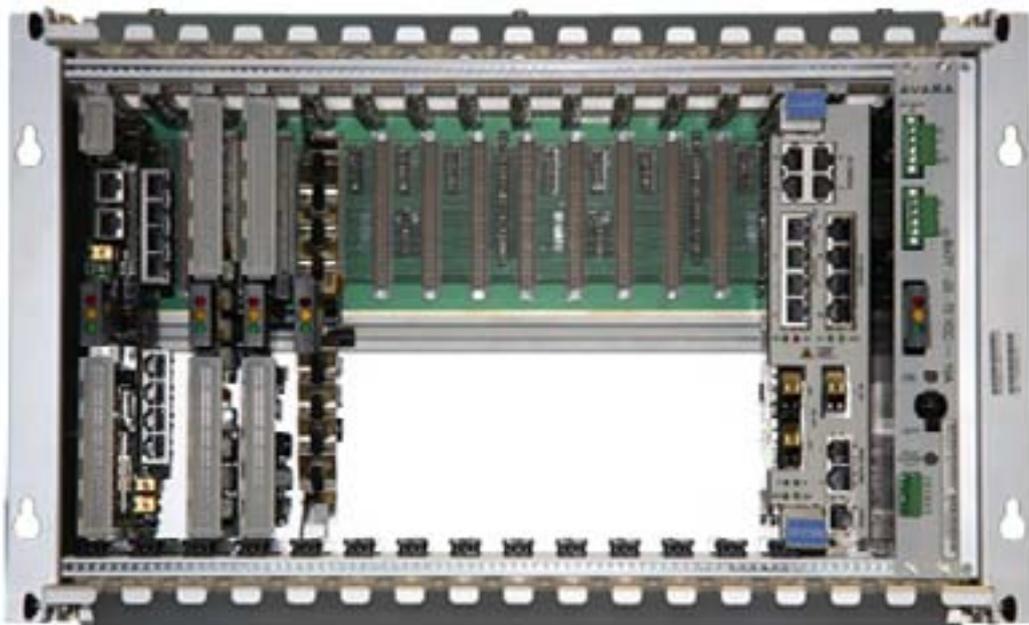# DynaFlex Multiplexer

Avara's DynaFlex product family is a flexible, fully featured, access multiplexer with powerful cross connect & protection capabilities, interoperable and compatible with the Nokia Dynanet product.

Avara's DynaFlex product family is a flexible, fully featured, access multiplexer with powerful cross connect and protection capabilities that is fully interoperable and compatible with the Nokia Dynanet product.

With the capability to handle a wide range of interfaces like POTS, SCADA, Ethernet, Serial Data and Tele-Protection, the DynaFlex platform is an ideal choice for transporting mission critical TDM services over PDH, SDH or Ethernet based packet interfaces.

- DynaFlex offers a broad range of hot pluggable channel cards to complement a range of physical interfaces in a modular manner:

A wide range of interfaces are supported:

- C37.94 Tele-protection
- VX V and X Type Serial Interface
- G.703 -64K Interface
- ESU layer 2 Ethernet Interface
- FXS POTS Interface (Sub-Sub)
- FXO POTS Interface (Sub-Exchange)
- VF Voice Frequency Interface
- SIP30 POTS to SIP Interface

The DB4 provides traditional PCM multiplexing, Nx64K/8K granularity Cross Connection and various Branching Capabilities for creating protected circuits using up to 4 x E1 interfaces. This unit also supports layer 2 switching and has QoS and VLAN capabilities including complex rate limiting methods, thus enabling the use of the existing E1 infrastructure to deliver Fast Ethernet services.

- The DB4 can be used as a direct replacement for the Dynanet DB2. It offers full remote configuration using Q1 and Telnet Protocols and monitoring using SNMP, enabling the use of existing management platforms to fully manage, configure and monitor DynaFlex elements.

Software download using TFTP is supported, thus reducing installation time. A comprehensive set of SNMP traps and alarms are provided to assist fault management & isolation. DynaFlex can be managed locally via CLI or Service Terminal and remotely using Q1 and Telnet. Ethernet / IP based management interfaces can be supported over a separate VLAN thus offering a greater level of security for management traffic.

