

# VL3000

VL3000 is VL series IP PBX based on industry standard SIP and especially designed for Enterprise. It offers all the functions of a traditional PBX such as Call Hold, Call Transfer, Call Pickup and Call Forwarding. Also it provides advanced functions such as IVR, Voicemail to E-mail, Remote Office, BLF/BLA and more. By those functions, user will be able to reduce the communication costs, increase productivity, and enhance collaboration efficiency. Providing ranges of capabilities on PSTN connection for integrating with existing PBXs or connecting analog phones, VL3000 is all the Enterprise need to get started easily at reasonable price. To improve its stability and reliability, VL3000 adopts COM Express Card based on x86 and built in temperature sensor. Also PSTN backup service proves its high stability by providing smooth communication via fixed PSTN line in case of sudden interruption on IP network.



*x86 SIP based Enterprise IPPBX*



*Various latest Functions for Productivity*



*Huge Cost Savings*



*PSTN(E1 PRI & FXO) Backup in case of VoIP Service Failure*

**2000 Subscribers**  
**300 Concurrent Calls**  
**E1 PRI Card**  
**NAS Card**  
**FXO & FXS Card**

- Users License(300 ~ 2000)
- x86 SIP based System
- Simple Installation & Management
- Flexible Configuration
- Easy Migration to VoIP
- Remote Office



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## Up to 2000 Extensions/ 300 Concurrent Calls

VL3000 is VL series IP PBX specially designed for large sized Enterprises. This model allows user to register up to 2000 extensions and supports up to 300 concurrent calls. Also, the calls among extensions registered with VL series are free, and all the advanced functions are also supported.

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## Flexible Configuration with E1 PRI, NAS, FXO & FXS Card

VL3000 has three I/O slots and each slot can be plugged in with one of three types of I/O cards, E1 PRI, NAS, and 4FXO & 4FXS combo cards. With flexible configuration of E1 PRI, NAS, and 4FXO & 4FXS, VL3000 will save VoIP adaptation costs by allowing user to select the right card based on company size.

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## Use COM Express Card(x86) com for large capacity

The VL3000 uses x86 based COM Express Card as the CPU for large capacity. It also uses a LIU(Line Interface Unit)\_SATA card which can be mounted and dismounted as a storage for OS and Application. The storage uses a 2.5 - inch SSD.

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## Use NAS Card for stable call recording

The VL3000 uses a built-in NAS card for voice call recording. The reason for using this card is that the built-in NAS provides reliable recording rather than an external NAS. Storage of this card uses 2.5 inch 1TB HDD and provides a Gigabit ethernet interface for checking recording files from the outside.

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## Convenient S/W Upgrade via WEB UI

Efficient management tool with regular S/W upgrade, Auto-Provisioning, and Diagnostic is provided through intuitive WEB user interface. WEB UI helps users to manage and upgrade system easily.

# Specification

## Basic PBX Features

- Call Hold/Unhold
- Call Transfer (Blind/Attended)
- Call Forwarding (Always/Busy/No-Answer/Error/Time-Based)
- Call Pickup (Direct/Group)
- Call Park/Unpark
- Intercom (Direct/Group)
- Three-way Call
- Music on Hold
- Music on Ringback
- Group Hunt (Sequential/Circular/Ring-All/Random)
- Distinctive Ringing
- DTMF Relay (in-audio/rfc2833/SIP Info)
- Flexible Dialplan
- SIP Trunking
- DID/DOD
- FXO backup (in case VSP is unavailable)
- Call Screening
- DND
- Virtual Caller ID
- Anonymous Caller ID
- Phonebook

## Advanced PBX Features

- Voicemail (with e-mail forwarding)
- Message Waiting Indication
- MR
- Conference
- Call Recording
- RAA
- Feature Code
- SIP Messaging & Presence
- BLF
- PBX-to-PBX interoperability

## Security

- ACL
- DDoS Protection
- SIP DDoS Protection
- PBX-to-PBX interoperability thru VPN

## SIP

- SIP Basic (RFC 3261)
- Provisional Responses (RFC 3262)
- An Offer/Answer Model (RFC 3264)
- Event Notification (RFC 3265)
- Asserted Identity (RFC 3325)
- Instant Messaging (RFC 3428)
- Message Waiting Indication (RFC 3842)
- Presence (RFC 3856)
- Session Timers (RFC 4028)
- INFO Method (RFC 2976)

