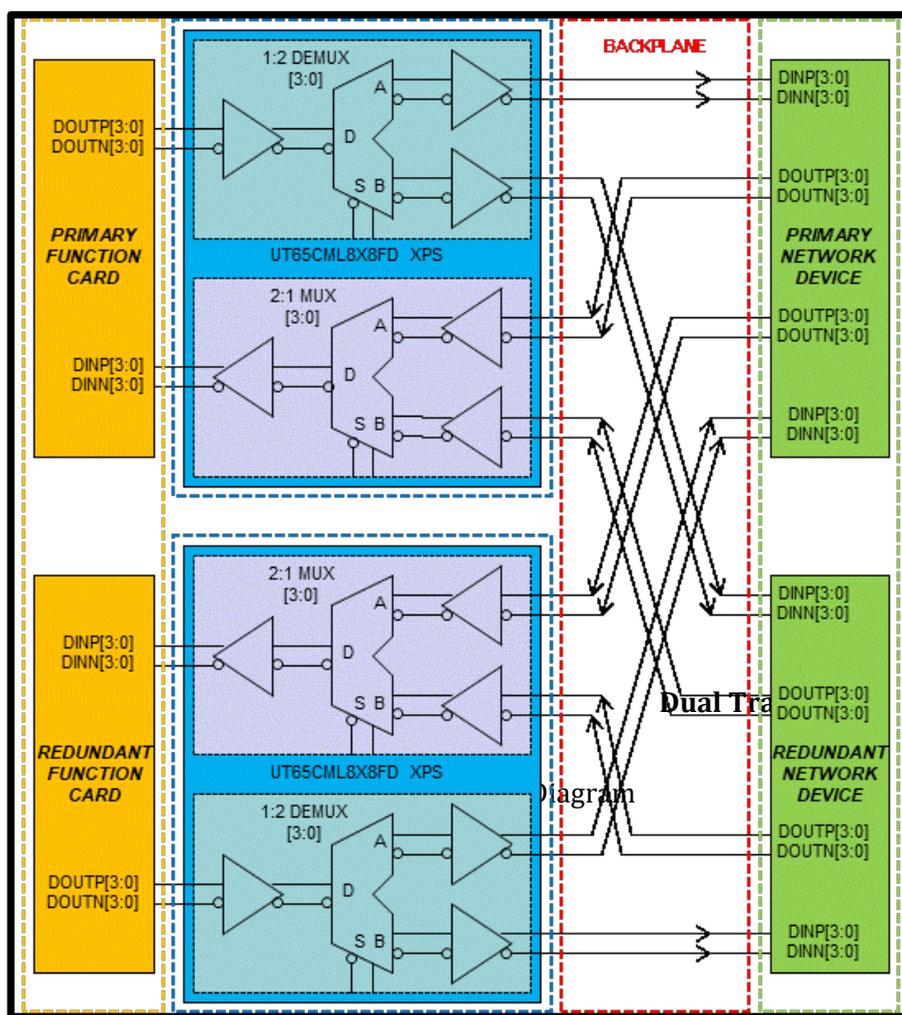


UT65CML8X8FD



For space applications demanding the highest reliability and radiation hardened products, Frontgrade's UT65CML8X8FD Crosspoint Switch is a highly versatile, protocol-agnostic, serial data switch. The protocol agnostic capability of the UT64CML8X8FD makes it well suited to support any serial communications protocol with signaling rates from 100 Mbps through 3.125 Gbps such as XAUI and Serial RapidIO™.

The UT65CML8X8FD's primary function is to perform switching of 10 G XAUI serial data streams between one of two, full duplex, current-mode logic (CML) signal I/O pads. The primary I/O configuration is an 8 x 8 XAUI-compatible port switch matrix. Each port has four full duplex lanes operating up to 3.125 Gbps.



UT65CML8X8FD Block diagram and A/B Switching

Crosspoint Switch

UT65CML8X8FD

Features:

- 8 x 8, Full-Duplex, Crosspoint Switch Matrix
 - Data Rates up to 3.125 Gbps per Channel
 - Protocol Independent
 - Low Propagation Delay (Latency)
 - Low Channel-to-Channel Skew
 - SPI Port Control Interface for Ease of Use
 - Diagnostic Serial Loopback Mode
 - Separate Power Domains per Bank
 - Power Down Feature for Unused Lanes
 - Loss of Signal (LOS) Detect
 - Adjustable 50 Ohm High-Speed Terminations
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Applications:

- High-Speed Serial Repeater and Distribution
 - Primary and Redundant Data Switching/Cross-Strapping
 - High-Speed Data Mux & Demux
 - L&S Band RF D2D/JESD204B Buffering and Muxing
 - SDR, UHF, SAR, Phased-Array Radar Data Buffering and Muxing
 - SpaceVPX (VITA78) Data Plane Switching and Cross-Strapping
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Operational Environment:

- Temp Range: -55°C to +105°C
 - TID: > 300 krad (Si)
 - SEL Immune: $\leq 100 \text{ MeV-cm}^2/\text{mg}$
 - SEU Rate: $< 1 \times E^{-10}$ errors/bit-day
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Physical:

- 143-pin CLGA, CBGA, CCGA
 - 14.5 mm x 14.5 mm, 1.0 mm pitch
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Power:

- 1.5 W (typical) – all channels active
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Qualifications:

- QML-Q, QML-V
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