



Key Features

- Voice over Internet Protocol (VoIP) Implementation
- PBX Telephony Features
- Optional Trunking Interfaces Supporting FXO, FXS, ISDN-BRI, T1, E1 and SIP Trunks
- Upgradable N-way Meet-Me Conference Calls
- Voicemail with E-mail Forwarding
- Basic Automatic Call Distribution (ACD)
- Mobile Extension
- PC-based Software Attendant Console
- Personal web-phone
- Click-To-Talk

Enterprise IP Telephony IP PBX Series

The ZyXEL IP PBX series is a complete IP telephony solution for small and medium enterprises (SME). With versatile trunking interface support, they easily fit into all sorts of telephony environments and ITSP services; and it's also designed to be integrated into multi-site constructions. As a result, users may benefit with smaller phone bills and minimized management efforts from the centralized mechanism.

To achieve the optimized productivity, ZyXEL's IP PBX comes with mobile extension features that support full telephony features designed for road warriors using mobile phones.

The ZyXEL IP PBX Series consists of two PBXs: ZyXEL X6004 and X2002. The ZyXEL X6004 is a next-generation IP PBX for SME providing versatile trunk expansions to fit all kinds of PBX and CO links. With a wire-speed VoIP switching engine and the world-leading IP PBX DSP, the system excels in both voice quality and performance.

The ZyXEL X2002 is designed for small sites or branch offices to act as a highly modular IP PBX offering DSP computing power, analog/digital lines and SIP proxy license expansions to fit different applications, and to provide the maximum flexibility possible for small sites or branches.

Key Benefits

Ensuring Availability of Enterprise Communications

The ZyXEL IP PBX Series uses IP PBX DSP to prevent unpredictable service break-offs, while its backup power system and lifeline design improve system availability. With dedicated DSP resources and QoS mechanism, it guarantees premium voice quality and performance.

Excellent Mobility and Productivity

The soft phone and personal Web phone features enable teleworkers to enjoy complete telephony services comparable to company offices; and mobile extensions even expand the services to road warriors using mobile phones.

Less Management Effort with Intuitive Interface and Auto-Provisioning

With intuitive Web-based management, wizards and a centralized dashboard, office telephony administrators can easily create or delete SIP user accounts through any connected ZyXEL IP phone or FXS phone. Furthermore, through the embedded ZyXEL auto-provisioning technology, the ZyXEL IP PBX Series can easily change the settings of all connected IP phones with just one click, freeing administrators from traveling to the service areas to alter client settings manually.

Expandable Design for Business Growth

Business growth is always appreciated, but meeting the ever-changing application requirements is still a big thing to office telephony administrators. The ZyXEL IP PBX Series comes with different expansion mechanisms to expand the capacity of outbound call interfaces, concurrent call capability and registered user accounts. With the expandable service capability, business owners can take advantage of existing investments to create more business and to generate more profit.

Seamless Integration with Telco, ITSP Services and Legacy PBX

The ZyXEL IP PBX Series supports versatile trunking expansions including FXO, FXS, ISDN, T1 and E1. Users can easily fit into all sorts of telephony environments, while the standard SIP trunks and trusted peers make the ZyXEL IP PBX seamlessly integrated with ITSP services.

