CXR HX9500-12FXSA/12FXOA

VOICE CARD FOR HX9500

RJ Version — TELCO Version
12FXSA

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12FXOA

Product Overview

The 12FXSA/12FXOA plug-in cards are designed for the single slot of HX9500 series. It allows voice frequency interfaces to be multiplexed as a 64 kbps DS0 signal onto a digital network. 12FXSA provides 12 voice Interfaces connect to telephones. 12FXOA provides connections from telephone lines, either from a central office or from a PBX in twelve RJ11 connectors or one Telco 64 connector. Coding is either A-law or μ-law selectable by user. Most popular signaling conventions are supported, including PLAR.

Key Features

- 12 RJ11 connectors or one Telco 64 connector
- 12 telephone connections for FXS
- 12 central office or PBX line connections for FXO
- Supports PLAR
- Loop start or Loop start/ground start option
- Battery reverse supported
- DID supported
- A, B, C, D signaling bits per-port configurable
- A-law or ɥ-law coding
- Intended for use with ±48, ±125Vdc, or 100-240Vac powered main units.
- Provides ±24Vdc powered manufacture option

Ordering Information

To specify options, choose from the list below.

Note 1: Before purchasing, please check the HX9500 main brochure to see if the following models are supported by the controller to use with.

Model	Description	Notes
HX9500-12FXSA-**sn**-**pta**-**typ**	12-channel FXSA plug-in card with 600/900 Impedance, Battery Reverse, Loop Start and PLAR. Without Ground Start and Metering Pulse. Used with 12 RJ11 connectors or 1 Telco 64 connector.	12FXSA-GMP includes all FXSA card functions. For **sn, pta** and **typ** option, please refer to the table below for detail information. **pta**= power type. For **pta** option, please refer to the table below for detail information.
HX9500-12FXSA-P-**sn**-**pta**-**typ**	12-channel FXSA plug-in card with 600/900 Impedance, Battery Reverse, Loop Start, PLAR and [PLAR bit programmable]. Without Ground Start and Metering Pulse. Used with 12 RJ11 connectors or 1 Telco 64 connector.	
HX9500-12FXSA-M-**sn**- **pta**-**typ**	12-channel FXSA plug-in card with 600/900 Impedance, Battery Reverse, Loop Start, PLAR and [Metering Pulse]. Used with 12 RJ11 connectors or 1 Telco 64 connector.	
HX9500-12FXSA-MPP- **sn**-**pta**-**typ**	12-channel FXSA plug-in card with 600/900 Impedance, Battery Reverse, Loop Start, PLAR, [PLAR bit programmable] and [Metering Pulse]. Used with 12 RJ11 connectors or 1 Telco 64 connector.	
HX9500-12FXSA-GS- **sn**-**pta**-**typ**	12-channel FXSA plug-in card with 600/900 Impedance, Battery Reverse, Loop Start, PLAR and [Ground Start]. Used with 12 RJ11 connectors or 1 Telco 64 connector.	
HX9500-12FXSA-GM-**sn**-**pta**-**typ**	12-channel FXSA plug-in card with 600/900 Impedance, Battery Reverse, Loop Start, PLAR, [Ground Start] and [Metering Pulse]. Used with 12 RJ11 connectors or 1 Telco 64 connector.	
HX9500-12FXSA-GMP- **sn**-**pta**-**typ**	12-channel FXSA plug-in card with 600/900 Impedance, Battery Reverse, Loop Start, PLAR, [PLAR bit programmable], [Ground Start] and [Metering Pulse]. Used with 12 RJ11 connectors or 1 Telco 64 connector.	
HX9500-12FXOA-**typ**	12-channel FXOA plug-in card with 600/900 Impedance, Battery Reverse and Loop Start. Without Ground Start. Used with 12 RJ11 connectors or 1 Telco 64 connector.	For **typ** option, please refer to the table below for detail information.
HX9500-12FXOA-GS-**typ**	12-channel FXOA plug-in card with 600/900 Impedance, Battery Reverse, Loop Start and [Ground Start]. Used with 12 RJ11 connectors or 1 Telco 64 connector.	

