



# The Vega 4x4

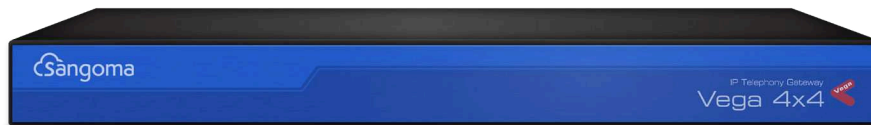
## The Most Flexible Analog VoIP Gateway In Its Class

### Datasheet

Take advantage of VoIP technology by connecting legacy telephony equipment, such as private wire connections and other analog devices seamlessly to IP endpoints. Beneficial within the financial sector where Capital Market Traders still require human interaction with customers, a Sangoma Vega 4x4 gateway connects the two technologies.

As technology moves forward with VoIP, some legacy infrastructures are left behind. The Vega 4x4 gateway handles a range of legacy telephony equipment including PBXs, analog private wires, audio sources and PSTN to SIP networks. The Vega 4x4 supports up to 16 analog ports on 16 physical interfaces. The chassis is designed to be built out by the systems integrator or OEM to individual requirements. It supports 4 Analog Interfaces:

- FXO
- Audio
- FXS
- GenGen



#### ✓ Modular Design Supports Up to 16 Calls

#### ✓ Voice, FAX and Modem Support

#### ✓ Local Survivability

Enables continuity of service during WAN/SIP outages and may be configured to operate in a number of ways:

- Standalone proxy
- IP device survivability
- IP device call routing
- SIP to SIP call routing
- Emergency call routing

#### ✓ Supports FXO, FXS, Audio & GenGen

#### ✓ Ideal for Private Wire or Point-to-point Applications

#### ✓ Open, Non-Proprietary Interfaces

(Vega 4x4 Supports SIP and T.38 Fax)

Four module slots are available for different module types, each with 4 ports, and can be populated in any configuration. The Vega 4x4 gateway has proven interoperability with a wide range of existing telecom and VoIP equipment.

The module types available are:

- FXO for connection to PBX extension lines or the PSTN
- FXS for connection to analog telephones or trunk ports
- Audio for connecting two-way audio sources
- SIP to SIP call routing
- GenGen for connecting GenGen or magneto type lines

#### ✓ Flexible Call Routing for Fallback/Least Cost Routing

#### ✓ Transparent Interop Between Analog & Digital Private Wires

#### ✓ Optional Support & Software Maintenance Plans

#### ✓ Use Cases/Applications

- Connect dealerboards to legacy analog private wire connections
- Bring audio sources, such as TV, into the SIP network
- Connect worldwide private wires regardless of what's at the other end
- Provide standards-based SIP private wires
- Connect multiple analog sources to SIP infrastructure

# Technical Specifications

## Interfaces

### VoIP Interface

- ⦿ SIP
- ⦿ Fax support — up to G3 FAX, using T.38
- ⦿ Modem support — up to V.90, using G.711
- ⦿ Up to 16 VoIP Channels
- ⦿ Audio Codecs:
  - G.711 (a-law/u-law) (64 kbps)
  - G.723.1 (5.3/6.4 kbps)
  - G.729a (8kbps)
  - G.726
  - T.38

### Telephony Interface

- ⦿ FXS
  - Up to 16 ports presented on RJ45
  - 600R, 900R or CTR-21 line impedance
- ⦿ FXO
  - Up to 16 ports presented on RJ45
  - 600R, 900R or CTR-21 line impedance
- ⦿ GenGen
  - Up to 16 ports presented on RJ45
  - 75V RMS ringing
- ⦿ Audio
  - Up to 16 ports presented on RJ45
  - Unbalanced audio input, receive (mic) and transmit (speaker)

### LAN Interface

- ⦿ 2 RJ-45s, 1000BaseT/100 BaseTX/10 BaseT, full/half duplex

## Features

### Identification

- ⦿ Caller ID presentation on (FXS/FXO only)
- ⦿ Caller ID screening allows connections to be accepted only from selected call sources
  - \*FXS/FXO only
- ⦿ SIP registration and digest authentication

### Operations, Maintenance & Billing

- ⦿ HTTP(S) web server
- ⦿ RADIUS accounting & login
- ⦿ Remote firmware upgrade
  - Auto code upgrade
  - Auto configuration upgrade

- ⦿ SNMP V1, V2 & V3

- ⦿ TR-069

- ⦿ Syslog

- ⦿ TFTP/FTP support

- ⦿ VT100 — RS232/Telnet/SSH

### Routing & Numbering

- ⦿ Direct Dialing In (DDI/DID)
- ⦿ SIP registration to multiple proxies
- ⦿ Dial planner — sophisticated call routing capabilities, standalone or gatekeeper/proxy integration

### Security & Encryption \*Optional

- ⦿ \*Media — SRTP/ \*SIP — TLS
- ⦿ Management — HTTPS, SSH Telnet
- ⦿ Configurable user login passwords
- ⦿ Local Survivability

### Call Quality

- ⦿ Adaptive jitter removal
- ⦿ Comfort noise generation
- ⦿ Silence suppression
- ⦿ 802.1p/Q VLAN tagging
- ⦿ Differentiated Services (DiffServ)
- ⦿ Type of Service (ToS)
- ⦿ QoS statistics reporting
- ⦿ Echo cancellation (G.168 up to 128ms tail)

## Compliance

- ⦿ EMC (CLASS A)
  - EN 55032:2012
  - EN 55024:2010
  - FCC Part 15
  - ICES-003
- ⦿ Safety
  - EN 62368-1:2014
  - IEC 62368-1:2014
  - AS/NZS 62368.1:2018
- ⦿ Telecom
  - TBR21
  - FCC Part 68
  - CS-03 — Part 1

## Environmental

- ⦿ 0°..40°C
- ⦿ 0%..90% humidity (non-condensing)

## FXS Line Length

- ⦿ 8 km at 1 REN, depending on environment

## LED Indicators

- ⦿ LAN: Speed/Activity

## Dimensions

- ⦿ 1U: 440mm (W) x 250mm (D) x 45mm (H)
- ⦿ Weight: 2.7kgs (6lbs)
- ⦿ Rackmount brackets supplied: 483mm

## Power Supply

- ⦿ Internal
- ⦿ 100–240 VAC, 1–0.5A (50/60 Hz)