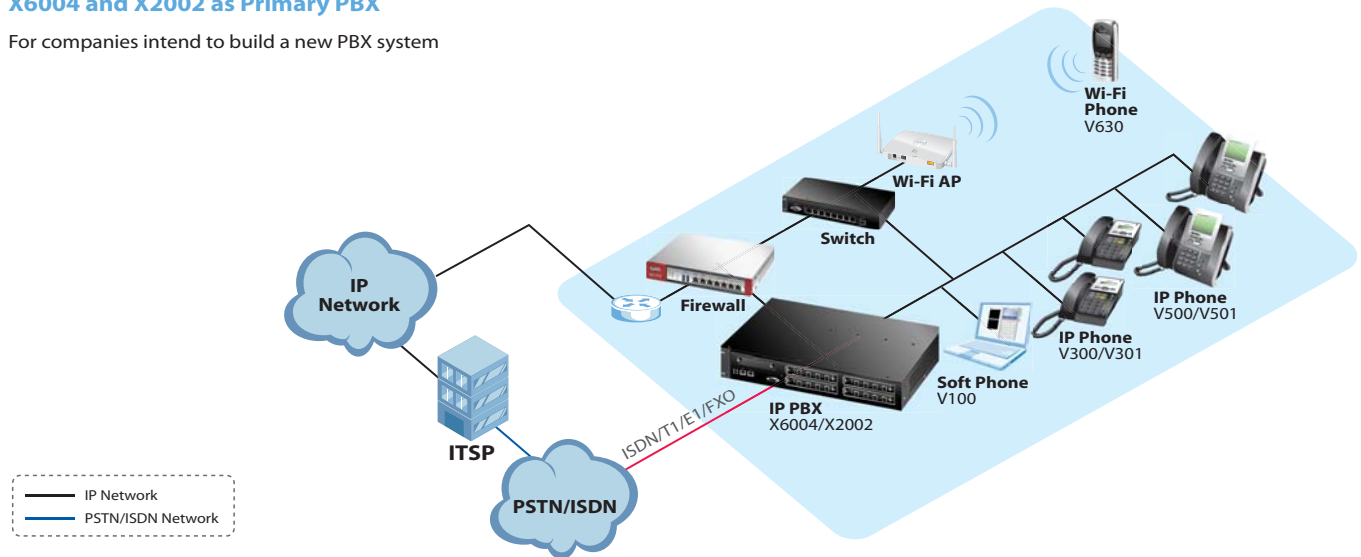
Value-added Services Enrich VoIP Application in SME

With the click-to-talk call center, 64-line meet-me conference and video conference features, the ZyXEL IP PBX Series enables a brand new working style through converged and unified communications.

Key Applications

X6004 and X2002 as Primary PBX

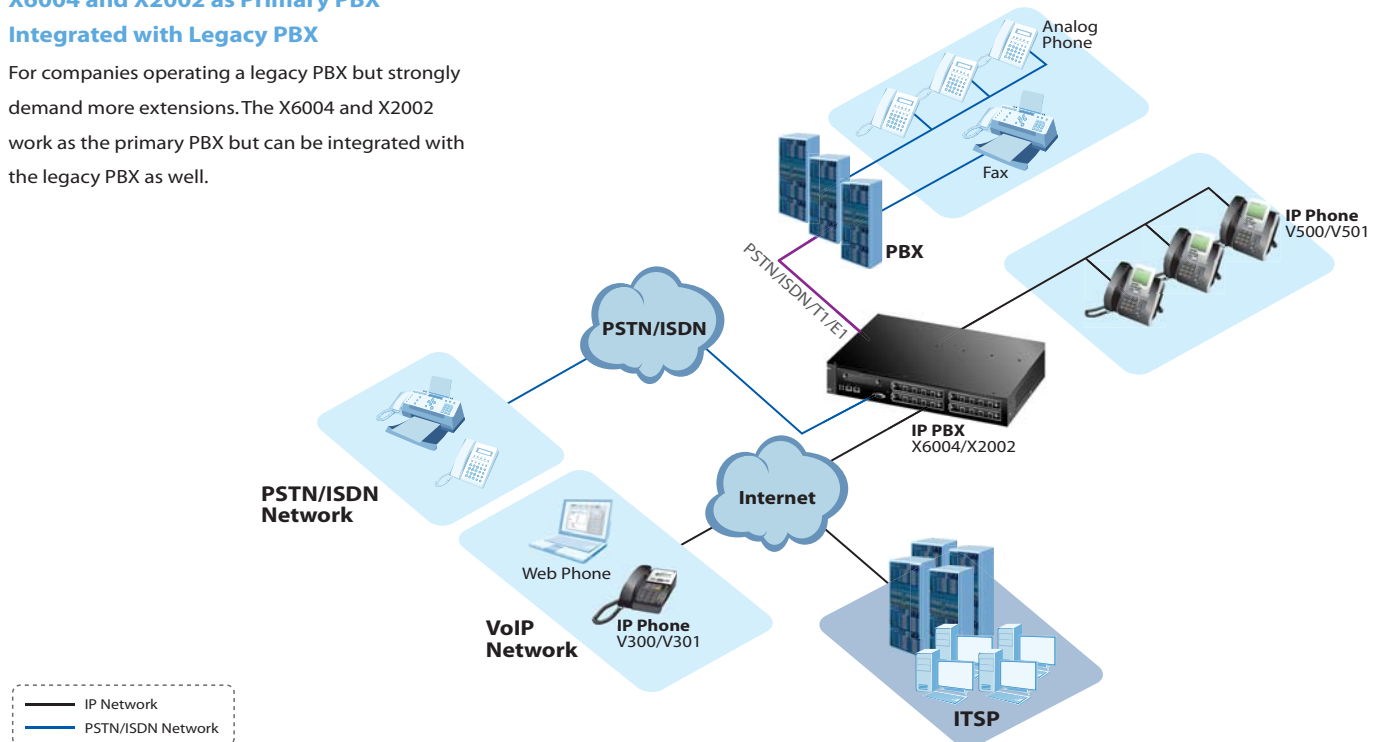
For companies intend to build a new PBX system



