

Oscom ChannelBank - Data Sheet



Professional VoIP solution

- A good business partner

Astribank is a USB channel bank especially designed for Asterisk Open Source PBX systems

Astribank USB channel bank extends the functionality of Asterisk-based IPX systems. Astribank connects to the Asterisk IP-PBX server via USB 2.0, thus eliminating the need for an intermediating PCI (the solution used by other channel banks). For a comparison between Astribank and legacy channel banks please email sales@dtasia.net and request this.



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Key Features:

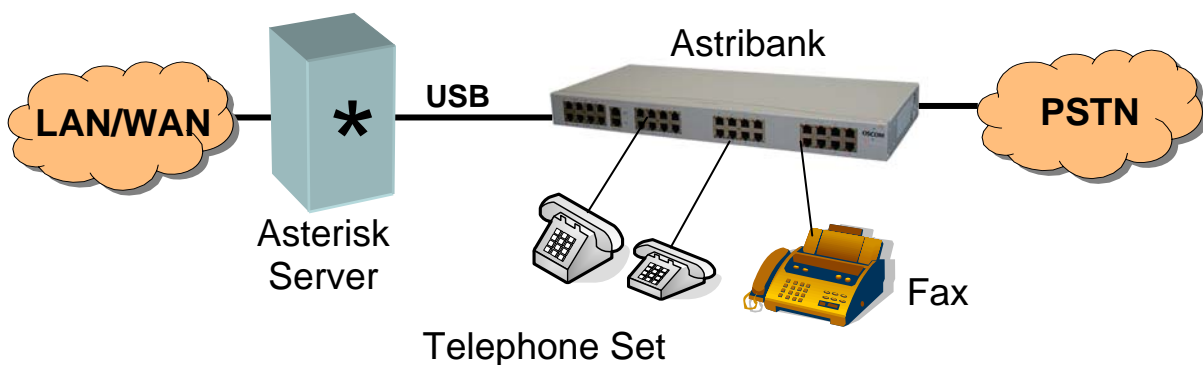
- USB channel bank for Asterisk
- Supports FXS, FXO, BRI and PRI
- Native Asterisk - no extra software or hardware required*
- Input/Output ports for connecting peripheral devices
- From eight ports to hundreds of ports
- Hardware echo canceller option
- 48 volt option
- TwinStar™ full redundancy support (dual server connection)
- Telecom connection option
- Power drive for ISDN phones

The reliable USB 2.0 plug-and-play connection can support, theoretically, over 3,000 concurrent calls on a single USB 2.0 port.

The industry-standard USB connection eliminates the costly, cumbersome PRI card that is needed for standard channel bank support, and adds unique features such as reliable fax support, transparent synchronization between Oscom Channel Bank units, an auxiliary system interface, and more.

Oscom Channel Banks modular architecture is designed to support all standard telephony interfaces: FXS, FXO, ISDN-BRI and ISDN- E1- T1 PRI.

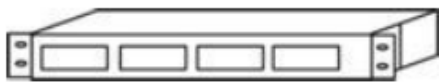
Architecture:



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Mechanical Design:

The internal design of Atribank is modular, offering a wide variety of FXS, FXO, BRI ISDN and I/O port combinations. To see a table of available port combinations please go to our website at www.dtasia.net. Use our product configurator wizard to design the best telephony system to match your requirements.



Atribank Rack Mount



Atribank Wall Mount

Multiple Atribank units may be connected to a single Asterisk server using different USB 2.0 ports, a USB 2.0 hub or USB 2.0 PCI card.

Telephony:

Maximum number of built-in analog ports	32
Maximum number of E1 / T1 ports	4
Maximum number of BRI ISDN ports	8
Maximum number of telephony modules	4
Maximum number of telephony ports	54 (E1 PRI/R2 + 24 analog ports)
Supported telephony modules	<ul style="list-style-type: none"> • 8 FXS ports • 8 FXS ports + I/O ports • 8 FXO ports • 2 FXO ports, 6 FXS ports + I/O ports • PRI/R2 supporting up to 4 ports • BRI ISDN supporting up to 8 ports

