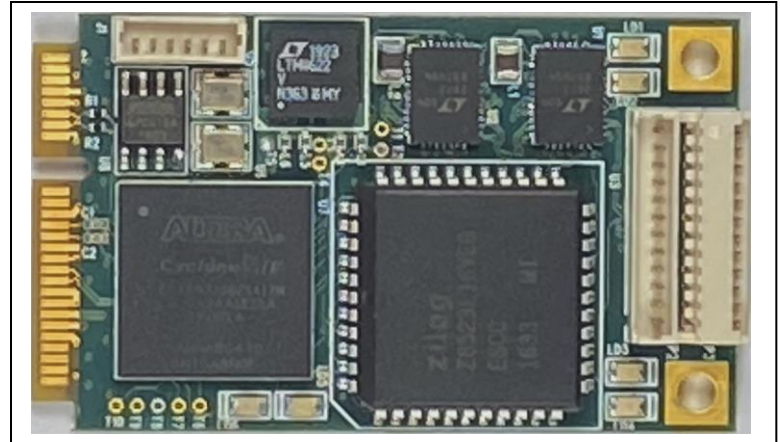


**Dual Synchronous/Asynchronous Serial I/O with 4K FIFO  
 RS-232 and RS-422/485 with Termination, Software Selectable**

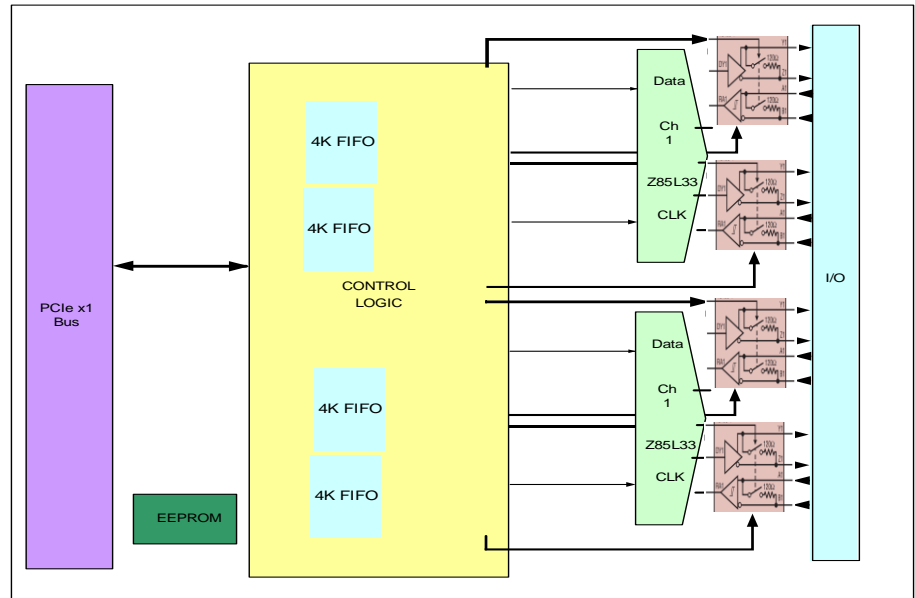
**Features**

- Enhanced Serial Controller Z85230
- Dual Synchronous/Asynchronous serial ports
- 2 Independent Full-Duplex Channels with Individual:
  - Baud rate generators (BRG)
  - Digital phase locked loop (DPLL)
  - 4K FIFO per Line (TX and RX)
  - Software selectable RS-232 or RS-422, RS-485 HDLC, SDLC



**Block Diagram and Operational Overview**

The PCIe-Mini-ESCC module is a Dual Channel serial communication controller with 4K FIFO per Line. The PCIe-Mini-ESCC module is based on the Z85230 Enhanced Serial Communication Controller, with larger FIFOs and several SDLC improvements from Zilog. This module provides two asynchronous ports up to 230Kbaud and synchronous ports up to 2Mbaud full-duplex channels, with an independent baud rate generator for each channel.



### **Asynchronous capabilities**

- 5, 6, 7 or 8 bits/character
- 1, 1.5 or 2 Stop bits
- Odd or Even parity
- Parity, Overrun and Framing Error detection
- Up 230Kbits

### **Synchronous/Isosynchronous capabilities**

- Up to 1/4 of PCLK using an external Clock
- Up to 1/8 of PCLK using DPLL in FM mode
- Up to 1/16 of PCLK using DPLL in NRZI
- Up to 2Mbits In Synchronous

### **Character-oriented synchronous capabilities**

- Internal or external synchronization
- 1 or 2 SYNC characters (6 or 8 bits/character)
- NRZ, NRZI, or FM encoding/decoding, as well as Manchester decoding
- Cyclic redundancy check (CRC-16, CRC-CCITT) generation/detection

### **SDLC/HDLC Capabilities**

- Automatic zero insertion and detection
- Automatic flag insertion between messages
- Address field recognition
- CRC generation/detection
- Full handshake control line
- Software programmable 100Ω termination
- Full modem control
- Low power 375mA typ.
- Software examples included

### **Available Software Drivers**

- Linux® drivers
- Windows® drivers
- VxWorks® drivers

### **Mechanical**

- Size: Mini PCIe Module (30mm x 50.95mm)
- Power: tbd
- Front panel I/O
- Vibration: 0.5G, 20-2000Hz rand
- Shock: 20G, 11ms, ½ sine
- Weight: tbd
- MTBF: >250,000 hours

### **Operating Environment**

- Operating temperature  
 Commercial: 0 to +70°C  
 Industrial: -40°C to +85°C
- Non-operating: -50°C to +90°C
- Airflow requirement: .5CFM
- Humidity: 5 to 90% (non-cond)
- Altitude: 0 to 10,000 feet

<b>Ordering information</b>	
<b>PCIe-Mini-ESCC</b>	Dual Channel RS-422/RS-485 Module append -I for Industrial Temp -40°C to +85°C append -C for Conformal Coat
<b>Optional Accessories</b>	
<b>CBL-ESCC-12</b>	12 pins, 12in cable