X6004 and X2002 as Primary PBX

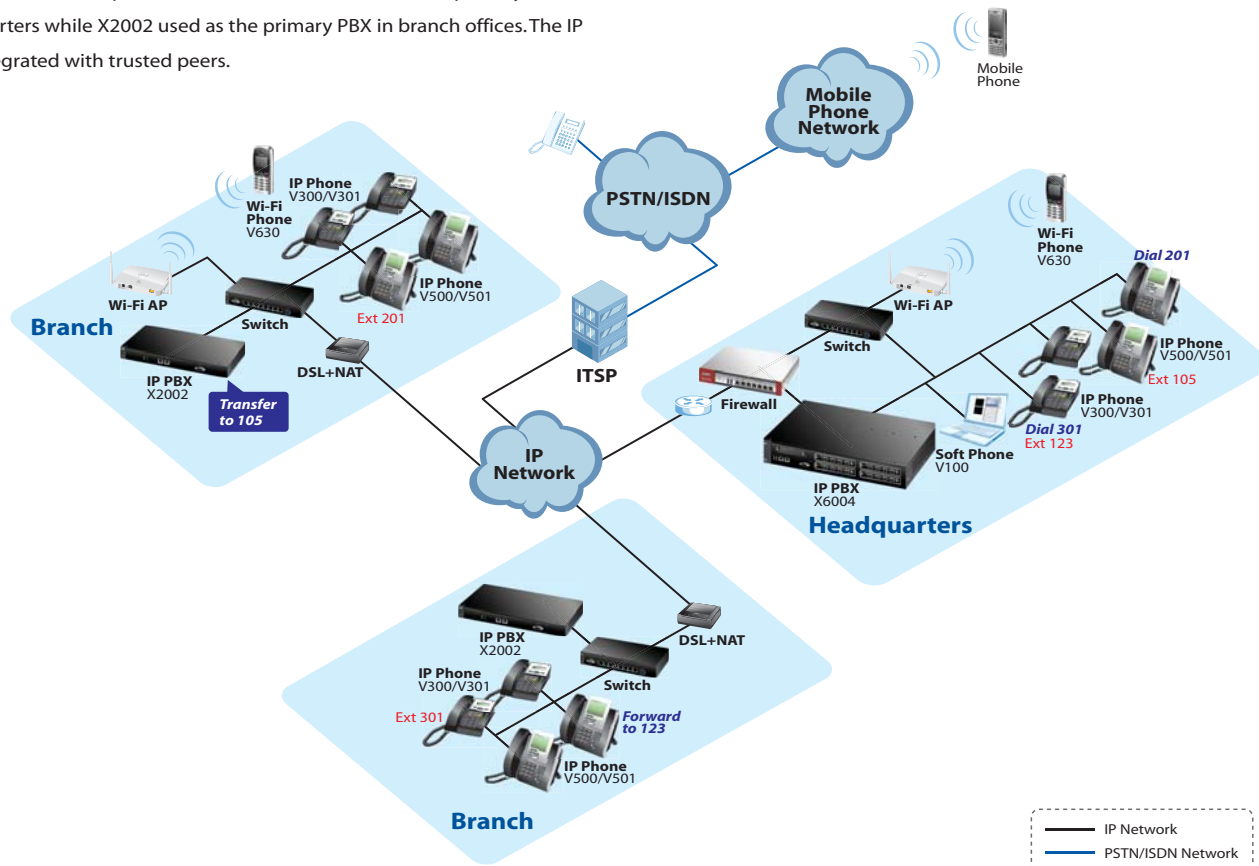
Integrated with Legacy PBX

For companies operating a legacy PBX but strongly demand more extensions. The X6004 and X2002 work as the primary PBX but can be integrated with the legacy PBX as well.



