Operating humidity: 90% maximum relative humidity,  
non-condensing

Storage humidity: 95% maximum relative humidity, non-  
condensing

#### ELECTRICAL SPECIFICATIONS

Power consumption: 38.5W maximum

#### ELECTROMAGNETIC EMISSIONS

CE mark

EN 55022 Class A (Emissions)

EN 55024 (Immunity)

FCC Part 15 Class A

VCCI Class A

C-Tick

#### LAYER 2 SERVICES

IEEE 802.1Q static VLAN (1024)

IEEE 802.1p Class of Service (CoS)

IEEE 802.1D Spanning Tree Protocol

IEEE 802.1v Protocol VLAN, Port VLAN, and MAC-based  
VLAN

IP subnet-based VLAN

IEEE 802.1 Q-in-Q

IEEE 802.3ad Link Aggregation (LACP)

IEEE 802.1x port access authentication

IGMP v1, v2, v3 snooping support

Static multicast filtering

Ingress rate limit in 1 Kbps increments

Weighted round robin (WRR) queue technology

MLD v1, v2 snooping

#### SECURITY

Access Control Lists (ACL)

MAC, IP, TCP ACLs: L2/L3/L4

Network storm protection including broadcast multicast  
and unicast traffic

MAC filtering

Private group CoS

IEEE 802.1x port access authentication

Port security

DoS

Dynamic ARP inspection

RADIUS (RFC 2865)

RADIUS accounting (RFC 2866)

TACACS+

#### SWITCH MANAGEMENT SPECIFICATIONS

SNMP v1, v2c, v3 with multiple IP addresses

RFC 1157, 1902-1907

RFC 768 UDP

UDP relay

RFC 854-859 telnet

RFC 951 BOOTP

RFC 1213 MIB II

RFC 1757 RMON groups 1, 2, 3, and 9

RFC 1215 SNMP Traps

RFC 1493 Bridge MIB

RFC 1643 Ethernet Interface MIB

RFC 1534 DHCP and BOOTP interoperation

RFC 2131, 2132 DHCP, and BOOTP

Private Enterprise MIB

Port mirroring support (many-to-one)

DHCP/BOOTP relay-primary and backup

(RFC 3046, option 82)

RFC 2030 Simple Network Time Protocol (SNTP)

DHCP server

DHCP L2 relay

IEEE 802.1AB Link Layer Discovery Protocol (LLDP)

ANSI/TIA-1057 LLDP Media Endpoint Discovery

(LLDP-MED)

DHCP relay (with backup servers)

GARP/GVRP/GMRP

SYSLOG

TFTP, SFTP, HTTP, SCP, or local USB flash firmware  
upgrade

Port description

RFC 1519 CIDR

Proxy ARP

DNS lookup

#### PERFORMANCE SPECIFICATIONS

Forwarding modes: Store-and-forward

System memory: 128 MB

Packet buffer memory: 1.5 MB buffer memory

Code storage (flash): 32 MB

Address database size: 8 K media access control  
(MAC) addresses

Number of VLANs: 1024 (1-4093)

Number of trunks: 64

Number of queues: 8

Number of static route: 32

Number of routed VLANs: 32

Number of ARP entries: 480

Number of ACL rules: 224

Jumbo frame support: up to 9 K packet size

#### USER INTERFACES

Command Line Interface (CLI) via console port

Web-based management via embedded HTTP

server protected with Secure Sockets Layer

Telnet remote login

#### MAINTENANCE

Supports debugging output

Supports ping (Packet Internet Groper)

#### QoS

Supports 802.1p/DSCP priority

Supports strict priority (SP), weighted round of tour  
scheduling (WRR)

Supports 4 priority queues

Supports port-based bandwidth control

#### STATISTICS

Supports the port send and receive message of  
statistics

#### SECURITY FEATURES

Supports user password protection