HUBBELL
Power Systems

IMUX 2000 8-Port DACS

By RFL Electronics
Catalog # IMUX_2000

The IMUX 2000 8-Port T1/E1 DACS, provides full cross-connect capability as well as a reliable level of system restoration. The RFL DACS enables the termination of up to eight [8] T1/E1 ports in a common platform while also providing full DS0 Time Slot Interchange capability. Redundant DACS modules are available for critical applications, which cannot tolerate single point of failure network architectures. Communications interface options for the DACS include built in T1 CSU, or fiber optic interface adapters, using Code Mark Inversion (CMI) encoding technology. In the event the application is time sensitive in nature the RFL DACS can be confi gured as an Intelligent Line Switch (ILS) in order to provide ultra high speed path switching. System restoration is accomplished through the use of alternate DS0, Time Slot Interchanged maps. The alternate maps are predetermined and pre-programmed through our user friendly Network Management Software. An alternate DS0 map is invoked automatically upon detection of T1/E1 failures (e.g. AIS, Loss of Frame, excessive BER). The time necessary to switch to an alternate map, upon detection of failure, is programmable down to 1 millisecond.

Features

- Provides T1/E1 connectivity to several sites
- Groom/Concentrate/Hub multiple T1/E1 links
- Enables dual T1/E1 Ring interconnection
- Offers automatic re-routing capabilities
- Redundant DACS module and power supply
- Full Time Slot Interchange (TSI) capability
- 1 ms High Speed Intelligent Line Switch
- Rugged design (SWC, EMI, RFI, Temp)
- Intuitive GUI with color coded DACS maps
- Optional SNMP interface compatibility
- Front access T1/E1 maintenance Jack-fields
- Up to 8 T1/E1 ports, fiber optic or electrical
- DACS map and Tri-color port status Displays
- Electrical to fiber optic DS1 migration

Application

- Inter-substation communications
- System protection control and monitoring
- Corporate Wide Area Networks
- Substation automation
- Remote station data backhaul
- SONET/ATM backbone access
- Advanced Transportation Management Systems (ATMS)
- Traffic operation center data concentration
- Wayside communications and signaling for metro/rail
- Airport enterprise solutions
- Voice, data, video transport
- DSO grooming
- DS1 concentration
- Fractional T1 to subscribers
- Public and private networks

General

Alarm Type	Alert: Cautionary conditions that do not prevent multiplexer operation. Alarm: Conditions that directly affect multiplexer operation
Catalog Number	IMUX_2000
Humidity	0-95% Non-condensing
Interface	Front Panel indicators and a RS232 port for remote access and interrogation. Shelf, Form C alarm relays rated for 100 mA at 250 Vdc
Operating Temperature Celcius Max	+55°C
Operating Temperature Celcius Min	-20°C
Power Supply	75 Watts
Specifications	T1 Specifications - DS1 Inputs/Outputs Interface: DSX1 interface per ANSI T1.4031995 T1 CSU line build outs of –

7.5dB,15dB, and –22.5dB.Input: 1.544 Mbps 3 30 PPM, using internal timingOutput: 1.544 Mbps 3 30 PPMPulse Amplitude: Per ANSI T1.4031995Formats: Extended Superframe (ESF) per AT&T 62411, D4/ Superframe (SF) per AT&T 43801Line Codes: Bipolar with 8 Zero Substitution (B8ZS) & Alternate Mark Inversion (AMI)Line Impedance: 100 Ohms resistance (nominal)Avg. Reframe Time: <25 ms or <1 ms with Fast Reframing channel (FRC) enabled (FRC reframe for single frame data payload only)E1 Specifications - E1 Inputs/Outputs Interface: Conforms to CCITT G.703Input: 2.048 Mbps 3 50 ppm, using internal timingOutput: 2.048 Mbps 3 200 ppm, when not loop or through timed. 2.048 Mbps 3 130 ppm, when loop or through timedPulse Shape: Per CCITT G.703Formats: Frame Format CCS or CAS as per CCITT G.704 in 30 channel and 31 channel modesLine Codes: High Density Bipolar; Order 3 (HDB3) per CCITT G.703 or Alternate Mark Inversion (AMI)Line Impedance: Selectable 75 or 120 ohm resistive (nominal)Average Reframe Time: <25 ms or <1 ms with Fast Reframing channel (FRC) enabled (FRC reframe for single frame data payload only)General Specifications - Propagation Delay: DS1/E1 through Delay DACS: 1 to 3 frames, 2 frames average (250 Qsec) for each pass through. DS1/E1 through Delay ILS: 25 Qsec for each signal pass throughSwitch Time: DACS DS0, ILS Alternate Maps Switch Time: Programmable down to 1msSWC & Fast Transient: ANSI C.37.901989 & ANSI C.3790.1EMI: ANSI C.37.90.2FCC Compliance: BCC Part 15 Class ACE/EMC: BS EN 5502:1995, BS EN 6100042:1995, BS EN 6100043:1997, BS EN 6100044:1995, BS EN 610046:1996, BS EN 6100048:1994, DD ENV 50204:1996

Test Method	Loopbacks: Remote, Local and Analog DS0 & DS1/E1. Test pattern: PRBS pattern generation/detection 16bit loopup and loopdown code generation and detection.

Dimensions

Depth	varies depending on I/O in rear of chassis. Available in 23” width mounting. in
Dimension - Height inch	5.25
Dimension - Height mm	134
Dimension - Width inch	19
Dimension - Width mm	483
Weight	15 lb
WeightMetric	6.8 kg

Electrical Ratings

Input Voltage	• 24 VDC • 48/125 VDC • 120 VAC • 250 VDC • 220 VAC
Voltage Rating	• 19-29 VDC • 38-150 VDC • 90-130 VAC • 200-300 VDC • 180-265 VDC

Certifications And Compliance

Compliance	• ANSI T1.4031995 • ANSI T1.2311993 • ANSI T1.408 • AT&T TR54016 • AT&T TR62411 • ITU G.703 • ITU G.704 • ITU G.706 • ITU G.736 • ITU G.775 • ITU G.823 • ITU G.932 • ITU I.431 • ITU O.151 • ITU O.161 • ETSI ETS 300 011 • ETS 300 166 • ETS 300 233 • CTR4 • CTR12 • IEC 2555 & IEC 8014

Product Assets

Brochures - IMUX 2000 8-Port DACS

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