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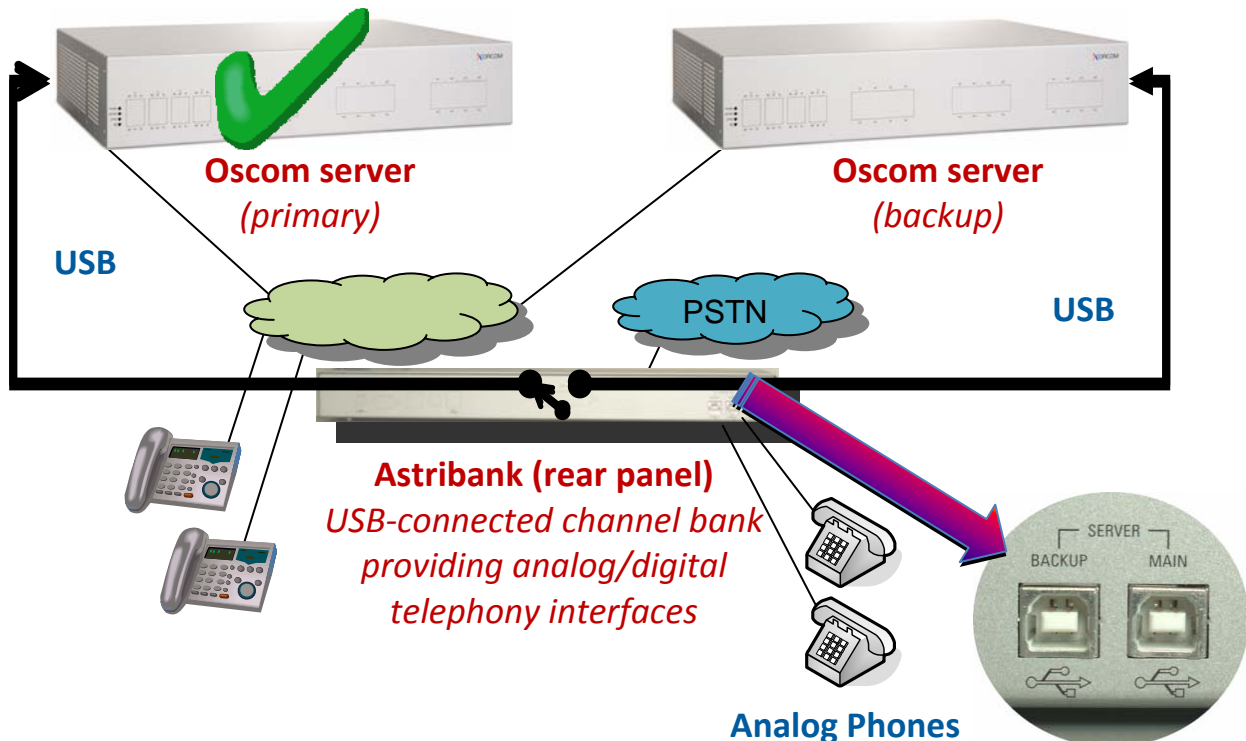
Software:

Astribank's driver has been included as an official part of Zaptel (now DAHDI) since release 1.2.4 (Feb. 2006), making Astribank integral with Asterisk systems. Today Astribank is tested with Debian, CentOS 5 and trixbox (CentOS 4).

TwinStar™ – Full and Automatic PBX Redundancy:

This optional high availability solution for Asterisk-based PBX systems provides automatic detection of server failure and immediate switching of all telephony functions, including telephony interfaces, to a back-up server within seconds. All Astribank 2 models are capable of supporting TwinStar functionality, which is activated via software license. [See our Web site for more information.](#)

The Astribank channel bank, using its dual-USB port feature, connects to both the primary and the backup server. Its firmware mechanism constantly checks the status of the server, and reverts all telephony to the back-up server in case of primary server failure.



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USB 2 Interface

The USB 2 interface provides a theoretical speed of 480,000,000 bits per second. A typical uncompressed phone conversation uses about 64,000 bits per second per direction, plus some overhead; in total less than 200,000 bits per second per phone call is used.

Thus, the theoretical concurrent number of conversation that the USB 2 interface can handle is 480,000,000 divided by 200,000: roughly 2,400 calls for a single USB 2 port.

This is a theoretical number, of course, and the typical host processor will not be able to handle this amount of concurrent calls, but it does give a clear answer to the question: "Can the USB 2 port support heavy telephony traffic with multiple Oscom Channel Banks?"

Connecting multiple Oscom Channel Bank units to a single USB 2 port is easy: simply use a USB Hub to connect many Oscom Channel Bank units.

Telecom Connector Option (TCO):

This option is available in units with 24 or more FXS ports. To streamline installation of multi-port systems, the TCO unites all FXS ports on the Astribank unit into a single telecom connector on the rear panel. All front panel indicators and RJ11 connectors remain active and enable easy monitoring and maintenance. A cable for connecting the telecom connector to the patch-panel is included.

Input/Output (I/O) Ports:

Analog units with FXS modules support I/O ports. The two output ports enable activation/deactivation of peripheral devices by dialing an extension number. A popular example of output port usage is to open a door by dialing an extension. The four input ports create an off-hook event in Asterisk. The dial plan can be configured to use this function to dial an extension, play a message, send an email, activate another device using the output ports, etc. Examples of possible input port usage include forwarding a call to specific numbers, and playing a pre-recorded message if the fire/burglar alarm goes off. More information about I/O ports is available in the White Papers section of our Web site: www.dtasia.net.

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Length of Telephone Lines:

A frequently asked question is “how long can the telephone line be?” Some applications need analog telephones that are located far away from the Oscom Communication Server.

The Oscom Channel Bank is designed to drive a load of 5 REN (Ring Equivalent Number) over a standard telephone line of 2,000 feet (610 meters). This translates to 160 Ohms for this length, which means that you can connect 5 standard telephone sets, which support a ring load of 1380 Ohms in parallel with capacitance of 40 micro-farads.

Put simply, 2,000 feet of normal telephone line will work fine. A calculated number of about 6,000 feet (~ 2 kilometers) shows that a telephone set will work at a distance (using standard telephone cable) seamlessly.

Important Note: When running telephone lines out of a building, it is essential that the lines are protected against lightning. Lightning can damage the units even if it does not physically touch the line: the induced current on the line may be high enough to damage the Oscom Channel bank.

Telephone lines are protected by standard protection devices such as gas discharge units or solid state devices.

Specification:

Power

Power Supply:	External 12VDC desktop
Voltage:	Switching, auto adjust 110/220 Volts, 50/60 Hz
Power consumption:	20-75 Watts (depends on number and usage of telephones)

Environment

Storing temperature:	-20° to 70° Celsius (-4°-158° F)
Working temperature:	0° to 40° Celsius (32°-104° F)
Humidity:	20%-95%, non condensing

Dimensions and Weight

Weight:	1.5 Kg 3.3 Lbs (weight may vary and depends on configuration)
Size:	19" 2U industry standard rack-mountable chassis

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