DynaFlex Data Interface Units

The Avara Data Interface Units provide serial data communications interfaces for the DynaFlex Multiservice Access platform. It supports frequently used interface standards including V.11, V.24/V.28, RS232, X.21, V.35, G.703 64K and SHDSL.

Data Interface Units

The Avara DynaFlex Data Interface Units provides users with total non-blocking flexibility in data transmission provisioning. The DIUs can be used in all DynaFlex subrack products.

They can be freely installed together with other DynaFlex family channel units such as VF, FXO, FXS, & Teleprotection Units. Several low speed data units of different types, can be combined into one time slot with granularity down to 1 bit (8Kbps) to ensure bandwidth utilisation is optimised.

The adaptation of serial data into any time slot of the 2048 kbit/s G.704 frame is achieved by using efficient V.110 adaptation or direct adaptation. A number of methods are provided to convert low speed asynchronous data to synchronous streams including V.14, transition coding (R.111), and sampling with error filtering.

Low Speed DIUs

Low speed data signals up to 38.4 kbit/s in asynchronous or synchronous mode are transmitted effectively using DynaFlex data interface units. These signals can be efficiently mapped to a timeslot with Nx8K granularity. Several data channels can be transmitted within a single 64 kbit/s time slot.

When used together with the data summing functions of the DynaFlex multiplexer, it provides a flexible and efficient solution when deploying SCADA RTU solutions.

High Speed DIUs - V/X Series

High speed synchronous serial data interfaces are supported at 64K and Nx64K rates.

Both DCE and DTE operations are supported allowing the user to provide the timing reference for the interface. Control signals associated with these interfaces are transported over time slot 16 (using CAS).

High Speed DIUs - SHDSL

The SHDSL channel units deliver Nx64K services over the local copper loop using the SHDSL.bis line code with speeds of up to 2.048Mbps over a single copper pair.

Two models are available: single port unit and a four port unit.

Configuration & Supervision

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

G.703-64K

Technical Highlights

G.703-64k Unit

- 10 x G.703-64K Interfaces
- 2kV Transformer Isolation
- 64kbits/s co & contra-directional timing

VX Units

- 4 x V/X Type interfaces supporting a full complement of V.24/X.24 circuits
- 8 x V.28/V.11 interfaces supporting only Tx/Rx (operating mode software selectable)
- Supports V.11, V.24, V.28, X.21 and V.35 serial protocols
- Synchronous and Asynchronous Operation

SHDSL Units

- 1 or 4 x G.991.2 SHDSL Interfaces
- Compatible with DB4, DB2 and DM2 as well as equivalent Dynanet channel units
- Compatible with FlexiNT SHDSL CPE

Technical Specifications

Data Rate	Interface Type	Timing	Adaptation into the 2M Frame	Time Slot Usage Per Interface	Number of Interfaces Per Unit	Product Code
0 .. 38.4k and 48, 56, 64k	V.24/V.28	Sync	V.110	1, 2, 4 or 8 bits	4	P61031.01
0 .. 38.4k	V.24/V.28	Async	V.14 + V.110	1, 2 or 4 bits	4	
0 .. 19.2k	V.28/V.11	Async	Transition Coding (R.111) or sampling +error filtering	1, 2, 4 or 8 bits	8	P61031.02
0 .. 38.4k and 48, 56, 64k	X.24/V.11	Sync	V.110	1, 2, 4 or 8 bits	4	P61031.03
0 .. 38.4k	X.24/V.11	Async	V.14 + V.110	1, 2 or 4 bits	4	
nx64k	X.21/V.11	Sync	Direct	1..n time slots	4	P61032.01
64k	G.703 64K	Co/contra	Direct	1 time slot	10	P61033.02
nx64k	V.35	Sync	Direct	1..n time slots	4	P61037.01
nx64k	SHDSL	Sync	Direct	1..n time slots	1	P61038.01
nx64k	SHDSL	Sync	Direct	1..n time slots	4	P61038.02

Power Power Supply Power Consumption	-20 to -72 VDC		**Standards**	ITU-T V.11 ITU-T V.24 & V.28 ITU-T X.24 & X.21 ITU-T V.14 & V.110 ITU-T V.35 ITU-T G.703 ITU-T G.704 ITU-T G.823 ITU-T G.991.2 EN55022 Class A Emissions EN60950 Safety AS/ACIF S016 EN55024 Immunity EN50082-2 Generic Immunity IEC 61850-3 ETS 300 019 -1-1 Operational ETS 300 019 -1-2 Storage ETS 300 019 -1-3 Transport A-tick C-tick
	P61031.xx	3.5W		
	P61032.01	3.5W		
	P61033.02	3.5W		
	P61037.01	4.0W		
	P61038.01	5.5W		
	P61038.01	7.0W		
MTBF	VX Units: G.703 Unit: SHDSL Unit:	85 Years 72 Years 65 Years		
LED Indications Alarm LEDs Login LED	Major (red) - A alarm Minor (yellow) - B alarm Green			
Environmental Operating Temperature Relative Humidity	-20 °C to +65 °C 5-90% (Non-condensing)			
Management (via DB4) Local Remote Q1	CLI via Console (RS-232) Telnet, SNMP, ASPeCT V.11 MI/DI TS0/TSx		**Mechanical** Height x Depth x Width	233 x 160 x 25 mm (Excluding Handle)

Head Office

9 Business Park Drive
Notting Hill, Victoria 3168
Australia
Tel: +61 3 95400330
Fax:+61 3 99236545

www.avaratechnologies.com

Regional Distributor