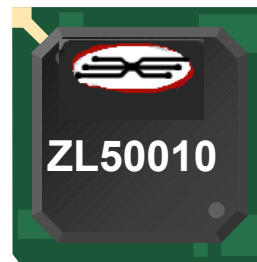


ZL50010

F512DX with Enhanced Integrated DPLL



KEY HIGHLIGHTS

- Full bandwidth use, 512x512 channel non-blocking switch operating at data rates of 2.048, 4.096 or 8.192 Mb/s
- Per stream rate conversion between the ST-Bus inputs and outputs
- Embedded PLL - Stratum 4E with holdover mode
- System Design Flexibility - Programmable Features
 - Per stream
 - Per channel



October 2002

FEATURES

- 512x512 channels non-blocking switching capacity at 2.048, 4.096 or 8.192 Mb/s
- Low voltage operation
 - 3.3V I/O supply voltage with 5V tolerant input
- Per channel programmable
 - Constant throughput delay mode for frame integrity
 - Message Mode
 - High impedance output control
- Testability
 - J-TAG, Bit Error Rate (BER)

FEATURES

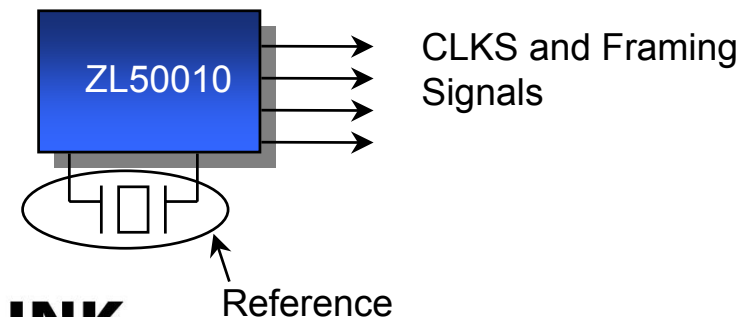
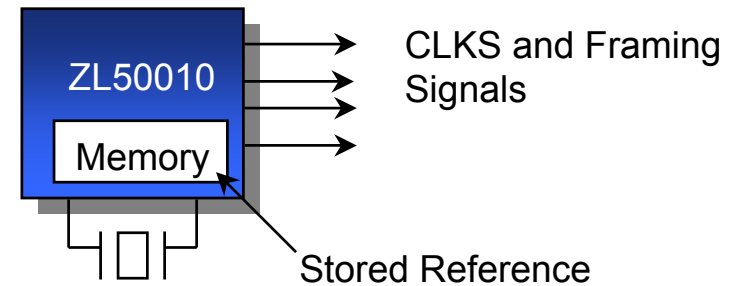
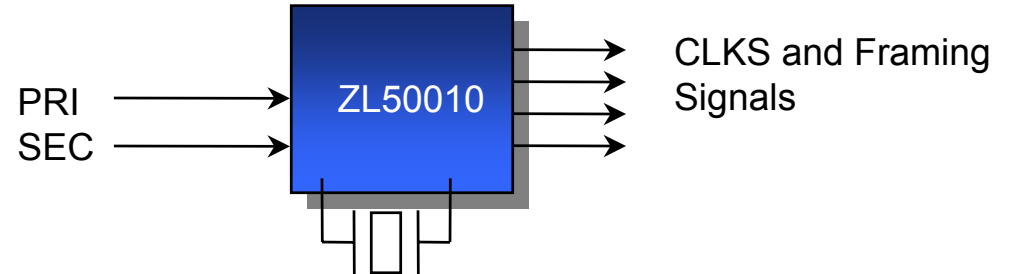
- High Impedance Output Control for Each Output Stream with Fractional Bit Advancement (used to control the external drivers for per-channel high impedance operation)
- Per stream data rate selection & conversion at 2.048, 4.096 or 8.192 Mb/s

Delay and Advancement

- Input Bit Offset
 - Up to $7 \frac{3}{4}$ bits, with a resolution of $\frac{1}{4}$ bit
- Input Channel Offset
 - up to 127 channels
- Output Bit Offset
 - up to $7 \frac{3}{4}$ bits, with a resolution of $\frac{1}{4}$ bit
- Output Channel Offset
 - up to 127 channels

