Annex D. Backplane Physical Implementation Example (informative)

D.1 Backplane Signals

Within each backplane environment, there are already standards for the types of drivers and receivers that must be used. However, in all cases the Serial Bus is implemented with a pair of signals SBUS_DATA and SBUS_STRB.

D.2 ANSI/IEEE 896 FutureBus+

Independent of the address and data path width, the FutureBus+ Application Environment Profiles A and B each reserve two bus lines for Serial Bus: **SB0** and **SB1**.   Both are open-collector.

D.2.1 Link Design

(to be fixed)

D.3 ANSI/IEEE 960 FASTBUS

(to be fixed)

The mapping between the 1394 backplane environment and the IEEE 960 FASTBUS standard is:

Figure D-1 – FASTBUS signal mapping

1394 Signal	960 Signal	960 Pin	960 Signal Type
RXdata	RX	B58	10K ECL
TXdata	TX	B57	10K ECL

Note: The ANSI/IEEE std 960-1986 document specifies the following characteristics for these lines:

10K or 10KH ECL (from Appendix A section A.1):

ECL backplane data bus drivers shall be industry standard 10K or 10KH ECL devices specified for a minimum operating range of 0 C to 70 C. They shall be operated at -5.2 V within 5%.   The specified output voltages over the operating range when terminated into a 50 Ohm load to -2.0 V are as follows:

Output   Logic   Voltage

high   1   -1.000 min, -0.700 max

low   0   -1.600 max

Bus drivers shall have a continuous output source current rating of at least 50 mA dc.

A device connected to the bus shall have a maximum of one driver and one receiver as a bus load.   The maximum input current of the receiver shall be less than 300 microamperes when the bus is in the high state and less than 100 microamperes when the bus is in the low state.

All drivers and receivers shall be placed on the device printed circuit card such that the capacitance presented to the bus does not exceed 12 pF.

D.4 ANSI/IEEE 1014 VMEbus

(to be fixed)

D.5 ANSI/IEEE 1196 NuBus

(to be fixed)

D.6 ANSI/IEEE 1296 Multibus II

(to be fixed)

This is an unapproved IEEE Standards Draft, subject to change