

DynaFlex DXC Digital Cross Connect System

The DXC is a member of Avara’s DynaFlex Multiservice Access platform and allows operators to cross connect up to 60 x E1 interfaces at an Nx64K or Nx8Kbps granularity. Designed in a modular manner, the DXC offers a highly reliable cross connect solution ideal for use in critical networks.

The DXC node comprises of multiple DXC4 Interface Units that are plugged into the DynaFlex subrack.

Each DXC4 unit provides 4 x E1 physical interfaces for traffic with support for up to 15 such units per DXC node allowing the node to support a fully non-blocking 60 x E1 cross connect at an Nx64K or Nx8K granularity.

Reliability through Modularity

With the DXC’s distributed architecture, should an interface unit malfunction, only the cross connects associated with the failed interface unit will be affected allowing the rest of the node to continue operating.

Synchronisation

The DXC offers a number of node and network synchronisation options necessary to implement high availability critical networks. Multiple timing inputs and timing priority lists are available so that should the preferred input timing reference to a node fail, alternate sources can be activated in a prioritised manner. The DXC also supports the distribution and usage of timing status over timeslot 0 to support loop and mesh type applications.

Protected Connections

The DXC supports protected services (Y-branching) whereby two different routes through the transmission network can be established and protected conditionally based on incoming pilot bits. These pilot bits can be transported over any bit in any timeslot or via CAS.

Data & Voice Summing

The DXC also support summing & conferencing functions whereby a number of voice or data channels can be summed/conferenced together to support point-to-multi- point applications.

Configuration, Monitoring & Alarms

The DXC can be managed using the Q1 protocol via the physical V.11 ports or remotely using timeslot 0 overhead bits or over any dedicated timeslot.

Alternately, where an Ethernet based Management DCC is available, the node can be managed using SSHv2, Telnet and SNMP. Additionally, Avara’s ASPeCT Element Manager can be used to manage the DXC over an encrypted TCP connection for secure access.

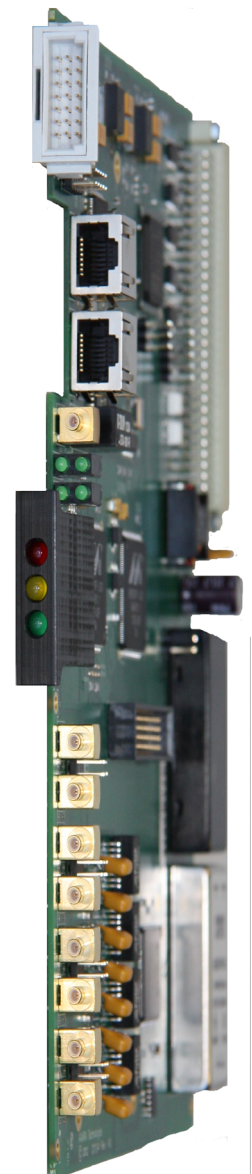
Standards compliant performance monitoring, numerous loopbacks, statistics and diagnostics on E1 and Ethernet interfaces are available to facilitate fault management and isolation.

Technical Highlights DXC System

- Supports up to 15 x DXC4 Interface Units providing a 60 x E1 cross connection capability
- Extensive Nx64K/8K cross connect and branching capabilities
- Extensive protection features
- Serial Data Summing/Conferencing
- Voice Summing/Conferencing
- Interoperable with third party multiplexer products including Nokia Dynanet DB2/ DB2LP/DN2/DM2/DM2+ and FMX
- Manageable via Q1, Telnet, SSHv2, SNMP & ASPeCT
- RADIUS support for AAA

DXC4 Interfaces

- 4 x G.704/2M Balanced (120 Ω) or Unbalanced (75 Ω)
- Q1 MI/DI with Data Hybrid (V.11)
- RS-232 console RJ45
- 2 x 10/100 Ethernet on single RJ45 for management
- 4 x Ethernet WAN directions per DXC-4 Interface Unit for management channel distribution
- Measurement port or Sync In/Out via SMB
- -20 to +65 °C operation



DXC4-75 Ω Interface Unit of the DXC node

Technical Specifications

| | | | |
|--|--|--|--|
| Model Order Code P61211.01 DXC-4-120 / P61411.01 sDXC-4-120 P61211.02 DXC-4-75 / P61411.02 sDXC-4-75 P61000.01 DYF-DXC-SR-19-16 P61005.01 DYF-PIU-DC P61006.01 DYF-PIU-AC S61027.xx DYF-ASPECT-DXCM | | Single slot card 120Ω Euro Connector Single slot card 75Ω SMB Connectors DynaFlex DXC 16 Slot Subrack DynaFlex -20 to -72VDC Power Interface Unit DynaFlex AC Power Interface Unit ASPeCT Management System for DXC | |
| Mechanical Height-Depth-Width DXC-4 | (Excluding handle) 233 x 160 x 25mm | Power Power Supply Power Consumption | -20 to -72 VDC 12 W (Max.) 9 W Typical |
| Interfaces DXC-4 4 x E1 ports Ethernet (management) Measurement Out or Sync In or Sync Out | G.703/G.704 2M 75/120Ω 2 x 10/100BASE-T (single RJ45 connector - switched) 1 x SMB connector 75Ω | Alarm Reporting Front panel LED | Major (red) Minor (yellow) A, B and D alarm reported to bus for relay contact activation on PIU |
| | | Security Data Interfaces Management | Dedicated VLAN Password Protection |
| TDM Features Cross Connect Granularity Summing/Conferencing | Nx64K / Nx8K Voice & Serial Data | Environmental Operating Temperature Relative Humidity | -20 °C to +65 °C 5-90% (Non-condensing) |
| Circuit Protection Data Path Cross Connect Size Table Switching Mode Number of Conditions | Y-Branching 2048 Entries (10 tables) Static or Conditions Based 255 | MTBF | DXC-4-120: 65 Years DXC-4-75: 65 Years |
| Network Timing Node Synchronisation Sync out | Sync In/E1/Internal G.703 2.048MHz | Standards | IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3x Flow Control RFC1157 SNMP RFC1213 MIB II RFC854 Telnet RFC783 TFTP EN55022 Class A Emissions EN60950 Safety AS/ACIF S016 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 A-tick / C-tick / CE Mark |
| DXC Ethernet Management Interface Parameters Speed Auto negotiation Duplex MDI/MDIX Support MAC Address Size Max Frame Size | 10/100Base-T Yes Full/Half Yes 8K 1632 Bytes | | |
| Management Local Remote Q1 | CLI via Console (RS-232) Telnet, SSH, SNMP, ASPeCT, RADIUS V.11 MI/DI TSO | | |
| | | ITU-T V.11 ITU-T G.703 ITU-T G.704 ITU-T G.823 | ITU-T G.732 ITU-T G.796 ITU-T G.797 |

Head Office

1/45 Normanby Road
 Notting Hill, Victoria 3168
 Australia
 Tel: +61 3 95400330
 Fax: +61 3 99236545
www.avaratechnologies.com

Regional Distributor