Embedded Stratum 4E PLL

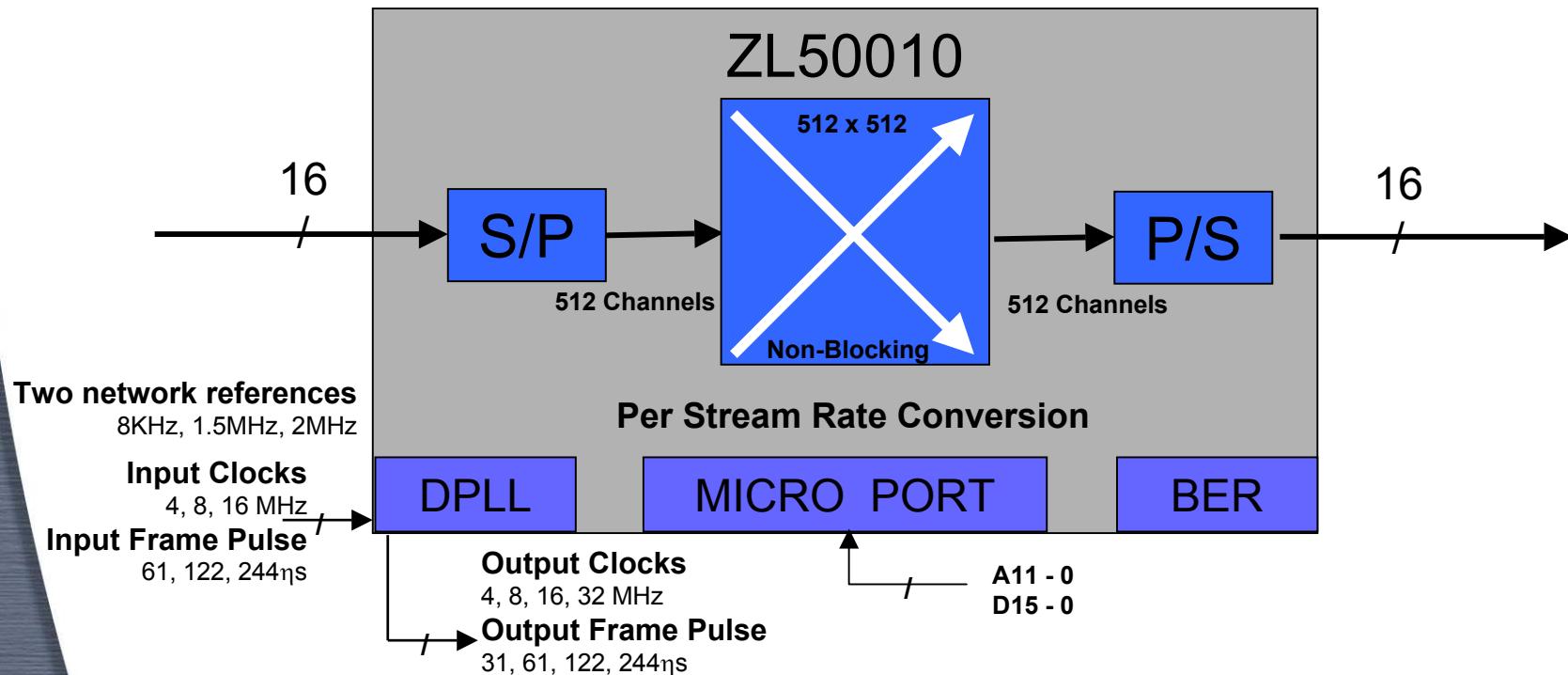
- Programmable Outputs
4, 8, 16 & 32 MHz
- Intrinsic Jitter of 6.25ns
- Maximum Time Interval Error (MTIE) correction
- Wander attenuation from 1.52Hz
- Holdover mode with 0.07ppm stability