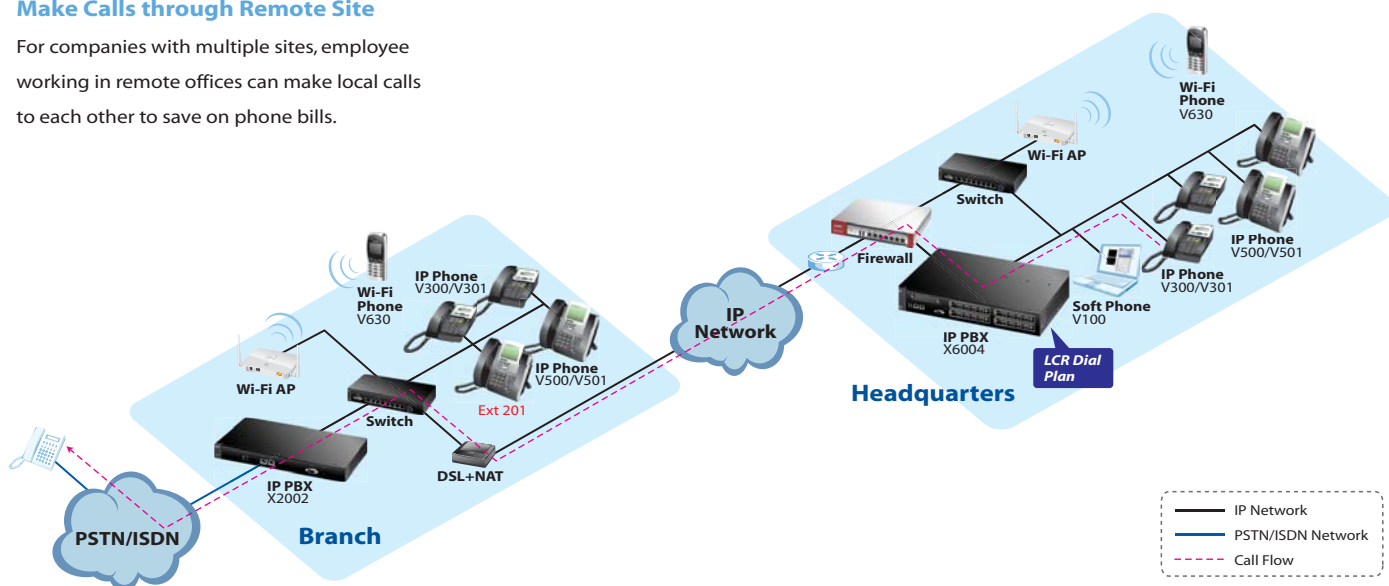
X6004 and X2002 for Multi-site Integration

For companies with multiple sites, the X6004 can be used as the primary PBX in the headquarters while X2002 used as the primary PBX in branch offices. The IP PBXs are integrated with trusted peers.



