DATA SHEET

IMACS FXO Cards

Features

- Terminating impedance of 600 ohms.
- Supports full range of CAS signaling states to ensure compatibility with most public networks.
- Encodes analog signals into 64 Kbps PCM format for connection to digital networks.
- Ability to specify, on a port-by-port basis, North American ANSI standard AB signaling or ITU (CCITT) ABCD signaling.
- Robust diagnostic evaluation and fault isolation through extensive loopbacks and test tone selection.
- Compatible with all IMACS voice compression server cards.
- Provides ring tone through additional ringing generators

Overview

The FXO 2W*8-6 card manages the flow of FXO voice traffic through the IMACS system. Each card encodes analog signals to 64 Kbps PCM format before transmission onto the T1 or E1 network. It also decodes the digital signals to analog at the remote system. The card has a two-wire interface and supports Foreign Exchange – Office (FXO), Manual Ringdown (MRD), Foreign Exchange Office-Defined Network (FXODN), and Dial-Pulse Terminating (DPT) operations.

FXO cards can be installed in any user slot in an IMACS chassis. FXO cards can use the voice-compression features of the ADPCM card. Each FXO card provides a single 50-pin female Amphenol connector (RJ27X).

The card is software configurable to set the card to operate based on the type of equipment to which each port is connected. All options use two-wire balanced connections. The FXO option allows connection of the system to a 2 way PBX trunk (both inbound and outbound calls) or a key system trunk. The FXODN (Foreign Exchange Office-Defined Network) option provides access to services in advanced networks offered by many major carriers. The DPT (Dial Pulse Terminating) option allows the unit to attach to incoming one-way trunks from a PBX, key system or a telephone set; similar to the fxo option.

The card can also operate in MRD (manual ring down) mode providing point-to-point unswitched connections between two telephone sets. This configuration is usually not attached to an exchange or switch; rather it provides a “hot line” between two locations.

The user may also specify, on a port-by-port basis, whether to use North American ANSI standard AB signaling or ITU (CCITT) ABCD signaling through the use of a signaling conversion setting.

Software-initiated testing and diagnostics supported on FXO cards include the setting of both analog (“anlg”) and digital (“dgtl”) loopbacks towards the network and the generation of a digital milliwatt signal on a port-by-port basis. A robust set of test functions allow the user to monitor and set the state of the analog tip and ring leads of any FXO port and to set and monitor the state of the ABCD signaling bits of the digitized voice signal.

Specifications

WEIGHT & DIMENSIONS

- 8" x 7.5" (20cm x 18.75cm)
- .75 lbs (.34 kg)

POWER

- 7 Watts, 23.9 BTU/hr

INTERFACES

- One RJ21 50-pin craft cable supporting eight ports

STANDARDS SUPPORT

- AT&T TR43801
- ITU-T G.711 1988
- ITU-T G.712
- ITU-T G.713
- ITU-T G.714
- ITU-T Q.552
- ITU-T Q.553
- FCC Part 68

ENVIRONMENTAL

- Operating Temperature: 0 to 50 degrees Celsius
- Storage Temperature: -20 to 80 degrees Celsius
- Humidity: 0 to 95% (non-condensing)

GEEK SPECS

- Transmission performance Exceeds requirements of ITU-T Sec. G.713
- Signaling modes. Software selectable on a per port basis
  - Foreign Exchange Station (FXO) 2 way connection to PRX or key system trunk.
  - Foreign Exchange Station – Defined Network (FXSDN) – provides access to major carrier services.
  - Private Line Automatic Ringdown (PLAR) – point-to-point unswitched connections.
  - Dial Pulse Originating (DPO)
  - slc96 – slc96 compatibility
- Signaling types
  - Loop Start
  - Loop Start – Forward Disconnect
  - Ground Start
  - Ground Start – Immediate
  - Ground Start – Automatic
- Termination impedance 600 ohms with 2.16 uF
- VF transmission characteristics
  - Nominal transmit TLP: -10.0 dB to +5.0 dB in steps of 0.1 dB
  - Nominal receive TLP: -10.0dB to +2.0dB in steps of 0.1 dB
  - PCM encoding: Software selectable on a per port basis
    - mu-law, A-law or a-inv (inverted A-law)
- Frequency response
  - 300-3khz <-0.15+0.15dB, Typical 0.05dB
  - 3200 hz <-0.75dB, Typical 0.07dB
  - 3400hz <-1.568, Typical 0.4dB
- Return loss (at 1 Khz): >28 dB
- Relative transhybrid Against 600 ohm, in series with 2.16 pF termination.
- Loss ERL 34.5dB SRL LO 20.5dB SRL HI 20.5dB
- Idle channel noise
  - (rcv and xmt): <-65 dBmop Typ < – 70 dBmop or <20 dBrncp
- Interchannel crosstalk Typ <-75 dBm0 using 7 adjacent channels being disturbed with a signal of 0.0 dBm0
- Total distortion including quantization (signal to distortion ratio) input frequencies 1004-1020 Hz:
  - Input Level Rcv or Xmt Overall
  - -30 to 0 dBm0 >35dB >33dB
  - -40 dBm0 >29dB >27dB
  - -45 dEm0 >25dB >22dB
- Absolute group delay <750 microseconds
- Group delay distortion versus frequency:
  - Within boundaries of ITU-T Rec. G.713
- Longitudinal balance Nom > 46 dB Typ> 50 dB
- Variation of gain with input level
  - Within boundaries of ITU-T Sec. G.713
  - Typical gain variation is within +0.25 dB from +3 to -50 dBm0
- Diagnostic capabilities Analogue loopback and digital loopback
- Extensive support for test tone insertion, termination, signaling lead set and monitor.
- Trunk conditioning Idle or Busy

Ordering Information

MODEL	DESCRIPTION
PRM-813970	IMACS, FXO, 2W, 8P
8000-FXO-8P	IMACS 8000, FXO, 2W, 8P

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