# DynaFlex FXO/FXS Subscriber & VF Interface Units

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The Avara DynaFlex FXO/FXS Subscriber and VF units provide a variety of voice grade communications interfaces for the DynaFlex Multiservice Access platform. They support FXS, FXO and Voice Frequency interfaces with E&M signaling.

## FXO / FXS Subscriber Interface Units

The subscriber interface units are designed for a variety of applications in public and dedicated networks.

The FXO unit is used to connect subscribers to an analogue exchange and converts the signaling from the exchange into digital format for the transmission path. At the end of the transmission path, the associated FXS interface unit converts the signaling back to analogue form for the subscriber. The FXO unit is thus always used as a pair with the FXS unit.

The FXS unit simulates the functions of an exchange to the subscriber. Similarly, the FXO unit simulates the functions of the subscriber to the exchange.

The FXS interface unit can be used in the following applications:

• to connect subscribers to an analogue exchange via an FXO unit
• in hot line applications interfacing directly to other FXS ports

The FXS unit has an integrated ring generator to produce the necessary voltages to drive telephone handset providing a very compact solution for service delivery.

The unit also features a 1 KHz tone to facilitate line testing that can be selected to appear on any channel towards the physical line.

## VF Interface Unit

The VF interface unit supports a range of different applications:

• Leased line 2-wire or 4-wire VF connections
• 2-wire or 4-wire connections with one or two E&M channels for use n public networks or in private PABX networks.

This unit has 8 voice channels with 2 x E&M signaling interfaces for each one. One of the E&M interfaces per port can also be used in an optically isolated manner. Each channel can be configured independently for:

• Channel on/off
• Channel time slot allocation 1-15 & 17-31
• Two-wire or four-wire operating mode
• Independent level setting for TX and RX directions
• Signaling logic

## Configuration & Supervision

Configuration and supervision of the VF units can be done locally or remotely using Q1 or Telnet/SNMP/ASPeCT when an Ethernet/IP Management DCC is available.

## Technical Highlights

**VF8**
•   8 x 2/4 wire transformer isolated VF channels
•   2 x E & M interfaces per channel
•   Configurable input and output levels
•   ITU-T G.711 & G.712

**FXS**
•   8 x Subscriber Interfaces
•   Integrated ring generator
•   ITU-T G.712, G.711 and Q.552

**FXO**
•   8 x Exchange interfaces
•   ITU-T G.712, G.711 and Q.552

•   Compatible with DB4, DB2 and DM2 as well as equivalent Dynanet channel units

**VF**

# Technical Specifications

| VF | Product Code | P61021.01 |
|---|---|---|
| **Customer Interfaces** | VF Channels Per Card<br>VF Modes | 8<br>2-Wire or 4-Wire |
| **Relative Levels** | Input levels to channel card<br>Output levels from channel card<br>Nominal Impedance<br>Adjustable VF Level step size<br>Return Loss (300Hz - 3,400Hz) | -12.0 …..+3.0 dBr<br>-19.0 …..+6.0 dBr<br>600 Ohms<br>0.5dB (software configurable)<br>> 20dB (min) |
| **Signaling** | E and M signalling bits per channel<br>Signal distortion | 2<br>2.5 ms (max) |
| **Power** | Power Consumption | 4.5W |
| **MTFB** | Mean Time Between Failure | 58 Years |

| FXO | Product Code | P61022.01 |
|---|---|---|
| **Customer Interfaces** | FXO Channels Per Card | 8 |
| **Features** | Nominal Levels<br>Dialing | RX: -4 dBr, TX: 0 dBr<br>DTMF |
| **Power** | Power Consumption | 4W |
| **MTFB** | Mean Time Between Failure | 61 Years |

| FXS | Product Code | P61023.01 |
|---|---|---|
| **Customer Interfaces** | FXS Channels Per Card | 8 |
| **Features** | Nominal Levels<br>Dialing<br>Ring Voltage (software settable) | RX: -6 dBr, TX: 0 dBr<br>DTMF<br>30 to 65V rms |
| **Power** | Power Consumption | 7W |
| **MTFB** | Mean Time Between Failure | 51 Years |

| | | **Standards** | |
|---|---|---|---|
| **Power**<br>Power Supply | -20 to -72 VDC | | ITU-T G.711<br>ITU-T G.712<br>ITU-T Q.552<br>AS/ACIF S002<br>AS/ACIF S003<br>AS/ACIF S004<br>EN55022 Class A Emissions<br>EN60950 Safety<br>EN55024 Immunity<br>EN50082-2 Generic Immunity<br>IEC 61850-3 Immunity<br>ETS 300 019 -1-1 Operational<br>ETS 300 019 -1-2 Storage<br>ETS 300 019 -1-3 Transport<br>A-tick<br>C-tick |
| **LED Indications**<br>Alarm LEDs<br><br>Login LED | Major (red) - A alarm<br>Minor (yellow) - B alarm<br>Green | | |
| **Environmental**<br>Operating Temperature<br>Relative Humidity | -20 °C to +65 °C<br>5-90% (Non-condensing) | | |
| **Mechanical**<br>Height x Depth x Width<br>(Excluding handle) | 233 x 160 x 25 mm | | |
| **Management (via Mux)**<br>Local<br>Remote<br>Q1 | CLI via Console (RS-232)<br>Telnet, SNMP, ASPeCT<br>V.11 MI/DI TS0/TSx | | |

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