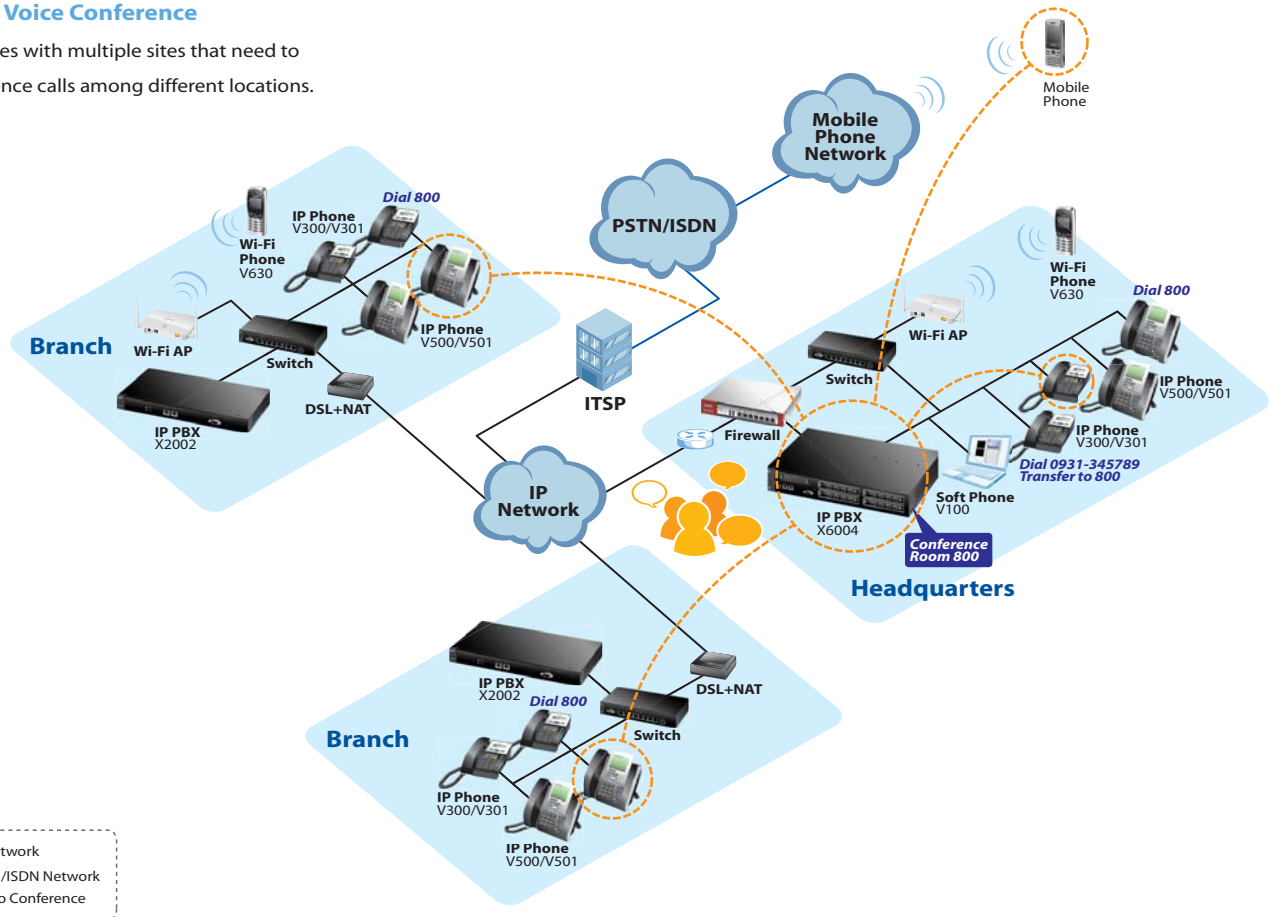
Make Calls through Remote Site

For companies with multiple sites, employee working in remote offices can make local calls to each other to save on phone bills.