DB4

DB4 – Primary Multiplexer Controller

- 4 x E1 (G.703/G.704) interfaces with CAS & CRC support
- 120Ω balanced or 75Ω unbalanced options
- Manageable via Q1, SNMP and Telnet
- Supports TS0 and TSx Q1 Management
- Supports fully non-blocking cross connects
- Supports Branching, Digital Summing and VF Summing functions
- RS232 console via RJ45
- 2 X 10/100 Ethernet on a single RJ45 for Management
- Integrated high performance Ethernet switch fabric
- 4 x Ethernet WAN directions
- Independant timing input and output interfaces
- Pluggable into Dynanet mechanics
- Interoperates with Dynanet DB2/DB2LP/DN2/DM2/DM2+.
- Point-to-point, linear, mesh & loop topology
- Smart E1 loop detection to preserve management connectivity
- -20 to -72 VDC Power Supply
- -20 to +65 °C fanless operation

DB4X (Switched Ethernet Transport support)
Contains the following additional interfaces & functionality:

- 4 x 10/100 Ethernet ports
- 4 x V.11 ports with data hybrid functionality
- Tag based VLAN (802.1q) and port based VLAN support
- Per VLAN MAC Address Table
- 802.1p priority
- Rate limiting on Ethernet ports

DB4X

C37.94 Channel Unit

- 4 x IEEE C37.94 optical tele-protection interfaces
- Programmable output power
- Nx64kbit/s (where N = 1 .. 12 per interface)
- Multi-mode fibre support

VX Channel Units

- 4/8 x V/X type interfaces supporting a full complement of V.24/X.24 circuits
- Supports V.11, V.24, V.28, V.35 and X.21 serial protocols
- Synchronous and Asynchronous Operation

G.703-64K Channel Unit

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

EXU Channel Unit

- 8 x 10/100BASE-T Ethernet ports
- VLAN and QoS Support (802.1p/q)
- Extensive Rate limiting options
- Support for 4096 VLANS
- 1632 Byte MTU with 8K MAC Addresses

FXS Channel Unit

- 8 x Subscriber Interfaces
- Integrated Ring Generator
- Interface ITU-T G.712, G.711 and Q.552

FXO Channel Unit

- 8 x Exchange Interfaces
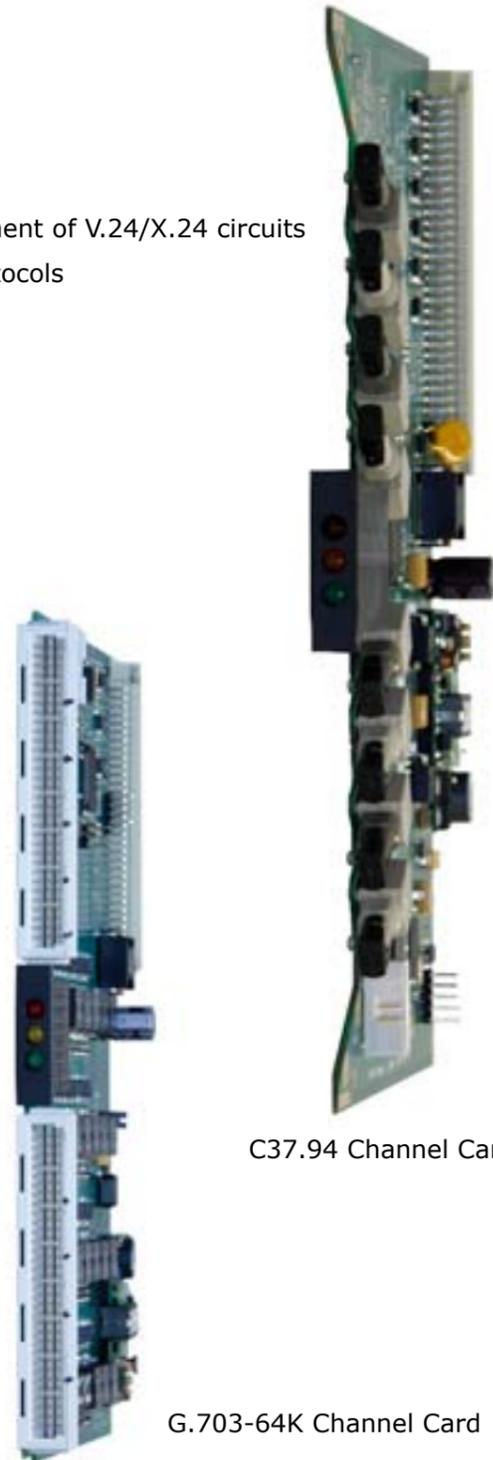- Interface ITU-T G.712, G.711 and Q.552

