ACU®-Z1™

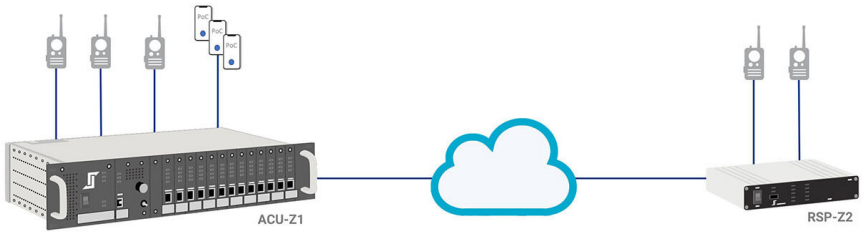
MODULAR INTEROPERABILITY GATEWAY



OVERVIEW

The ACU-Z1 combines modern technology with JPS' nearly 30 years of experience as the industry leader in communications interoperability. Modular, 2U high, fully IP centric, and loaded with the capable radio interface features you have come to expect from JPS, the ACU-Z1 can interface practically every type of voice communication system.

The ACU-Z1 has a feature-filled user interface, a local handset, modular design for LMR radio and PSTN connections, virtual IP-based resources on the CPM-Z1 and also on installed cards, native PoC integrations on installed cards, audio in the browser, monitor groups, broadcast groups, dedicated recording streams to third-party recorders, and multi-user light dispatch.



DISPATCH + MONITOR

The ACU-Z1's intuitive browser-based GUI allows an operator to expand or minimize the Dispatch area, Nets, and Monitor and Broadcast Groups.

Since the ACU-Z1 has multi-user dispatch capability, operators can use any resource to create mini-dispatch stations for on-the-fly one-way or two-way communications.

Separate from dispatch, Monitor and Broadcast Groups provide additional flexibility. Any system resource can be used to monitor or broadcast to a group while still participating in two-way Nets.

NETWORK CENTRIC

The ACU-Z1's network-focused design allows straightforward integration of other JPS gateways, such as the RSP-Z2, the NXU®-2B, or even other ACU-Z1s.

Creating multi-gateway systems does not tie up dedicated hardware connectors – such as are used for LMR and POTS phones – on the controlling ACU-Z1. All input from other gateways links via IP to either the CPM-Z1 or to a virtual VIM-Z1 or PSTN-Z1 card resource.

KEY BENEFITS

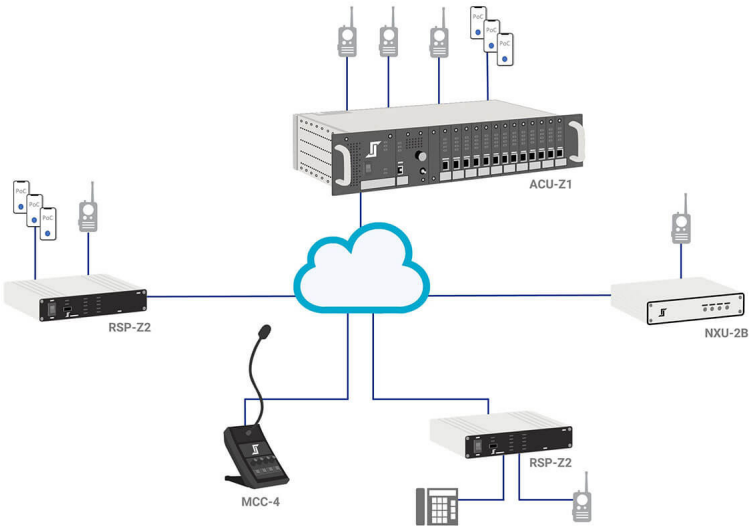
- Requires less power than legacy ACUs and no additional rack space for ventilation
- User-configurable VIM-Z1 for radio/4-wire device and IP resource types
- PSTN-Z1 for telephony and IP resource types
- Connect up to 24 remote IP resources to the CPM-Z1
- VIM-Z1 and PSTN-Z1 cards each have 2 resources per card (1 hardware or IP + 1 IP)
- Push-to-Talk over Cellular (PoC) interface connections
- Patented, enhanced trunked radio Adaptive Transmit Delay
- Resource-specific settings for optimal audio quality
- Updated UI for straightforward operation and management
- One- or two-way multi-user light dispatch
- Encryption optionally available

APPLICATIONS

When the situation is critical, your team needs seamless interoperability. The ACU-Z1 provides a true IP-centric gateway to digitally converge existing radio systems with each other as well as with landline and SIP telephones, smartphones, and other devices.

An ACU-Z1 can function as the controller for a wide-area system that includes both hardware devices (LMR, USB headset, handset, POTS phone line) and virtual IP-based technologies like Push-to-Talk over Cellular (PoC), RoIP+®, JPS RoIP, RTP, and SIP.

Each ACU-Z1 operator can personalize the scalable, web-based user interface to manage audio nets and groups, perform light dispatch, and even listen to audio using their web browser.



In the example above, three radio systems and one PoC talkgroup are configured locally on VIM-Z1 cards. Additionally, JPS RoIP is used to bring in audio via IP from remote RSP-Z2s and an NXU-2B. Channels on the remote MCC-4 desktop mic connect using JPS Bridge. Regardless of how audio interfaces with the system, the ACU-Z1 lets the people using these different device types communicate easily.

SPECIFICATIONS

Size and Weight
3.5” H x 19” W x 10” D ; Approx. 11 lbs

Input Power
115 or 230 VAC +/- 15%, 47-63 Hz, 60 VA typical, 90 VA max.; +11 to +15 VDC @ 4 A nom. 7 A max.

Audio Vocoders
GSM (13 Kbps), PCMU/G.711 µLaw (64 Kbps), PCMA/G.711 aLaw (64 Kbps), Opus (~6 Kbps, ~10 Kbps, ~12 Kbps), AMBE (with USB dongle for DFSI)

Impedance
VIM-Z1 Input: Balanced / Unbalanced 600 Ω, Unbalanced 47 kΩ
VIM-Z1 Output: Unbalanced 600 Ω
PSTN-Z1 Input: 600 Ω Nominal / Output: 600 Ω Nominal





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