

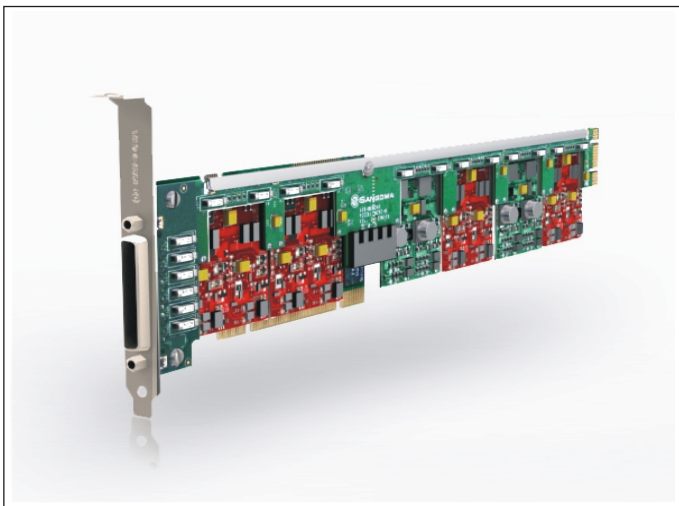


# A400/ENHANCED REMORA 12 PORT FXO/FXS System

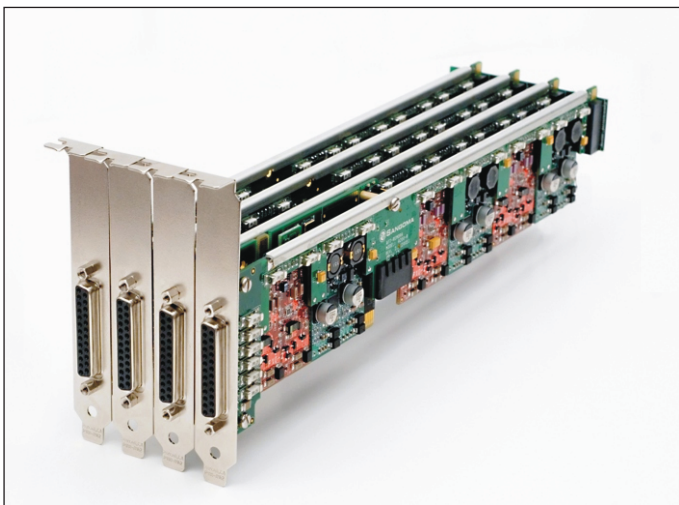
## A400 Card (PCI and PCI Express)

Version	Interface	Digital Signal Processor
A400	PCI	N/A
A400D	PCI	Hardware echo canceller
A400-X	PCI Express	N/A
A400D-X	PCI Express	Hardware echo canceller

Product Identifier



A400 base board - 12 ports



A400 base plus 3 REMORA cards: 48 ports

## The A400 and REMORA system support up to 48 FXO/FXS ports

The A400 Series is the high density version of the popular A200 series analog cards. Identical in operation and configuration, and using the same FXO and FXS modules, the A400 system supports twelve ports per main board and REMORA, as compared to four ports for the A200.

As you need them, additional REMORA cards can be added to the base twelve port A400 card. A single PCI or PCI Express slot host connection can support up to 48 FXO/FXS ports with common synchronous clocking for all channels.

Like all the Sangoma AFT Series, the A400 and REMORA system has field upgradeable firmware to take advantage of enhancements as they become available. Optionally, the A400 supports Sangoma's echo cancellation and voice enhancement DSP daughterboard for carrier grade echo cancellation and voice enhancement.

## Architecture

The A400 consists of an A400 REMORA daughterboard mounted on the AFT PCI /PCI Express. The A400 REMORA card has six sockets each which can accept an FXO-2 or FXS-2 module. Each FXO-2 or FXS-2 module supports two FXO or FXS lines respectively.

Up to four additional A400 REMORA daughterboards can be mounted in empty slot positions beside the A400 assembly, connected to the A400 by a backplane bus connector. Each 12 port A400 REMORA card is connected by means of a standard 12 line color coded telephone cable terminating at the card in a robust DB25 connector, and ready for hard wiring into a punch block at for the PSTN connection.



## Technical Specifications

- From 2 to 48 ports supported, mixing FXO and FXS interfaces as required.
- Support for the Asterisk™, Yate™, FreeSwitch™ OPAL™ PBX/IVR projects, as well as other Open Source and proprietary PBX/Switch/IVR/VoIP gateway applications.
- Single synchronous PCI interface up to 48 FXO/FXS ports.
- Connects to punch block using a standard two line colour coded telephone cable. Pictured below is the optional Amphenol Y cable that is now available to connect up to two Sangoma A400 Cards to a telephone patch panel.



Optional Amphenol Y cable

- Dimensions: 2U height form factor: 290mm x 55 mm for use in a 2U chassis.
- Short 2U compatible mounting clips available for installation in 2U rackmount servers.
- 32 bit bus master DMA data exchanges across PCI interface at 132Mbytes/sec for minimum host processor intervention.
- Autosense compatibility with 5v and 3.3v PCI busses.
- Fully PCI 2.2 compliant, compatible with all commercially available motherboards, proper interrupts sharing.
- Intelligent hardware: Downloadable Field Programmable Gate Array programming with multiple operating modes. Field upgradeable so that new features related to voice and/or data can be added when they become available.

- Power: 800mA peak, operational 300mA max at +3.3v or 5v.
- Temperature range: 0 - 50C.

## Optional DSP daughterboard on the A400d

- G.168-2002 echo cancellation in hardware
- 1024 taps/128ms tail per channel on all channel densities
- DTMF decoding and tone recognition
- Voice quality enhancement: Octasic music protection, acoustic echo control and adaptive noise reduction.

## Operating Systems

Linux (all versions, releases and distributions from 1.0 up). Windows NT/ 2000/ XP, FreeBSD, Open BSD, NetBSD, Solaris

## Certification

FCC Part 15 Class A, FCC Part 68, CISPR 22, EN 55022 Class A, CISPR 24, AFIC-S016, IEC 60950. Technical certifications in Russia and Malaysia.

## Diagnostic Tools

WANPIPEMON, SNMP, System logs

## Production Quality

ISO 9002

## Warranty

Five years parts and labour.

## Contact Information



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**Because it must work!**

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