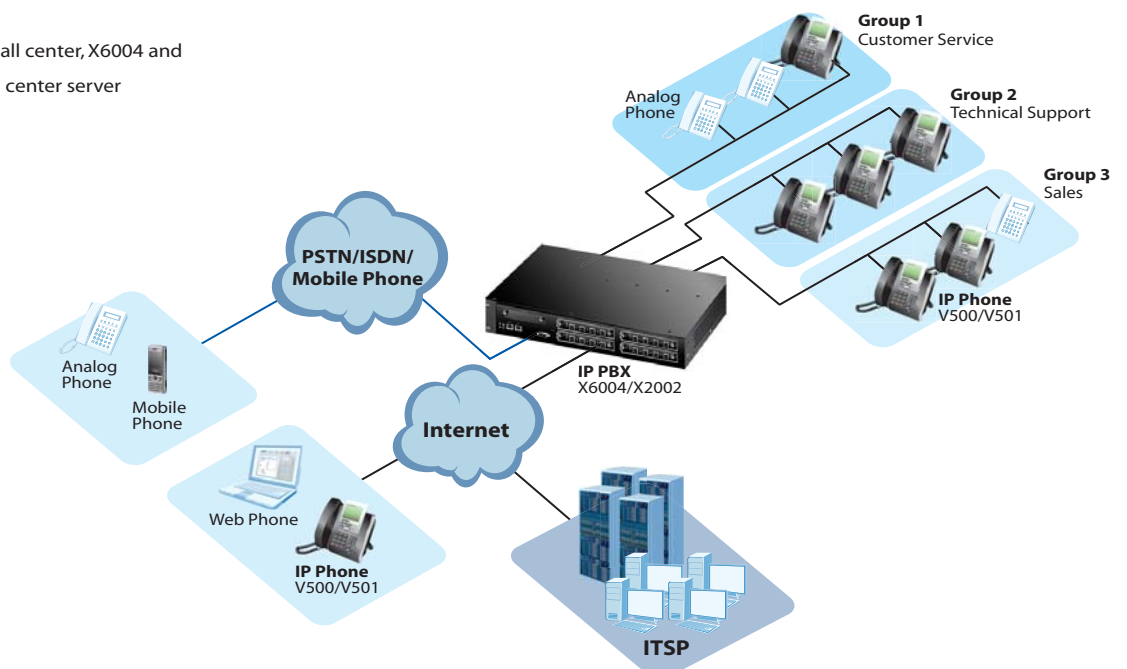
Multi-Site Voice Conference

For companies with multiple sites that need to hold conference calls among different locations.



Basic Call Center

For SMEs need to build a call center, X6004 and X2002 can work as the call center server



Specifications

Model	IP PBX Series	
	X6004	X2002
Product Pictures		
Description	SME IP PBX Server	SB IP PBX Server
WAN (10/100 Mbps Fast Ethernet)	1	1
LAN (10/100 Mbps Fast Ethernet)	1	1
Trunking Expansion Slot	4	2
System Capacity		
Default Extensions	32	32
Maximum Extensions	256	64
Default DSP Channels	32	32
Maximum DSP Channels	160	96
Maximum Concurrent Calls	64	32
Maximum Voice Mail	Without M6AMS, 90 minutes With M6AMS, 1,000 hours	90 minutes
Maximum Meet-me Conference	Without M6D64, 32 With M6D64, 64	Without M6D64, 32 With M6D64, 64
Maximum Group Paging	Without M6D64, 32 With M6D64, 64	Without M6D64, 32 With M6D64, 64
Power Requirement		
Input Voltage	100-240 V, 50-60 Hz	100-240 V, 50-60 Hz
Power Rating	75 W	40 W
Maximum Consumption	40 W	25 W
BPM Socket (ZyXEL BPS, 120 W, 12 V DC)	1	-
Environmental Specifications		
Operating Temperature	0°C ~ 40°C	0°C ~ 40°C
Operating Humidity	20% ~ 95% RH	20% ~ 95% RH
Storage Temperature	-30°C ~ 60°C	-30°C ~ 60°C
Storage Humidity	20% ~ 95% RH	20% ~ 95% RH
Physical Specifications		
Dimensions (W) x (D) x (H) mm	437 x 310 x 66	345 x 205 x 43
Weight, kg	5.6	2.9
Rackmountable (19")	Yes	Yes

