## **Product Brief**

# **Telephone Expansion Board (FXO)**





### **Description**

The Telephone Expansion Board (FXO) is one of a suite of option cards available for the Gemini Intercom system.

The FXO board provides a standard interface to four (4) third-party telephony systems like PSTN lines, PBXs, mobile telephone interfaces and other telephony devices.

Outside callers can dial into Gemini and contact individual users or conferences automatically or manually through an operator.

This option also allows Gemini users to make outside calls from anywhere on the system using any device with DTMF dialing capability.

### **Key Features**

- Provides a standard interface for four PSTN lines or other third-party telephony devices
- Allows outside callers to access a Gemini intercom system and reach individual subscribers or conferences automatically or via an operator
- Enables users to make and receive outside phone calls from anywhere on the system

#### **Incoming Call Modes**

- Auto-answer: incoming call is greeted with a dial tone, and caller uses a predefined DTMF dial plan to contact a specific user or conference
- Manual-answer: incoming call is automatically routed to pre-defined Hardware or software intercom panels for manual call handling

#### **Outgoing Call Modes**

- Line Access from Intercom Panels: a key on a opeator panel is used to access a line and dial a call
- Line Access from Other Gemini users with DTMF Capability: devices dial a series of digits to access a line and dial a call



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#### **Specifications**

Connectors

Line Interference Number of channels 4 per card, Max of 4 option cards per MIU

> 4 DSP IP channels per card, regardsless of whether the DSP Channel usage

channel is routed to a different host

Signalling Loop start or ground

**DTMF** DTMF detection for DDOI routing

Bypass phone operation Phone is switched out of circuit whenever FXO channel is in use

Line Impedance CTR21, 600R, 900R or Japan - software selectable

Return loss >18dB 300-400Hz

Protection FCC pt 68 type B longitudinal surge, 1500V: FCC pt 68 type B

metallic surge, 800V

Ring equivalency number **REN < 0.2** 

Longitudinal balance >60dB (200-1000Hz); 40dB (1000-4000Hz) Common mode rejection ratio (CMRR) On hook >70dB 50-500Hz Vcm=60Vrms

Off hook >40dB 50-500Hz Vcm=60Vrms

On hook >300Vrms 50-60Hz Common mode overload level (CMOL)

Off hook >250Vrms 50-60Hz

Max trip/ring voltage 300V (Correct operation not implied) Recommended max 120V

90mA

Ringing voltage - detect Typically 22V, min 26V, 17-68Hz Ringing voltage - no detect Typically 14V, max 18V, 1768Hz

THD <1% at 0dBm. 1kHz

<-85dB (inter-channel and inter-card) Crosstalk

Insertion Loss 0dB

Nominal line TX level -9dBm ± 1dB

Input level adjustment Via software -9dB to +12dB in steps of 1.5dB

Output level adjustment Via software –34.5dB to +12dB in steps of 1.5dB. Mute option

Freq response 300Hz - 3200Hz ± 2dB ref to 1kHz (8kHz sampling)

Line RJ11 2 pin modular jack socket

Bypass Phone 1 per channel (4)

Phone connector pinout Pin 3 – tip (B), Pin 4 – ring (A), other pins - unused

Ringing Ring Cadence **US Ringtone** 

**Echo Suppression** DSP Based adaptive filter providing acoustic & network suppression General

Tail length (acoustic) 63.5ms

**ERLE** 30dB typical

**Environmental** Weight 200g

Max loop current

Operating temperature 0 to +50°C. Storage -20 to +85°C

Relative humidity 0 to 90% non-condensing Operating Humidity

**MTBF** 80.000 hours

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