

IP PBX Link-Up

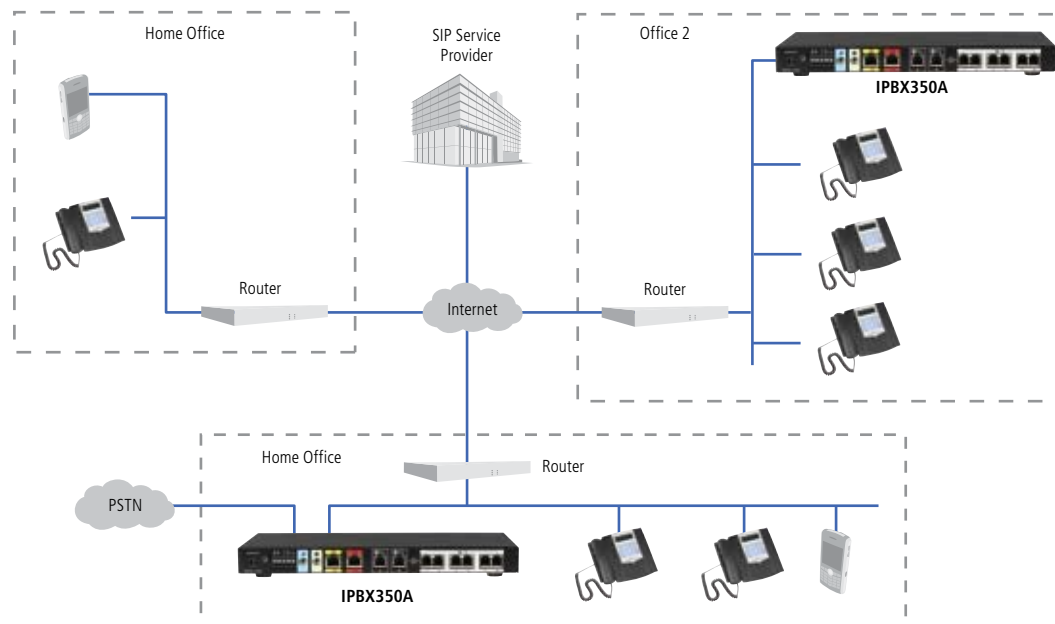
**A standalone IP PBX system
for small offices — powerful,
easy to use, and cost-effective.**



FEATURES

- » Sized for organizations with 3 to 50 phones.
- » Easy plug-and-play setup—automatically configures itself on initial startup.
- » Linux® based appliance hosts Asterisk® open source PBX software.
- » Supports up to 50 SIP extensions and up to 10 SIP trunks.
- » Integrates with desktop IP phones and expansion modules from Black Box.
- » Visual and standard voice mail, and voice mail to e-mail notification with audio attachment.
- » Auto attendant (AA) with day, night, and holiday scheduling and custom announcements.
- » Easy-to-use softkey management via global or local user templates with the ability to print softkey inserts.
- » XML interface to on-board push button input trigger and relay output.
- » Built-in audio in/out circuitry for music on hold and external paging; zone paging also featured.
- » Key system emulation of Shared Line Appearance (SLA) (FXO ports only).
- » Standard key system functions such as: busy lamp field, flexible call forward, 3-way conference calls, and call park.
- » Enhanced system features such as: find-me follow-me, directed call pickup, SIP telephone auto discovery and FXO line monitoring via GUI.
- » Up to six foreign exchange office (FXO) ports for connection to analog public telephone lines (PSTN). Each FXO is equipped with on-hook Caller ID detection and G.168 echo cancellation.

IP-PBX Link-Up LAN Setup



OVERVIEW

IP PBX Link-Up from Black Box is a simple, one-box appliance that provides VoIP phone service with full PBX/key system functionality to a small organization with up to 50 phones. The IP PBX Link-Up appliance hosts Linux based Asterisk open source software and provides all the standard PBX/key system features and functionality.

Big features for the small office

The system features an auto-attendant and individual voice mail boxes and directs incoming calls to individuals or groups by extension dialing or name search—all of which can be pre-configured at Black Box for even more convenience. Its FXO ports can operate in a Shared Line Appearance (SLA), pooled, or mixed-line mode.

The PBX telephone features include call forwarding, hold and hold alerts, call log, call transfer, three-way conferencing, and corporate and personal directory.

Plug and play

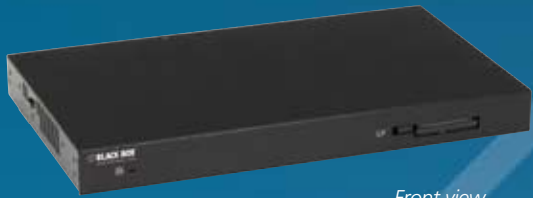
The IP PBX Link-Up is ready to start communicating without the need for an installation technician. Just plug the appliance into a LAN, and it automatically discovers and configures connected IP phones.

Grows as business grows

In addition, the system is scalable, so it grows as your business grows. It hosts up to 50 extensions when SIP trunking is used. Daisychain up to nine Link-Up systems via IP to create a WAN-based, multisite office environment.

No hidden costs

The IP PBX Link-Up has no hidden application license or user costs, and doesn't need an installation technician, which makes it cost-effective for small businesses. It seamlessly integrates with IP phones and expansion models.