Model	IP PBX Trunk Module				
	M6FO4	M6FS4	M6FO2FS2	M6BRI4	M6T1E1
POTS FXO Port	4	-	2	-	-
POTS FXS Port	-	4	2	-	-
PSNT Lifeline Port	-	-	2	-	-
ISDN NT/TE Port	-	-	-	4 (8 channels)	-
T1/E1 Port	-	-	-	-	1
Dimensions (W) x (D) x (H) mm	119 x 152 x 18	119 x 152 x 18	119 x 152 x 18	119 x 152 x 18	119 x 152 x 18
Weight, g	107.6	121.6	126.6	161.4	108.2



Features

Voice Feature

- SIP v2 (RFC 3261)
- SDP (RFC 2327)
- RTP (RFC 1889)
- Audio CODEC transcoding (G.711 a/μ, G.729 a/b, G.726 (32 Kbps), G.723.1 (5.3 Kbps))
- Video CODEC pass-through (H.261, H.263, H.263+, H.264, MPEG-4 SP/ASP)
- G.168 Echo cancellation 8 ms
- G.711 PCM fax/modem detection and pass-through
- Voice Activity Detection (VAD)
- Comfort Noise Generation (CNG)
- DTMF detection and generation (Inband, RFC 2833, SIP INFO)
- QoS (IP bandwidth management)
- ToS support
- Phonebook (LDAP and local)
- Interactive Voice Response (IVR)
- Caller ID
- Call waiting
- Call hold
- Call park
- Call pickup
- Call transferring
- Call forwarding
- Do Not Disturb (DND)
- Call back on busy
- Distinctive ring
- Intercom
- Message waiting indication
- Group paging (cross-subnet)
- Music-On-Hold
- Personal IVR
- Voice Mail (VM) with e-mail forwarding

Outbound Call Handling

- Call emergency
- Least Cost Route (LCR)
- Group control and dial plan
- Call access code
- Call screening

Incoming Call Handling

- Call blocking
- Hunt group
- Direct inward dialing
- Night service
- Auto attendant

Advanced Features

- Meet-me conference
- Personal web phone (with Click-to-Dial)
- Basic ACD

Network

- TCP/IP
- DHCP client (WAN)
- DHCP server (WAN/LAN)
- DDNS

Management

- Web-based management
- SSH management
- Secured HTTP auto provisioning
- EZ provisioning
- Sys log
- Call Detail Record (CDR) database
- E-mail notification for CDR rotation
- myZyXEL.com online service subscription
 - Additional SIP extension
 - Softphone V100 runtime license
 - PC-based attendant console V120 runtime license
 - Click-to-talk web phone runtime license

Interoperability

- Snom advanced interop partner
 - Call origination
 - Call termination (calls are terminated correctly)
 - Call failure handling
 - Hold - Unhold a call
 - DTMF functionality
 - VoiceMail integration
 - Attended/unattended transfer
 - Music on hold
 - Busy lamp field
- Trunk
 - ISDN PRI (T1/E1): Alcatel-Lucent, Avaya, Siemens and Nortel PBXs
 - SIP trunk: Nokia Siemens, Nortel, Broadsoft and Huawei Soft switches

Modular

M6FO4

ZyXEL IPPBX Outbound Trunk



- Interface type: Foreign eXchange Office (FXO)
- Signaling formats: ground start and loop start
- Address signaling formats: In-band DTMF
- Physical connector: RJ-11
- Number of connectors: 4
- Dimensions: 119 (W) x 152 (D) x 18 (H) mm
- Weight: 107.6 g

M6FS4

ZyXEL IPPBX Analog Phone Interface



- Interface type: Foreign eXchange Station (FXS)
- Signaling formats: loop start
- Address signaling formats: In-band DTMF
- REN: 5 per port
- Physical connector: RJ-11
- Number of connectors: 4
- Dimensions: 119 (W) x 152 (D) x 18 (H) mm
- Weight: 121.6 g

M6FO2FS2

ZyXEL IPPBX Outbound Trunk and Analog Phone Interface with Lifeline



- Interface type: Foreign eXchange Office (FXO) and Foreign eXchange Station (FXS)
- Signaling formats:
 - FXO: ground start and loop start
 - FXS: loop start
- Address signaling formats: In-band DTMF
- FXS REN: 5 per port
- Physical connector: RJ-11
- Number of connectors:
 - FXO: 2
 - FXS: 2
- Dimensions: 119 (W) x 152 (D) x 18 (H) mm
- Weight: 126.6 g

