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Keywords: T1, E1, T1/E1, 8MHz, backplane, PCM, pulse code modulation, elastic store, DS0, 2.048MHz, system clock, framer, byte interleaved, IBO, interleave bus operation, SCTs, single chip transceivers, stream

APPLICATION NOTE 561

Tech Brief 7: DS2152 and DS2154 8MHz System Clock Operation

Apr 05, 2001

Abstract: Tech Brief 7 provides the requirements for multiplexing four PCM streams into one 8MHz system backplane using the Dallas Semiconductor/Maxim DS2152 and DS2154 T1/E1 single chip transceivers (SCTs). The DS2155, DS26528, DS26524, DS26522, DS26521, DS26519 and DS26518 all contain IBO functionality without external circuitry and are recommended for new designs.

The DS2152 and DS2154 PCM signals can interface to an 8 MHz system backplane. Typically this application is used to multiplex four 2.048 MHz PCM streams onto a single 8 MHz PCM stream. To accomplish this, the elastic stores are enabled and placed in the 2.048 MHz System Clock mode. **Figure 1** describes a timing scheme in which a single RSYNC is generated for all four framers. Each framer in turn is driven with an 8.192 MHz clock burst of 8 cycles. Each clock burst causes the elastic store to output 1 DS0. This results in a "Byte Interleaved" 8.192 MHz PCM stream as shown in **Figure 2**.

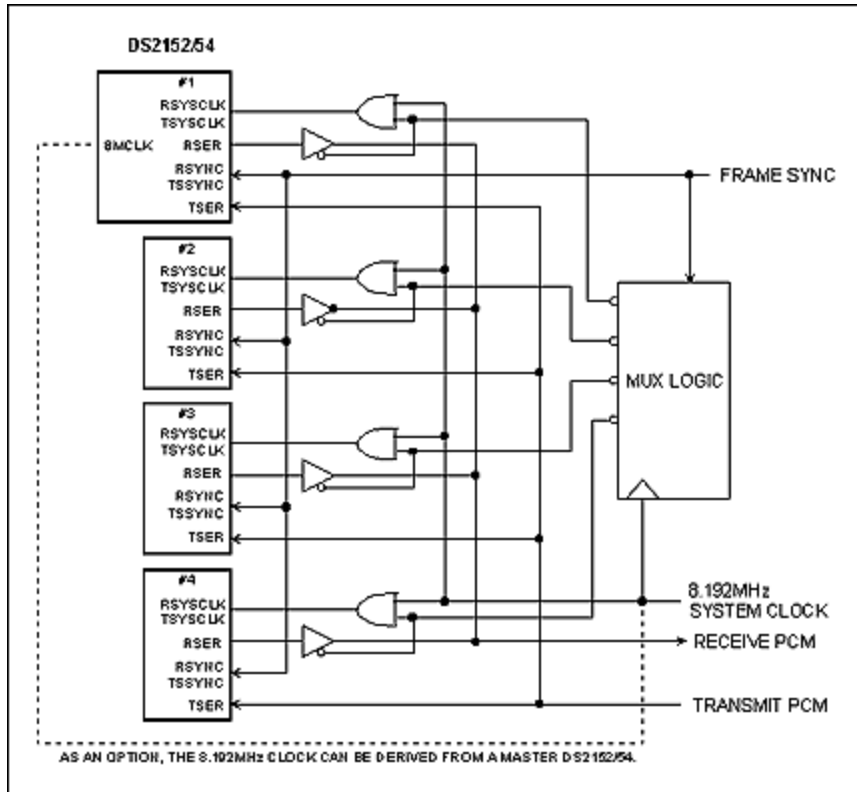


Figure 1.

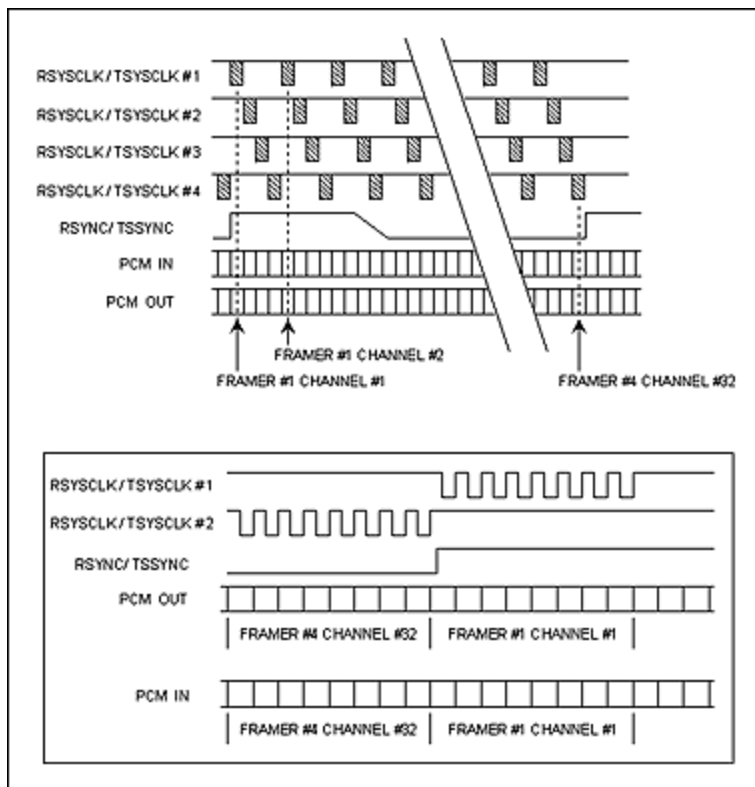


Figure 2.

Related Parts

DS2152	Enhanced T1 Single Chip Transceiver	
DS2154	Enhanced E1 Single Chip Transceiver	
DS26518	8-Port T1/E1/J1 Transceiver	Free Samples
DS26519	16-Port T1/E1/J1 Transceiver	Free Samples
DS26521	Single T1/E1/J1 Transceiver	Free Samples
DS26522	Dual T1/E1/J1 Transceiver	Free Samples
DS26524	Quad T1/E1/J1 Transceiver	Free Samples
DS26528	Octal T1/E1/J1 Transceiver	Free Samples

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