VF Channel Unit

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

SHDSL Channel Unit

- 4 x SHDSL Interfaces
- Interface ITU-T G.992.1

SIP30 Channel Unit

- SIP30 can terminate up to 30 voice channels from up to 4 E1 interfaces and convert them to SIP
- A full 64K cross connect is available on board to perform grooming of the TDM voice circuits allowing the SIP30 to be located at more centrally and easily accessible sites
- Call features include; parallel ring, group pick-up, hunt group, call forwarding, call hold and common ring group.

C37.94 Channel Card

G.703-64K Channel Card

M4 Subrack

M4 Subrack

- 3RU with 4 slots available
- Integrated AC or DC power supply
- Optional integrated 16 x RJ45 connector patch panel

M16 Subrack

- 6RU with16 slots available in total (1 x PIU with 15 slots available for other cards)
- Can optionally support two power interface units (2 x PIU with 14 slots available for other cards)
- -20 to -72VDC Power Interface Unit (PIU)

Enviromental ratings

- Operating Temperature -20 °C to +65 °C
- Relative Humidity 5-90% (Non-condensing)
- EN55022 Class A Emissions
- EN60950 Safety
- EN55024 Immunity
- EN50082-2 Generic Immunity
- IEC 61850-3 Immunity
- ETS 300 019 -1-1 Operational
- ETS 300 019 -1-2 Storage
- ETS 300 019 -1-3 Transport

DFX100/1000 Optical Transport Card

- 4 x 10/100Base-T Ethernet Ports
- 4/8 x G.703/2M E1 Ports (DFX100 = 4E1, DFX1000 = 8E1)
- 2 x V.11 Serial Data Ports supporting asynchronous operation
- 2 x 1000Base-X (SFP based) Network Interfaces on DFX1000
- 2 x 100Base-X (SFP based) Network Interfaces on DFX100
- 1 x 1000Base-X (SFP based) Tributary Interface (DFX1000 only)
- Point to point, linear and ring topology support
- Sub 50ms protection switching in ring mode
- High performance Ethernet layer 2 switch fabric
  with 802.1p/q VLAN capabilities
- Rate Limiting on Ethernet ports
- Supports both VLAN access ports as well as trunk ports
- Management via Q1, SNMP, Telnet, CLI, Web Browser

DFS-1/4 SDH Transport Card

- 2 x 155/622 Mbps SFP receptacles
- 2 x 155 Mbps SFP receptacles
- 12 x E1 2.048 Mbps 120 Ω
- 4 x 10/100/1000BaseT Electrical
- Management via ASPeCT & SNMP

SHDSL Transport card

- 4 x SHDSL Interfaces with M-Pair bonding
- 4 x E1 (120 Ohm) Interfaces
- Transparent E1 or Nx64K over SHDSL transport
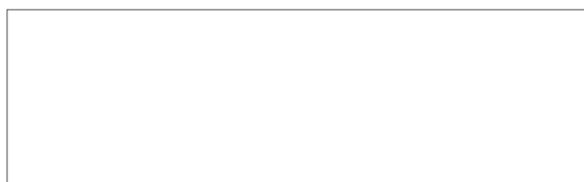- Management via Q1, ASPeCT, SNMP, Telnet, & CLI

DFX1000

AVARA
TECHNOLOGIES

Regional Distributor

Quality
ISO 9001

We make every effort to ensure this item has been created from environmentally sustainable products. We only print what we need.

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