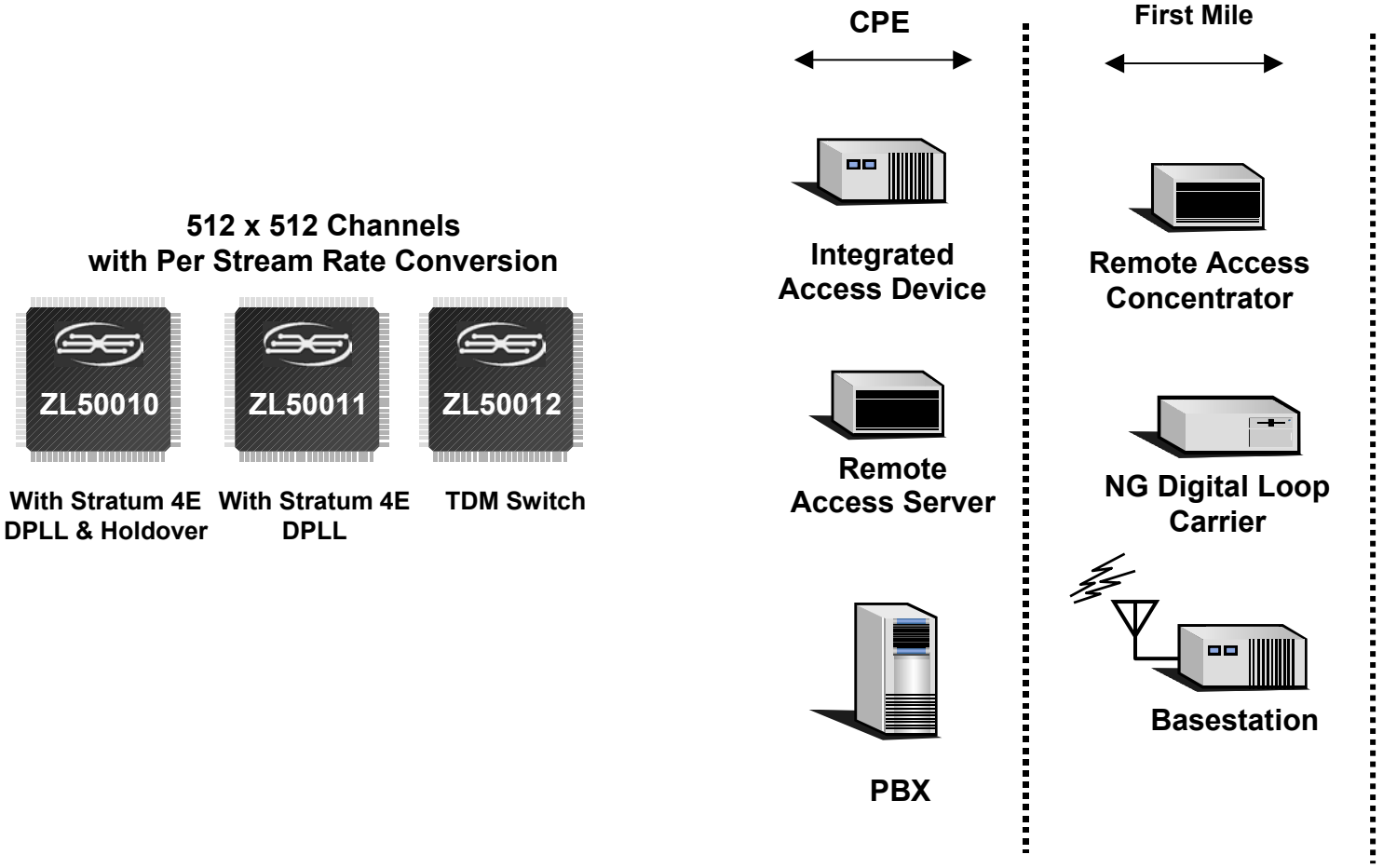
ZL50010 Block Diagram

Data Rates: 2, 4 or 8 Mb/s

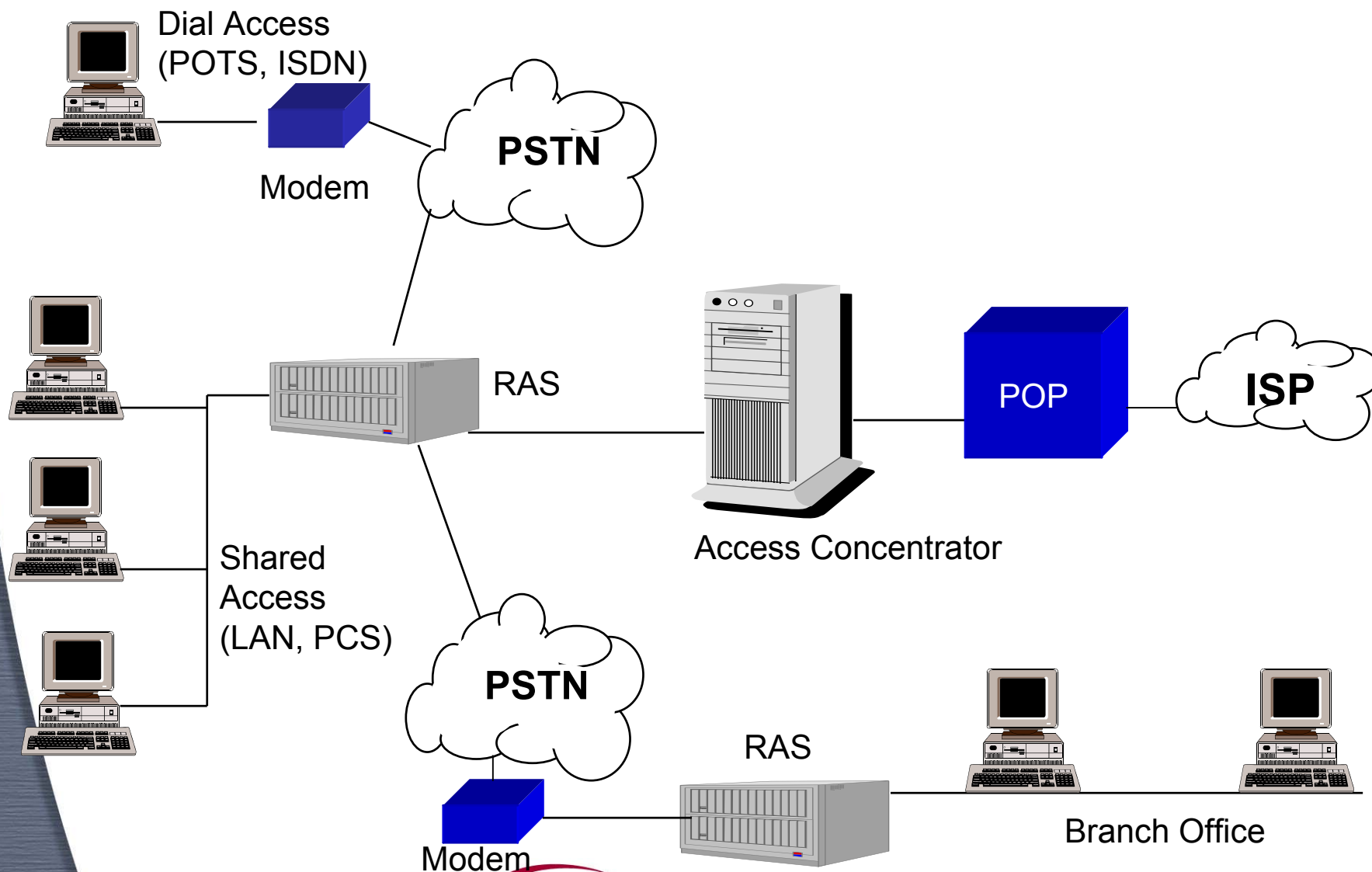
Data Rates: 2, 4 or 8 Mb/s



