

Quad FXS Voice Card for HX9800



Features

- 4 telephone connections
- PLAR supported
- 3 options supported: Loop Start, Ground Start, Metering Pulse
- Metering Pulse support 12KHz/16KHz
- User programmable signaling Bit A, B, C, D
- User programmable A-law or μ -law coding
- User programmable gain adjustment
- User programmable balance 600/900 ohm impedance
- Signaling and voice tests
- Status monitoring

Intended for use with ± 48 Vac powered main units

Description

The QFXSA plug-in cards are designed for the HX9800, allowing voice frequency interfaces to be multiplexed as a 64 kbps DS0 signal onto a digital network.

QFXSA provides connections to four telephones, and it also provides user programmable A-law or μ -law coding. Most popular signaling conventions are supported, including PLAR (Private Line Automatic Ring down).

The QFXSA supports signaling and voice tests, including ring test, battery reverse test, channel swap, metering pulse test, and tip open test. Moreover, it supports status monitoring: line, signaling bit, and jump setting

Ordering Information

Note 1: RoHS compliant units are identified by the letter **G** appearing at the end of ordering code.

Note 2: Before purchasing, please check the HX9800 main brochure to see if the following models are supported by the controller to be used with.

Model	Description	Note
HX9800-SQFXSA- x-pt-G	Quad FXSA voice plug-in card	- Jumper setting options: Loop Start, Ground Start (GS), Metering Pulse Transmit 12/16 KHz (MP) - For x & pt option, please refer to the table below for detail information
HX9800-SQFXSA-M- x-pt-G	Quad FXSA with MP 16 KHz voice plug-in card	
HX9800-SQFXSA-M12- x-pt-G	Quad FXSA with MP 12 KHz voice plug-in card used	
HX9800-SQFXSA-GS- x-pt-G	Quad FXSA with GS plug-in card	
HX9800-SQFXSA-GM- x-pt-G	Quad FXSA with GS and MP 16 KHz voice plug-in card	

NOTE: If **x** is not selected from the table below, the default setting for signaling bits is ETSI and for trunk condition is ON HOOK.

■ Where **x** is used to select version type. If this option is not required, omit the **x** field in the ordering code.

x =	Description	Note
A	follows ANSI signaling bits	The default mode for signaling bit is ETSI mode, and other modes may also be set via VT100.
E	follows ETSI signaling bits	
S	follows customer's special bits assignment	

■ Where **pt** is used to select the power type:

pt =	Description	Note
PWR	For HX9800 with CHA chassis using SDA power module with $\pm 48\text{Vdc}$ input power	

QFXSA Voice Card for HX9800 Series Product Specifications

Voice Card (QFXSA)

Quad FXSA voice card
(4 FXS per plug-in)

Connector	1, 2, 3, or 4 FXS per RJ11 connector
Alarm Conditioning	CGA busy after 2.5 seconds of LOS, LOF
Encoding	A-law or μ -law, user selectable
AC impedance	Balanced 600 or 900 ohms (user selectable)
Longitudinal Rejection	55 dB
Gain Adjustment	-21 to +3 dB / 0.1 dB step for transmit (D/A) & receive (A/D) gain
Signal/ Distortion	> 46dB with 1004 Hz, 0dBm input
Frequency Response	± 0.5 dB from 300 to 3400 Hz, coincide with ITU-T G.712
Loop Feed	$\pm 48\text{Vdc}$ with 25mA current limit per port Jumper Selectable: 25mA, 30mA, 35mA
Ringing	Support 2 REN per port (1 REN = $6930\Omega + 8\mu\text{F}$) 16.7Hz, 20Hz, 25 Hz, 50Hz (user programmable) 64 / 78 Vrms by jumper setting (Default is 78 Vrms) 2 sec on 4 sec off, or 1 sec on 2 sec off optional for PLAR (user programmable)
Metering Pulse	12KHz/ 16KHz (2.4Vrm/1Vrm user programmable)
Signaling	Loop Start (Metering Pulse, DTMF, Dialing Pulse, PLAR), GND-Start (Tip Open, Ring GND), OOS Alarm, Battery Reverse

- 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.

