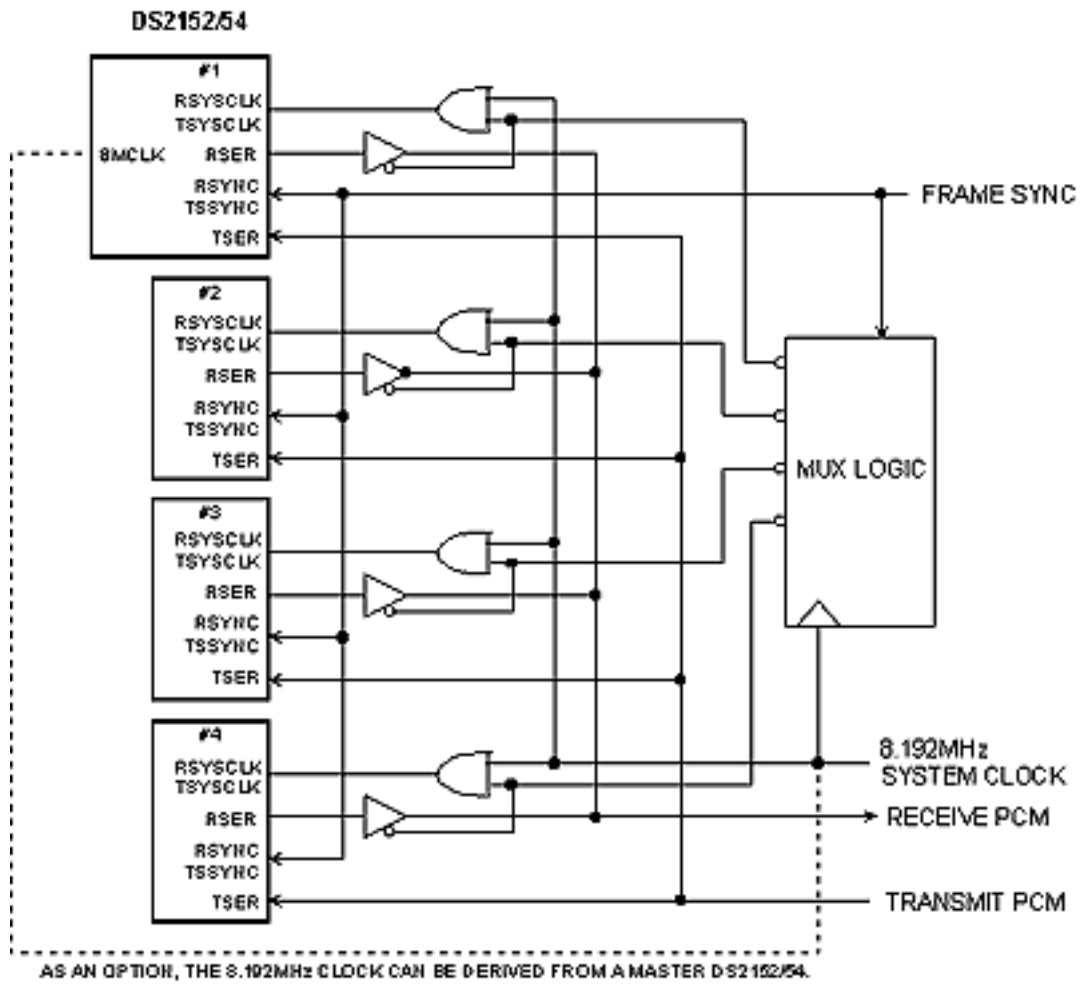


## Tech Brief 7: DS2152 and DS2154 8MHz System Clock Operation

*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, DS21554, DS21354, DS21552, DS21352 SCTs and their quad versions, 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**

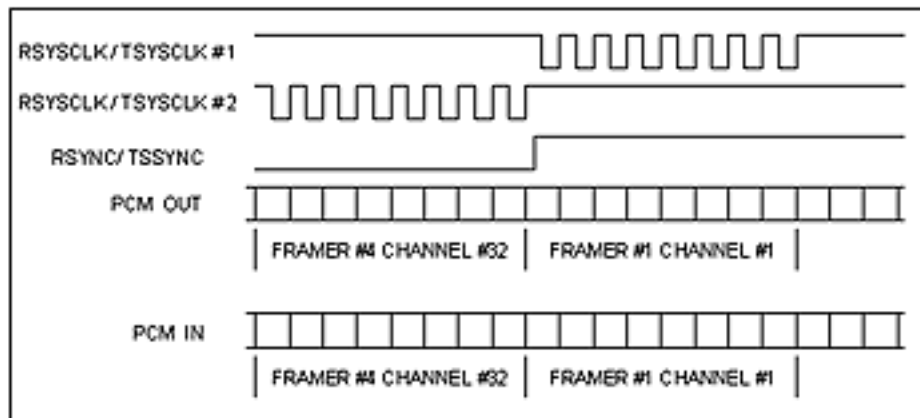
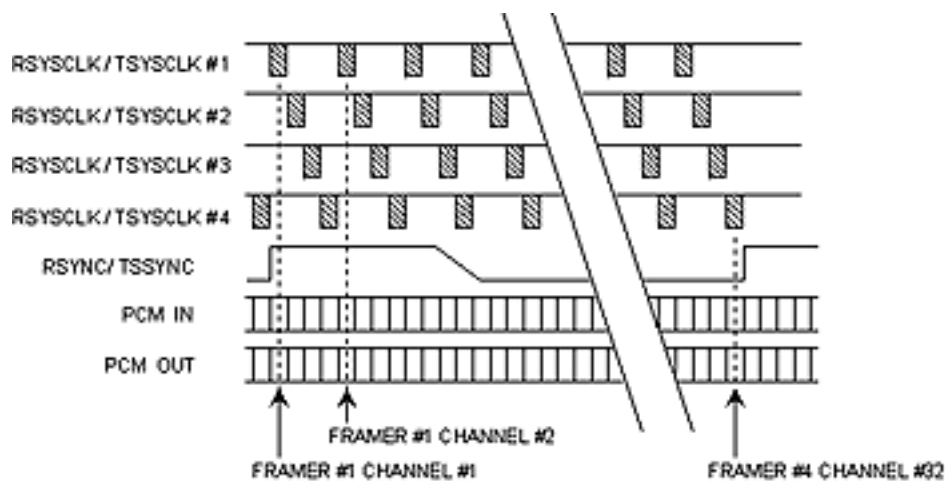


Figure 2

### More Information

DS2152: [QuickView](#) -- [Full \(PDF\) Data Sheet](#) -- [Free Samples](#)

DS2154: [QuickView](#) -- [Full \(PDF\) Data Sheet](#) -- [Free Samples](#)