Applications

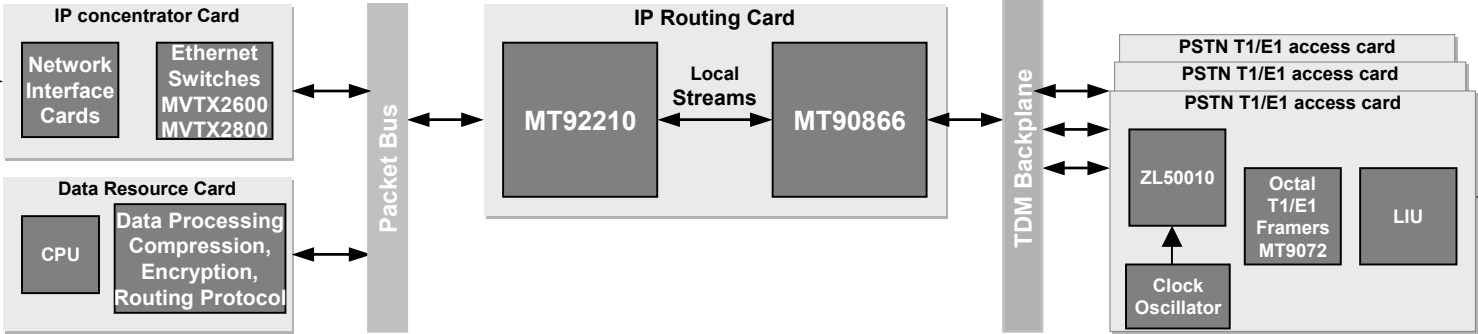


Remote Access Server



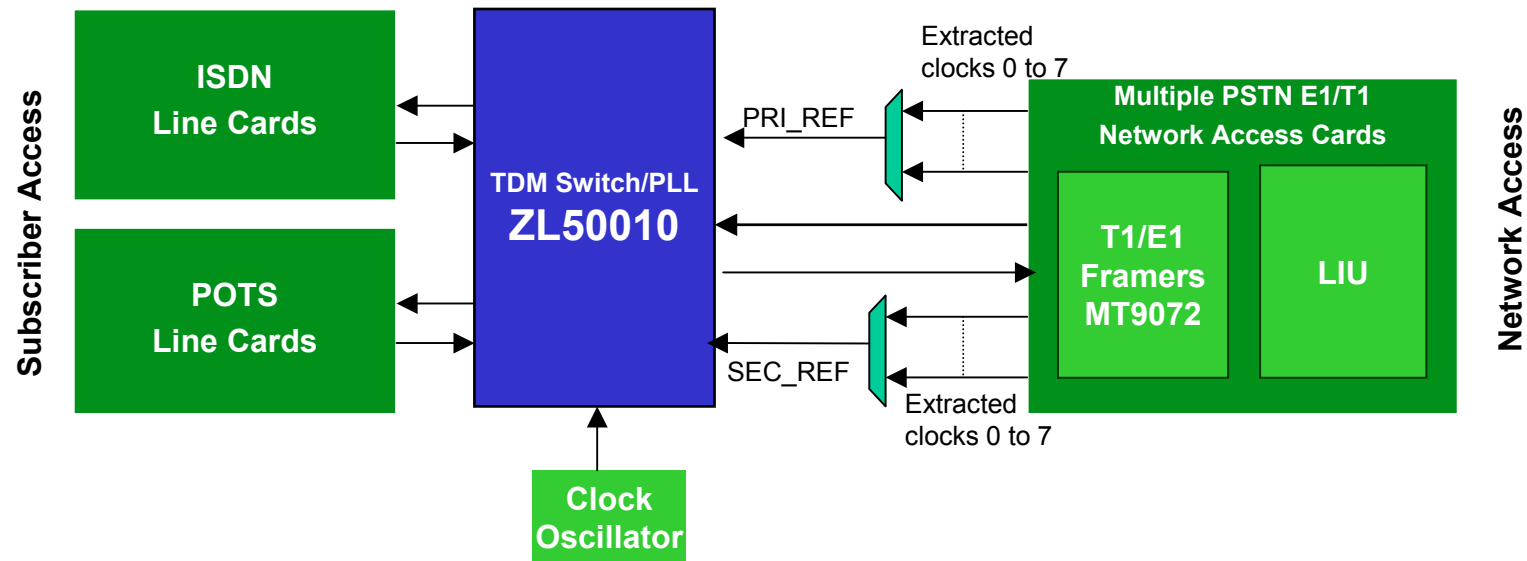
Remote Access Server

