

IPM-2K Media Server Platform



- Meet the need for enhanced voice services in VoIP wireline, cable and wireless markets with a right-sized and cost-effective media server
- Enable enhanced voice services such as Network Announcements, Conferencing, Interactive Voice Response (IVR) and Messaging
- Deliver a cost-optimized solution for smaller scale deployments that demand full-featured server functionality

The **IPM-2K** is the cost-effective, entry-level member in the Nuera family of market-ready, standards compliant, media server systems. Incorporating Nuera's leading Voice over Packet technology and based on field-proven media technology, the IPM-2K enables Network Equipment Providers (NEPs) rapid time-to-market and reliable cost-effective deployments of enhanced voice services in VoIP telephony networks. The IPM-2K is based on VolPerfect™ architecture, Nuera's underlying, best-of-breed, core media gateway technology for all of its products.

Deliver Enhanced Voice Services

The IPM-2K enables NEPs to significantly enhance their network solutions. Media processing technologies, such as voice record/playback, announcements, voice mixing and DTMF (detection/generation, trans-coding) ensure delivery of advanced services beyond the scope of basic dial tone service. These include conferencing, network announcements, voicemail, auto-attendant, Interactive Voice Response (IVR), and others.

Deploy Best-of-Breed Right-Sized Systems

The IPM-2K matches the density requirements for smaller locations in the network while meeting the requirements for a market-ready full-featured media-processing server. The IPM-2K is specifically fine-tuned to meet demand, with a dense (up to 480 ports) solution that provides high capacity for the entire gamut of interactive voice services.

Improve Infrastructure Interoperability

Application partners can port and integrate applications directly on the open-platform IPM-2K, thus eliminating the need for additional application servers. This alleviates traditionally slow interoperability processes and delivers superior manageability, a smaller footprint and trouble-free maintenance.

Leverage Legacy Investments

The IPM-2K consists of PSTN and VoIP interfaces, allowing NEPs and Application Partners to deliver enhanced voice services on legacy PSTN networks as well as on new packet-based networks. This enables easy migration to new deployments of packet infrastructure.

Benefit from Extensive Experience

Nuera is one of the world's leading providers of new voice infrastructure network technologies. Nuera's commitment to innovation yields consistently high-quality voice processing products that meet our customers' demand for higher levels of integration.

The IPM-2K is part of Nuera's complete family of Voice Network Products for new voice infrastructure carrier networks.

IPM 2K

Specifications

Capacity

Up to 480¹ Media Processing ports
All densities apply to either VoIP or PSTN ports

User Interfaces

Audio Processing	Call progress tones Voice Activity Detection (VAD) Comfort noise generation DTMF detection and generation in-band/out-band (RFC 2833) T.38 compliant (real-time fax) Playback Acceleration/deceleration Echo Cancellation: G.168 30, 64, 128 ² msec Gain Control: Automatic (AGC) or Programmable
Voice Coders	G.723.1, G.729 AB, G.711, G.726/G.727, GSM 6.10 at 13 kbps Cellular Coder: UMTS - AMR all rates; CDMA ² - EVRC, QCELP8, QCELP13
Conferencing	Maximum number of conferencing ports: 240 Maximum half-duplex parties per conference bridge: 120 Maximum full-duplex parties per conference bridge: 64 participants Conferencing Control: moderator mode, passive listener, mute, drop
Enhanced Services	Announcement playback –Advanced audio package per H.248.9, PacketCable BAU package Voice recording/playback Local announcement storage ASR ³ , TTS ³ CALEA support Trunk testing per GR-822, tests: TL 100, 102 and 105, Multiple Vocoder Transcoding

Control and Management

Control Protocols	MGCP, H.248, SIP, VXML ⁴ Nuera [®] extensive TPNCAP API over IP C++ API libraries and SDK
API Supported OS Management	• Windows [™] NT, 2K, XP • Linux [™] • Solaris [™] on Sparc [™] /Intel [™] SNMP v2 User-friendly GUI via Embedded Web Server Remote configuration and software download via TFTP & Boot Centralized Element Management System

Signaling and Transport

PSTN Protocols	CAS T1 robbed bit, E1 CAS/MFC-R2, ISDN PRI
IP Transport	IETF RFC 3550, RFC 3551 RTP/RTCP Transport, TCP, UDP

Interfaces

Ethernet	Dual redundant 10/100 Base T Ethernet ports via 2 RJ-45 connectors
Telephony	Up to 8 trunks using RJ-48 connectors Up to 16 trunks using dual 50-pin telco connectors

Hardware

Physical	1U high, 19-inch wide rack mount
Enclosure	2-slot cPCI chassis
Mechanical	PICMG 2.0 R2.1 cPCI
Hot Swap	Full cPCI hot swap supported for media processing blade
Power Consumption	Up to 41 Watts typical at full capacity
Power Supply	Single universal 90-260 V AC or dual-redundant AC or single -48 V DC

Regulatory Environment

Telecommunication Standards	FCC part 68, TBR4 and TBR13
Safety and EMC Standards	UL60950, FCC part 15 class B CE mark (EN55022 Class B, EN60950, EN55024, EN300 386)
Environmental	NEBS Level 3: GR-63-Core (DC-powered model), GR-1089-Core, Type 1&3, ETS300 019

1 SIP option supports up to 240 ports
2 May affect density
3 Integrated Partner technologies
4 Planned

Applications

- **Basic services** including instant conferencing and network announcements for wireless networks, media resource functions, VoIP access lines and packet toll offices
- **Enhanced services** including Voicemail, Messaging and Interactive Voice Response in deployments such as: Voice VPN and IP Centrex
- **Speech-enabled services** for wireless networks
- **Transcoding server**
- **CALEA server**

About Nuera Communications

Nuera Communications, designs, manufactures & sells packet voice gateways to communication service providers worldwide. These products work over any medium (cable, wireless, copper and fiber). Nuera's ORCA (Open Reliable Communications Architecture) product portfolio of VoIP gateways, softswitches, and management systems provide telephony solutions for cable and DSL networks, international long distance networks and enterprise networks. Nuera is a leader in the broadband telephony market.

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