Front view



Rear view

Software Specifications

Features

- Direct Inward Dialing (DID) on SIP trunking
- Visual and standard voice mail
- Operator console
- Auto-attendant (AA) with day, night, and holiday scheduling and custom announcements
- Interactive Voice Response (IVR) with directory number and name dialing
- Key System emulation of SLA
- Busy lamp field monitoring (BLF)
- Flexible call forwarding (CFB, CFNA, CFA)
- Find-Me Follow-Me (FMFM)
- Call park with visual call pickup
- Meet Me conferencing
- Call/ring groups with distinctive ring
- Remote call pickup
- Barred numbers
- Custom speed dial
- Universal Plug-and-Play (UPnP) integration for easy setup of gateway/router
- Voice mail to e-mail notification with audio attachment
- Intercom/page

- Zone paging
- Personal and corporate directories
- Administrator and user Web interface (Web UI)

Enhanced Features

- Auto discovery and self-provisioning of extensions
- Auto fax detection; on FXO ports, and routing to FXS ports
- Ability to network multiple IP PBX Link-Up platforms across a LAN/WAN (identified by an IP address or a domain name service (DNS))
- Ability to generate call detail records (CDRs) for external billing applications
- System configuration backup and recovery via Compact Flash (CF) card
- Provides an input connection that can trigger an event notification on the IP PBX Link Up. A triggered event can be sent as an e-mail, Extensible Mark-up Language (XML) message sent to the phone UI, or as a recorded prompt for voice notification
- Incoming call routing selection for individual FX
- FXO Auto Tuning Wizard

Administration and Management

- Configuration and administration via Web interface
- Operation and configuration of phones via Web and telephone interface

TECH SPECS

Codec — ITU G.711 PCM

Environmental — Operating temperature: 32 to 104° F (0 to 40° C);
Operating humidity: 10 to 85% noncondensing

Hardware Specifications — (1) Compact Flash slot;
Up to (6) FXO ports

(2) analog FXS ports ([1] for fax; [1] for life-line)

(2) 100 Mbps Ethernet ports for connection to public or private networks

Management — Embedded Web server

Protocols Supported — SIP call control;

RTP and RTCP for VoIP media streams, with RFC 2833 DTMF detection;

TFTP: Trivial File Transfer Protocol;

HTTP: Hypertext Transfer Protocol;

DHCP: Dynamic Host Configuration;

SMTP: Simple Mail Transfer Protocol

CE Approval — Yes

RoHS — Yes

Connectors — (6) RJ-11 FXO for connection to PSTN lines;

(2) RJ-11 FXS analog;

(2) RJ-45 100-Mbps Ethernet;

(1) 3.5-mm audio input; (1) 3.5-mm audio output;

(1) compact Flash slot;

(1) 5-postion terminal block

Power — External power supply: 100–240 VAC, 50–60 Hz, 0.45 A secondary;
12 VDC 1.25 A 15 W

Size — 1.2"H x 11.8"W x 6.9"D (3 x 30 x 17.5 cm)

Weight — 3.4 lb. (1.5 kg)

Item

Code

IP PBX Link-Up

IPBX350A

You may also need...

Black Box Desktop IP Phones

DTIP9480I

DTIP9480I CT

DTIP9143I

DTIP6757I

DTIP6757I CT

DTIP9480I

DTIP9480I CT

DTIP9143I

DTIP6757I

DTIP6757I CT

Item

Code

Black Box Desktop IP Phones (Continued)

DTIP6755I

DTIP6753I

DTIP6731I

DTIP6431I

20-Button Access Expansion Module
for Black Box IP Phones

DTIP6755I

DTIP6753I

DTIP6731I

DTIP6431I

DTIPM675I

Technically Speaking

SIP.

Session Initiation Protocol (SIP) is used for controlling multimedia communication sessions over an IP network. Common applications include voice over IP (VoIP), videoconferencing, streaming multimedia, on-line gaming, and instant messaging. SIP is the protocol of choice for VoIP, and is used to create, modify, and terminate VoIP sessions, including functions such as call transfer, conference calls, and call hold.

This very high-level protocol operates primarily in the Application Layer (Layer 7) of the OSI model. Because SIP runs independently of the Transport Layer (Layer 4), it works with most transport protocols, including TCP and UDP.

Much like HTTP, SIP is a text-based protocol. SIP messages contain only as much information as is needed for each session, so it's very efficient and can expand and contract to meet each application's specific requirements. This extensibility makes SIP incredibly versatile, enabling it to cover functions ranging from simple VoIP calls to complex multi-user videoconferencing.

SIP uses proxy servers to route requests, authenticate users, and provide features such as voice mail.

SIP performs five basic functions:

- 1. User Location** finds another user by way of an address, not unlike an e-mail address.
- 2. User Availability** determines whether a user answers a request to communicate. A user may be registered under several addresses, in which case SIP may transfer an unanswered call to another address, which may be another device or an application such as voice mail.
- 3. User Capabilities** checks for compatibility between clients.
- 4. Session Setup** establishes session parameters for both called and calling party.
- 5. Session Management** handles changes to the call status, including transfer and termination of sessions, modifying session parameters, and invoking new services.

Why Buy From Black Box? Exceptional Value. Exceptional Tech Support. Period.

Recognize any of these situations?

- You wait more than 30 minutes to get through to a vendor's tech support.
- The so-called "tech" can't help you or gives you the wrong answer.
- You don't have a purchase order number and the tech refuses to help you.
- It's 9 p.m. and you need help, but your vendor's tech support line is closed.

According to a survey by *Data Communications* magazine, 90% of network managers surveyed say that getting the technical support they need is extremely important when choosing a vendor. But even though network managers pay anywhere from 10 to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls far short of their expectations—and certainly isn't worth what they paid.

At Black Box, we guarantee the best value and the best support. You can even consult our Technical Support Experts before you buy if you need help selecting just the right component for your application.

Don't waste time and money—call Black Box today.