Enterprise LAN Access

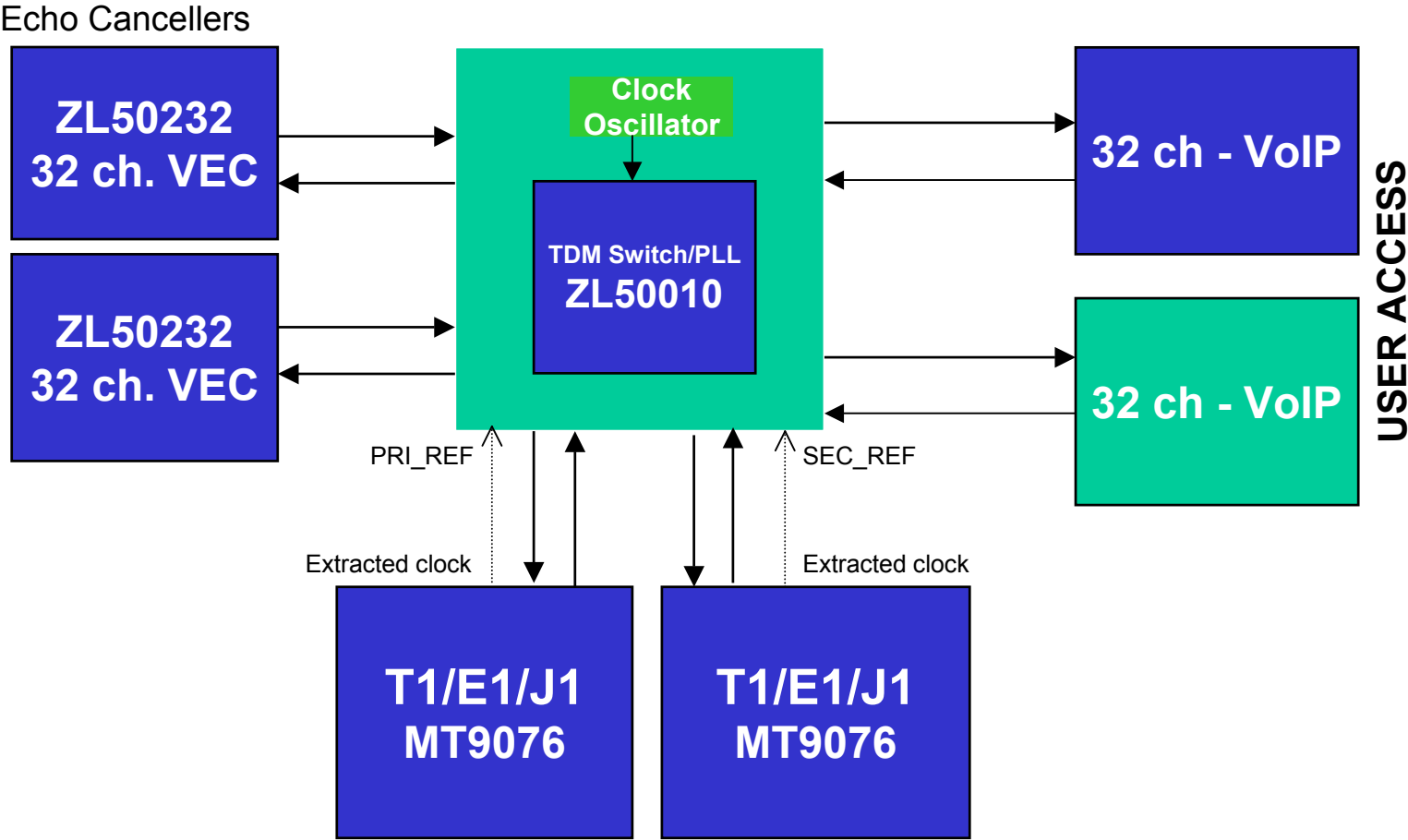


Remote User Access from PSTN

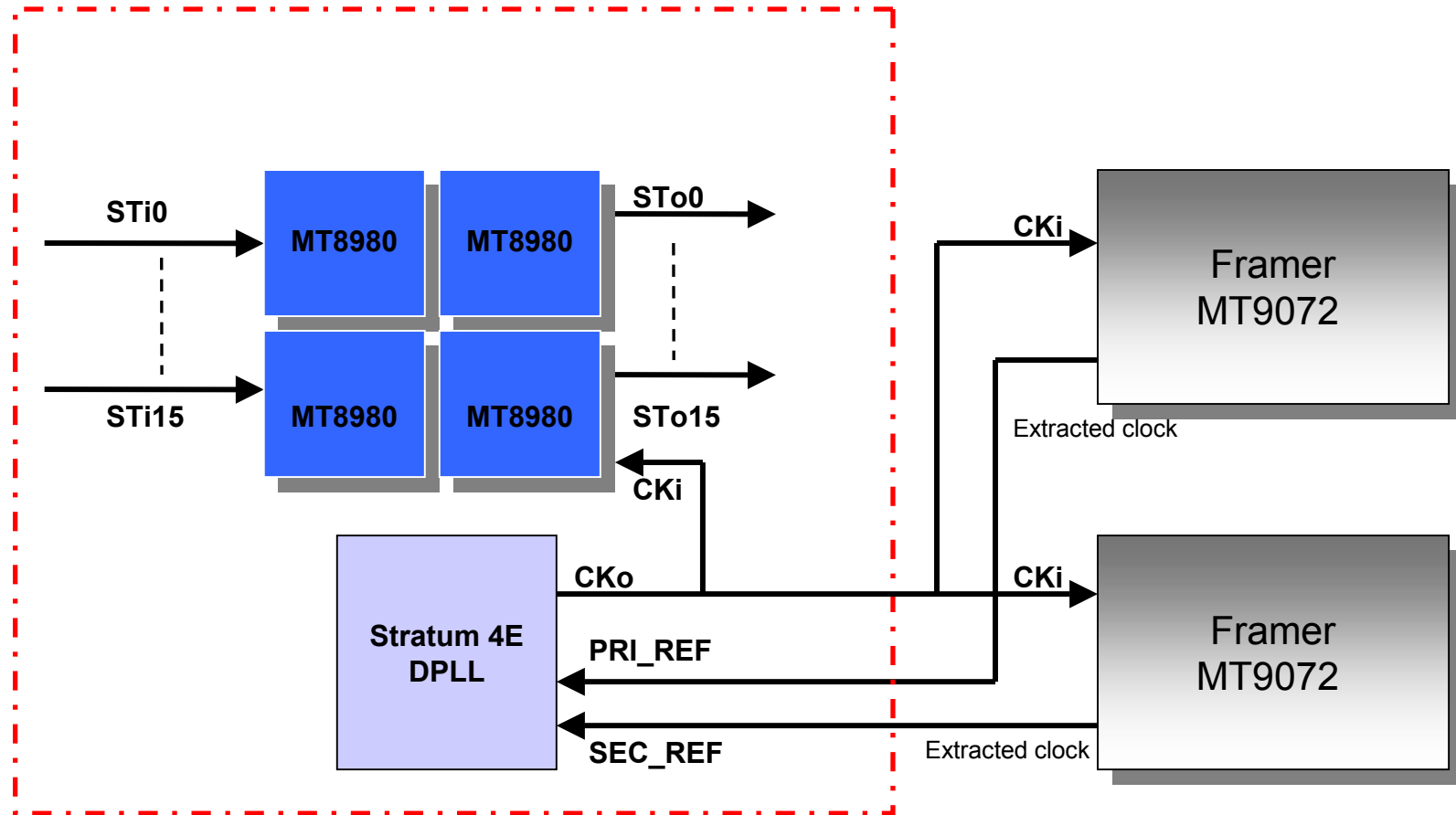
Subscriber Access Application