■ Where **sn** is used to select special function. If this option is not required, omit the **sn** field in the ordering code.

sn =	Description	Notes
sn = omit	FXSA Loop Feed = -48 Vdc with 25 mA current limit; alarm tone enable; normal ring	
S1	FXSA Loop Feed = -48 Vdc with 35 mA current limit	
S4	Remove alarm tone	
S5	Double ring tone transmit	

*Note: **For sn (special function), please contact your nearest CXR sales representative**.*

Where **pta** is used to select the following functions for 12FXSA.

pta=	Description	Notes
24	For HX9500-CHPAa using SDPA power module with ±24Vdc input power	
PWR	For HX9500-CHPAa using SDPA power module with ±48Vdc input power or using SDP125 power module with ±125Vdc input power	
	For HX9500-CHPCa using SDPB power module with ±48Vdc input power or using SAPB power module with 100 to 240Vac input power	

■ Where **typ** is used to select the connector type:

typ=	Description	Notes
RJ	12 x RJ11	
TELCO	1 x Telco 64	

12 FXSA/FXOA Card Product Specifications

Connector	Twelve RJ11 or one Telco 64
Alarm Conditioning	CGA busy after 2.5 seconds of LOS, LOF
Encoding	A-law or μ-law, user selectable together for all
AC Impedance	Balanced 600 or 900 ohms (selectable together for all)
Longitudinal Conversion Loss	> 46dB
Cross Talk Measure	Max -70dBm0
Gain Adjustment	FXS: -21 to +3 dB / 0.1dB step transmit & receive
	FXO: -15 to +10 dB / 0.1dB step transmit & receive
Signal/ Distortion	> 25dB with 1004 Hz, 0dBm input
Frequency Response	± 0.5 dB from 300 to 3400 Hz, coincide with ITU-T G.712
Idle Channel Noise	Max. –65 dBm0p
Variation of Gain	±0.5dB

FXO	Ringing REN	0.5B (AC)
	Detectable Ringing	25 Vrms
	Loop Resistance	$\leq 1800\ \Omega$
	DC Impedance (ON-HOOK)	$> 1M\ \Omega$
	DC Impedance (OFF-HOOK)	$235\ \Omega$ @ 25mA feed
FXO Signaling Bit A,B,C,D	Per-port configurable	$90\ \Omega$ @ 100mA feed

FXS Loop Feed	-48Vdc with 25mA current limit per port
	Jumper Selectable: 25mA(default=25mA), 30mA, or 35mA(sn=S1)
FXS Signalling	Normal / PLAR: Private Line Auto Ring down
FXS Ringing	1 REN at 5K meters per port
	16.7Hz, 20Hz, 25Hz, 50Hz, user selectable for all ports
	Jumper selectable: 64, 76, and 85 Vrms (triangle wave), (default= 76 Vrms for Ring Voltage)
	2 sec on 4 sec off, or 1 sec on 2 sec off optional for PLAR ON
FXS Tone	Alarm Tone: 480Hz/620Hz/-24dBm
	Ring Back Tone: 440Hz/480Hz/-19dBm

FXS Functions	Basic functions: Bettary Reverse, Loop Start, PLAR
	Optional functions: PLAR ON/PLAR bit programmable, Ground Start, and/or Metering Pulse.
FXS Signaling Bit A,B,C,D	Programable bit

- All in-band signaling tones are carried transparently by the digitizing process.
- Customer is responsible for in-band signaling compatibility between a telephone and a switch, or between a PBX and a switch.
- FXS specification shown above support 12FXSA card hardware version N and up.
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Certifications

FCC Part 15 Class A, FCC Part 68, CS-03

Application Illustrations