## Codex

- IP
  - + Voice
    - G.711  $\mu$ /A-Law
    - G.729 A/B (pass-thru only)
    - G.723.1 (pass-thru only)
  - + Video (pass-thru only)
    - H.263
    - H.264
    - MPEG-4 SP/ASP
- Analog
  - + Voice
    - G.711  $\mu$ /A-Law
    - G.729 A/B
    - G.723.1

## FXO

- LEC (G.168)
- Caller ID Detection
- Call Progress Tone Detection
- DTMF Generation & Detection
- VAD/CNG
- Packet Loss Concealment
- Adaptive Jitter Buffer
- Dynamic Payload Support
- Adjustable Audio Frames per Packet

## FXS

- Battery Feeding for Analog Telephone
- Ringing Signal up to 3 LEN
- Type I/II FSK Caller ID Generation & Detection
- Call Progress Tone Generation
- DTMF Generation & Detection
- VAD/CNG
- FAX
  - + T.30 Receiving (only with e-mail forwarding)
- Configurable Tip/Ring impedance
- Hook Flash Signaling

## Management

- System Configuration via WEB Manager
- Multi Language Support (Korean/English/Turkish)
- Password Protection
- Configuration Backup/Restore thru WEB/FTP
- S/W Upgrade from Remote Place
- Direct Phone Management thru WEB
- IP-Phone Auto Provision
- Event Log
- Call Log
- CDR
- SNMPv2

## HW

- CPU: Compact COMe Type6 with 4C Intel Atom E3845 at 1.91GHz
- Memory: DDR3 4 Gbyte
- Storage: SSD

## Network Interfaces

- Ethernet: 2 Ports (10/100/1000Mbps)
- PSTN: up to 12 Ports (3 4FXO & 4FXS Cards)
- Analog Telephone Interface: up to 12 Ports (4FXO & 4FXS Cards)
- E1 PRI : up to 2 E1
- NAS : 1TB

## Other Interfaces

- LED Status Indicators
- AC 220V Power Connector
- Earth Connector
- Restore Factory Defaults Button

## Power Consumption

- Max. Operational Power Consumption: 120 W

## Cooling Fan

- 3 DC Fans
- RPM: 5000, Air Flow: 4.17 CFM

## SuperCapacitor for Power Failure

## Physical

- Dimensions: 440(W) x 430(D) x 45(H) mm
- Weight: 5.5Kg (without Cables)

## System Capacity

- Max. Extensions: 2000 Subscribers
- Max. Concurrent Calls: 300 Calls
- Max. Call Per Second: 20 (CPS)
- CDR Database: up to 200MByte records

## Ethernet Interfaces

- WAN/LAN: 10Base-T, 100Base-TX, 1000Base-T complying IEEE 802.3 Standards supports Auto-Negotiation
- RJ45 Connector: Ethernet packets over CAT5-UTP cable

## PSTN Interface

- 2 Pin(Tip-Ring) RJ11 Connector for each PSTN port
- Up to 3KV Line Isolation and Surge Protection
- TX power of up to +10 dBm into 600Ohm
- Ringing Detection
- CID Monitoring and Detection
- Parallel Phone Detection

## Environmental

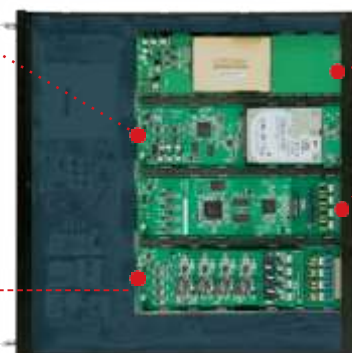
- Operating Temperature: 0°C ~ 40°C
- Operating Humidity: 20% ~ 80% RH
- Storage Temperature: -20°C ~ 60°C
- Storage Humidity: 20% ~ 95% RH

# Line Interface Unit (LIU)

## NAS

CPU : 400MHz, Dual Core  
HDD Interface : SATA2  
Ethernet Interface : Gigabit Ethernet for External Interface  
HDD Spec : 2.5 inch HDD/1TB, Recording HDD FTP Support  
ort : External Ethernet Interface Port, SamBa Support : External Ethernet Interface Port

## 4 FXO & 4 FXS



## SSD CARD

## E1 PRI

- Card Capacity : 1 E1 PRI
- E1 Interface : 2 Ports line card (1Port (Operation) / 1Port (for Backup))
- E1 Digital : ISDN PRI (R2 Unsupported)
- CODEC : PCMa/PCMu
- LINE CODING : HDB3, AMI
- OP MODE : User/Network