IP Gateway Application

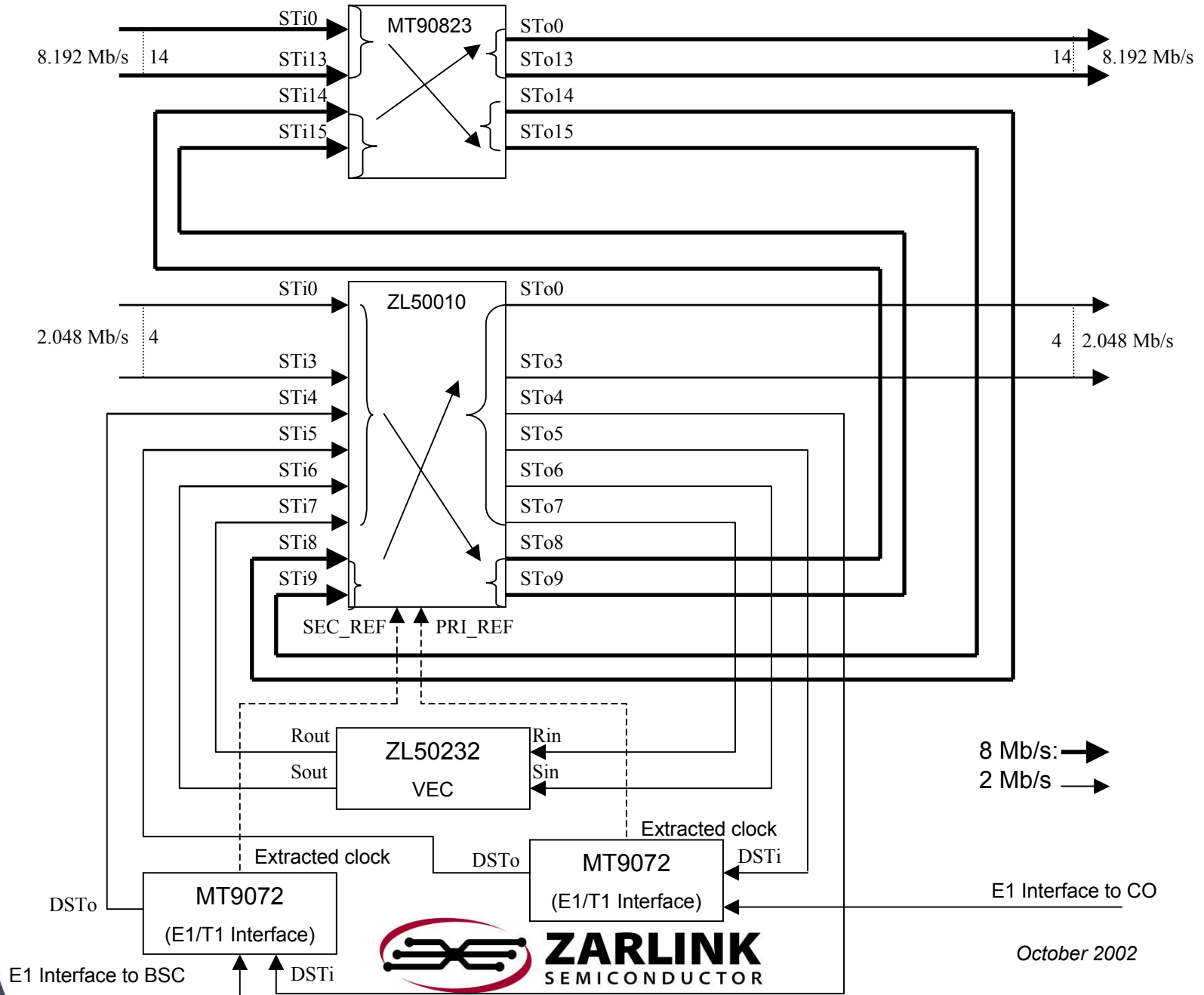


ZL50010: F512DX with on-chip enhanced DPLL Stratum 4E and Holdover



Can be replaced with a single ZL50010

ZL50010 - Data Rate Conversion Application



Package, Availability & Collateral

- **Package**
 - 160 pin LQFP, 24mmx24mm, pin pitch of 0.5 mm
 - 144 ball LBGA, 13mmx13mm, ball pitch of 1mm
- **Availability: Alpha samples since July 2002**
- **Collateral: Preliminary datasheet**