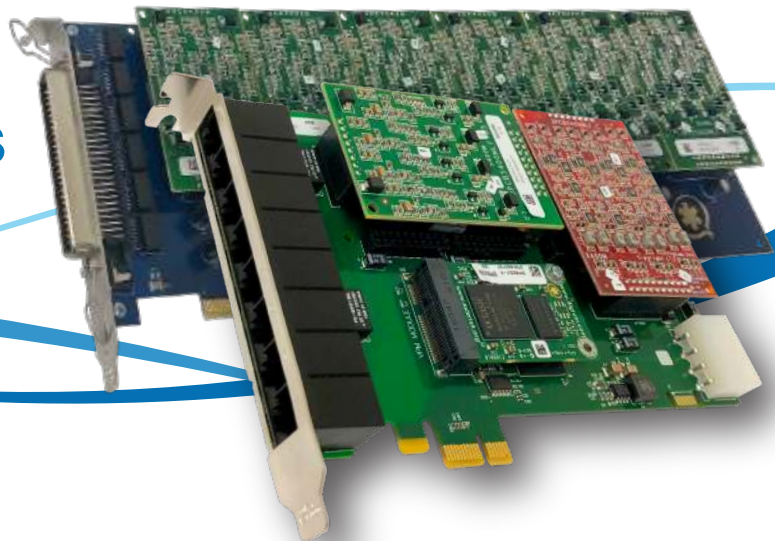# Analog Telephony Cards

The Highest Quality Analog Telephony Interface Cards

For many SMBs and SOHO businesses, analog telephone lines are still their primary method of accessing the PSTN. For over three decades, Sangoma has been providing the highest quality analog telephony cards for FreePBX, PBXact, Asterisk and many other proprietary phone systems to connect to the PSTN.

Trusted by tens of thousand of worldwide customers and projects, Sangoma's analog cards are trusted for their dependability, flexibility, and interoperability. Sangoma's telephony cards are compatible with virtually all environments and standard servers. Sangoma is the global leader in telephony interfaces.

"Sangoma cards are guaranteed to work with FreePBX and PBXact systems with full Plug-and-Play support from the web GUI."

Our analog cards offer optional telco-grade echo cancellation to help provide superior echo cancellation and eliminate the load that software echo cancellation would otherwise place on the PBX.

Quick Facts

» 1-24 Ports FXO/FXS (Scalable)

» Optional Telco Grade Echo Cancellation

» Compatible with Most Motherboards and Operating Systems

» Plug-and-Play with PBXact and FreePBX

Use Cases: Channel Banks, Small Office Home Office (SOHO) Applications, SMB Applications, Analog Trunks, Loopstart Server Applications

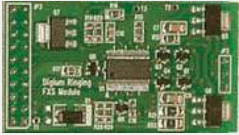|	A4A	A4B	A8A	A8B	TDM2400	AEX2400
Ports	4	4	8	8	24	24
	RJ11	RJ11	RJ11	RJ11	50-Pin RJ21	50-Pin RJ21
Bus Type	PCI 2.2+	PCI-E 1.0+	PCI 2.2+	PCI-E 1.0+	PCI 2.2+	PCI-E 1.0+
Connector	3.3/5.0 V	X1	3.3/5.0 V	X1	3.3/5.0 V	X1
Dimensions (cm)	16 x 6.3	16 x 6.3	15.7 x 10.6	15.7 x 10.6	31.19 x 10.67	31.19 x 10.67
Low-Profile	Yes	Yes	No	No	No	No
Half-Length	Yes	Yes	Yes	Yes	No	No
FXO Module	Single Trunk	Single Trunk	Single and/or Quad Trunk		Quad Trunk	Quad Trunk
FXS Module	Single Station	Single Station	Single and/or Quad Station		Quad Station	Quad Station
Echo Cancellation Module	VPM032	VPM032	VPM032	VPM032	VPMOCT032	VPMOCT032

Which Type of Module Do I Need to Use with My Analog Card?

Modular design lets you choose between the interchangeable FXS or FXO modules to create your channel requirements
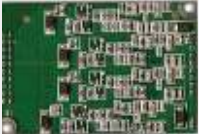
FXS Modules

FXS Modules are used for:
» Connecting analog telephones and fax machines
» Connecting to the FXO ports of an analog phone system

S110M:
» Supports one channel/port of FXS
» Used with A4/A8 cards

S400M:
» Supports up to four channel/ports of FXS
» Used with A8/TDM2400/AEX2400 cards

FXO Modules

FXO Modules are used for:
» Connecting directly to PSTN provider lines
» Receive ring voltage from FXS devices

X100M:
» Supports one FXO channe and one PSTN trunk line
» Used with A4/A8 cards

X400M:
» Supports up to four channel/ports of FXS
» Used with A8/TDM2400/AEX2400 cards

Technical Specifications

Interfaces

Telephony Interfaces:

A4A/B
» 1-4 ports of FXS/FXO (Scalable) using S110M/X100M single port modules

A8A/B
» 1-8 ports FXS/FXO (Scalable) using S110M/X100M single port modules or S400M/X400M quad port modules

TDM2400/AEX2400
» 4-24 ports FXS/FXO (Scalable) using S400M/X400M quad port modules

PCI Interfaces:
» PCI or PCI Express 1.0 and greater
» Fully PCI 2.2 compliant, compatible with all commercially available motherboards, and shares PCI interrupts
» Autosense compatibility with 5 V and 3.3 V PCI busses
» Compatible with PCI-E slots x1 to x16

Features

PBX Support:
» Asterisk, FreePBX, PBXact

Operating System Support:
» Linux (Most flavors)

Server and Motherboard Support:
» Compatible with most commercially available servers and motherboards

DSP Echo Canceller (Optional):
» G.168-2002 echo cancellation in DSP hardware
» 1024 taps/128 ms tail per channel on all channel densities
» No CPU load as a result of echo cancellation
» Double talk detection

Wiring Connections

A4A/B & A8A/B
» 6-pin RJ11 jacks (4 for A4A/B and 8 for A8A/B)
  Cables not included

TDM2400/AEX2400
» Single 50-pin RJ21 connector
  50-pin amphenol cable sold separately

Hardware

Environmental:

Temperature
» 0 to 50° C (32 to 122° F) operation
» 20 to 65° C (4 to 149° F) storage

Humidity
» 10 to 90% noncondensing

Dimensions:

A4A/B
» 6.3" x 2.52" x 0.591"

A8A/B
» 6.18" x 4.21" x 0.591"

TDM2400/AEX2400
» 12.28" x 4.2" x 0.68"

Mounting:
» Includes standard mounting bracket Half-Length bracket available for purchase
» Compatible with all commercially available motherboards

Power Requirements:

A4A/B
» PCI: 4W
» PCI Express: 5W
» 3.5W (2FXS into 3 REN), 5W (4FXS into 3 REN)

A8A/B
» PCI: 5W
» PCI Express:7W
» 6.5W (4FXS into 2 REN), 13W (8 FXS into 5 REN)

TDM2400
» 3.3V @1.0W, 5V @9.0W
» 12V @11-20 W

AEX2400
» 3.3V@4W, 5V@9W
» 12V@11-20W

SANG✳MA

Analog Telephony Cards.En.202002.24.R1