M6BRI4

ZyXEL IPPBX Outbound Trunk



- Per-port configurable mode: NT (Network Termination) and TE (Terminal Equipment)
- Protocol: I.430
- Switch type: 5ESS (US), NET3 (Europe), AUS (Australia)
- Supplementary services: CLIP, DDI, and MSN
- Interface type: ISDN BRI S/T
- Physical connector: RJ-48
- Number of connectors: 4
- Dimensions: 119 (W) x 152 (D) x 18 (H) mm
- Weight: 161.4 g

M6T1E1

ZyXEL IPPBX Outbound Trunk



- Configurable mode: NT (Network Termination) and TE (Terminal Equipment)
- Protocol: I.431, Q.921, Q.931, and Q.SIG
- Switch type: 4ESS (US), 5ESS (US), DMS (US), NI2 (US), NET5 (Europe), AUS (Australia), Q.SIG
- Supplementary services: CLIP and DDI
- Interface type: T1/E1
- Physical connector: RJ-48
- Number of connectors: 1
- Dimensions: 119 (W) x 152 (D) x 18 (H) mm
- Weight: 108.2 g

M6D16/32/64

ZyXEL IP-PBX DSP Expansion Module



- Complete VoIP processing from TDM to Ethernet
- Packet processing:
 - QoS pre-router
 - VoIP: RTP/UDP/IP/Ethernet
 - RTCP
 - DTMF: RFC2833
- G.165/G.168 echo cancellation with echo path change detection
- Voice codecs: G.711 u/A law, G.726, G.729A/B, and G.723.1
- Number of channel: 16/32/64
- Dimensions: 59 (W) x 64 (D) x 5 (H) mm
- Weight: 16.2 g

Accessories

M6AMS

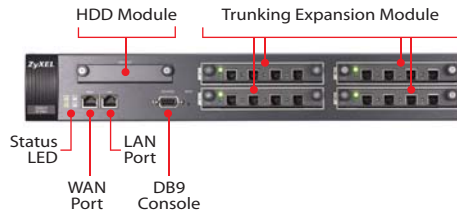
ZyXEL IP-PBX Advanced Media Storage Module



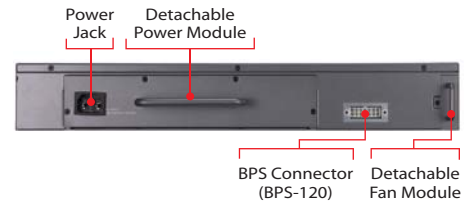
- 2.5" SATA HDD: 80 GB
- Added-On feature:
 - Voice mail: 1,000 Hr
 - Call recording: 100 Hr
 - CDR database: 20M records
 - IVR: 100 Hr
- Dimensions: 94 (W) x 155 (D) x 18 (H) mm
- Weight: 189.2 g

A Quick Look at X6004 and X2002

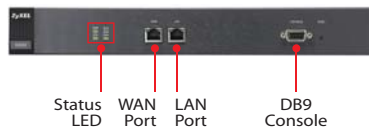
X6004 Hardware View (Front)



X6004 Hardware View (Rear)






X2002 Hardware View (Front)



X2002 Hardware View (Rear)



DB9: one kind of connector for RS232 port
SATA: Serial Advanced Technology Attachment (one kind of HDD interface)

Model	IP PBX Software IP Phone		
	V100	V120	Click-to-talk
Product Pictures			
SIP (RFC 3261)	Yes	Yes	Yes
3-way Conference	Yes	-	-
Video Conference	Yes	-	-
Auto Provisioning	Yes	Yes	-
Presence	Yes	Yes	-
Operator Features			
IP PBX Monitoring: Lines, Parked Calls, and Extension Presence	-	Yes	-
Call Forward	-	Yes	-
Call Park	-	Yes	-
Call Recording	-	Yes	-