

i series Trader Voice Solutions

iG214 Analogue 4-Wire Hoot & Private Line Gateway

Features Include

- Protocol Conversion from Speakerbus Real Time Protocol Multicast Local Area Network (LAN) to UDP Unicast Wide Area Network (WAN)
- 2-Wire or 4-Wire E&M, 2-Wire FXO / FXS or 4-Wire Analogue Interface Support
- Backwards Compatibility with Applications that Support 2-Wire or 4-Wire Analogue Circuits
- 2-Wire Voice Recorder Output
- Comprehensive Set of Embedded Security Options
- 4 Remote Analogue Channel Bridges, Eliminating the Need for a Separate Conference Bridge
- Device Management via an Integral HTTP Server or Speakerbus' Browser-based Centralised Management System



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Overview

The *i* series is a suite of Voice over Internet Protocol (VoIP) applications that increases the resilience, flexibility and power of trading room voice solutions, through a "Plug and Trade" approach to trader voice technology. Based on dedicated network hardware and Speakerbus' Real Time Protocol (SbRTP) packet technology, the *i* series product family maintains traditional voice quality and scalability standards while offering an evolutionary migration to a pure VoIP environment.

At the heart of the *i* series IP solutions suite is Speakerbus' enhanced SbRTP technology, which delivers exceptional voice quality across the Local Area Network (LAN). The iG214 converts a range of Analogue interfaces such as 2-wire or 4-wire E&M, 2-wire FXO / FXS or 4-wire Analogue circuits to SbRTP packet technology to ensure that Hoot 'n' Holler or Private/Direct Line (MRD/ARD) calls reach the end user without the distracting latency between speakers.

The iG214 gateway is a simple way to integrate the *i* series IP solution suite with traditional Hoot 'n' Holler and Private/Direct Line (MRD/ARD) solutions. It complements the Speakerbus SB 534 Intercom System, the Speakerbus Voice Conference Manager System plus other third party solutions, such as trading turrets, conference bridges, Analogue voice recorders, voice-enabled routers and external audio broadcast devices. Additionally, with the iG214 onboard mixing capability, the need for a separate conference bridge is eliminated. The iG214 is built on standards-based packet formats utilising interfaces such as Simple Network Management Protocol (SNMP) and enabling integration into third party network monitoring solutions.

The iG214 is configured via an intuitive web-based interface or Speakerbus' Centralised Management System.

Channel Capacity

- 4 x E&M 2-Wire or 4-Wire Analogue Channels
- 4 x FXO/FXS 2-Wire Analogue Channels
- 4 x 600 OHM 4-Wire Analogue Channels

Call Types

- Hoot 'n' Holler Conferences
- Private/Direct Line (MRD/ARD)

Protocol Conversion of SbRTP LAN to:

- UDP Unicast WAN
- 2-Wire FXO (Loop-Gen)
- 2-Wire FXS
- 2-Wire or 4-Wire E&M type i, ii, iii & v
- 4-Wire 600 OHM

Mixing Capability

- 8 x Gateways and 4 x talkers per local LAN conference stream
- 4 x Remote WAN conference streams¹
- 4 x Analogue ports

Conferences Modes

- 1 x Conference connected to 5 x separate sites (Mesh or Hub)¹
- 2 x Conference connected to 3 x separate sites (Mesh or Hub)¹
- 4 x Conferences connected between 2 x sites¹

Feature Keys

- Hoot 'n' Holler voice channels
- Private/Direct Line ARD/MRD voice channels
- Combine Hoot 'n' Holler and Private/Direct Line MRD/ARD voice channels
- IP gateway (for UDP Unicast WAN support requirements)
- G.723 codec

Network Requirements

- Network 100 Base-Tx (full duplex)
- IP addressing: Dynamic or Static
- Voice LAN: Multicast network utilisation IGMP and supporting SbRTP
- Voice WAN: Unicast network supporting UDP²
- Other supported network protocols: Ethernet, IPv4, DHCP, TCP/IP, DNS, HTTP and SNMP

VoIP Media

- Transmission protocol on LAN: Speakerbus Real Time Protocol (SbRTP) Enhanced– 7KHZ voice bandwidth (adjustable packet sizes 1ms, 2ms and 4ms)
- Typical latency over LAN 6ms (using 1ms packet sizes)
- Max packet loss 5-7%
- Audio compression on the WAN: G.711 PCM 3.4KHZ A-law/U-law; G.729 Annex A – CS-ACELP; G.723.1 (6K3) MPC-MLQ³
- Bandwidth utilisation per WAN stream between 8Kbits/s to 96 Kbits/s⁴ (dependent upon packet size and voice compression configuration)
- Bandwidth utilisation per LAN stream (not including Ethernet pre-amble) between 416K/bits to 836K/bits (dependent upon packet size configuration)⁴
- Bandwidth optimisation techniques: VAD (Voice Activity Detection)
- DiffServ RFC 2475 – Type of service field configurable

System Management

- Optional browser-based centralised management application for large scale deployments.
- Individual device management via integral HTTP server
- Browser support either IE 5.5 or higher, Mozilla Firefox 1.5 or higher and Netscape 7.2 or higher
- SNMP traps supported: coldstart, linkdown, linkup & authentication failure
- Upgradeable operating firmware

Security Features

- Separate account profiles, independently password protected
- Encrypted passwords
- Ability to lock down individual device services including integral HTTP server and SNMP ports
- Configurable SNMP community string password
- Password protected Engineering communications port
- Administrator defined HTTP inactivity timeout

Status Indicators

- LAN and WAN status indicator
- Analogue channel status indicator
- ARD/MRD channel status indicator

Dimensions

- Housing Aluminum enclosure
- Width: 240mm
- Height: 34mm
- Depth: 192mm
- Weight: 1Kg

Power Requirements

- Voltage 100-240VAC nominal
- Frequency 50-60Hz AC
- DC Output 12 v 750mA

Interfaces

- Voice connections 4 x RJ45 sockets
- Network interface 10/100 Base Ethernet auto sensing
- LAN connection RJ45 Socket
- 8 Pin Mini Din Com Port (reserved for use by Speakerbus)
- 2.5mm DC outlet socket

Environmental

- Operating temperature 0-35 C
- Relative humidity 10% to 90%, non condensing

1. Must be used in conjunction with the IP Gateway feature key
2. When utilising IP Gateway mode only
3. Must be used in conjunction with the G.723 feature key (note: this is an enhanced version, please contact your Speakerbus representative for further details)
4. The figures quoted are with out voice activity detection enabled