Compliance

FCC Part 68, CS-03 listed for connection to PSTN

NRTL safety listed: UL1459, CSA

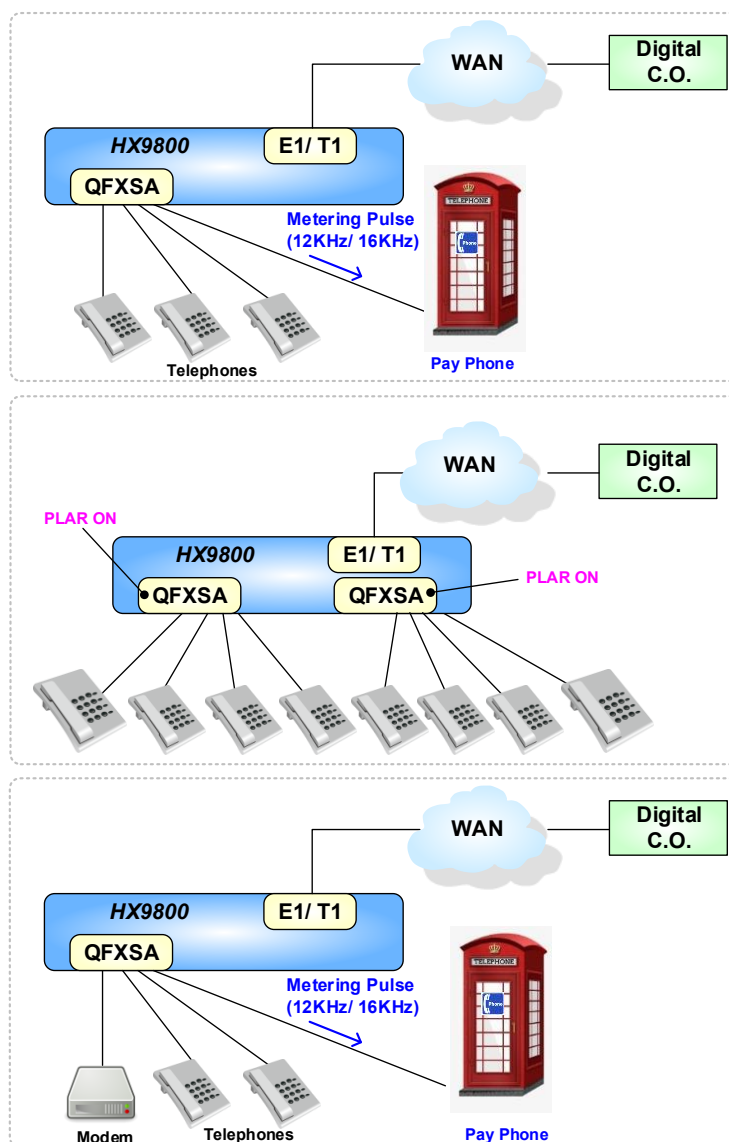
ITU-T G.712

Reference Table for QFXSA Signaling Bits

Item	Tx/Rx	Signaling Bit ABCD (J1 Jump)									
		PIN	N/A	P14_P23	P15_P22	P16_P21	P17_P20	P18_P19	P16_P21 + P18_P19	P17_P20 + P18_P19	P17_P20 + P16_P21
		Name	ETSI (Default)	ETSI	ANSI	SB3	SB4	SB1	SB3.1	SB4.1	SB4.3
ON-HOOK	TX	0101		0101		1101				1111	
OFF-HOOK	Tx	1101		1101	1111	1101	0101	0101	1101	1111	0000
RING ON	Rx	00**		0001	0000	1011	0001	0101	1011	0000	
OFF-HOOK [@PLAR- ON]	Tx	1111		1111			0101		1111	0000	
RING ON [@PLAR- ON]	Rx	1111		1111			0101		1111	0000	1111
BATTERY REVERSE	Rx	0100		0100				0001	0110	0100	
Pulse ON [Metering Pulse]	Rx	0111		0111		0000	0111		0000	0111	
TIP-OPEN [GND- Start]	Rx	1111		1111							
RING-GND [GND- Start]	Tx	0001		0001		0000	0001	1111	0000	0001	
OOS ALARM	Rx	****		1010							

- NOTES:**
1. * for don't care.
 2. [GND-Start] and [Metering Pulse] are available only when these two options are selected.

Application Illustrations



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