FAST 40 AND FAST 80 DATA FROM MULTIMODE BACKPLANES

• THE FIRST DATA FROM ACTUAL MULTIMODE (SE/LVD) BACKPLANES IS PRESENTED

• THIS DATA SUGGESTS THAT THE MULTIMODE BACKPLANES WORK AS EXPECTED -- SUPPORTS BOTH SINGLE ENDED AND LVD IN THE SAME DESIGN

• FAST 80 AND FAST 40 WITH 10 METER CABLES WERE SHOWN TO PROBABLY REQUIRE EXPANDERS
ULTRA-2 MULTIMODE BACKPLANE SYSTEM WITH NO EXPANDER

HOST SYSTEM

+200 mV / DIV

-200 mV

D

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F

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T

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A

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S

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G

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A

L

S

W2_005_

HOST SYSTEM

3 METER CABLE

120 W TERMINATOR WITH NO BIAS ACROSS + AND - SIGNALS

A0

T

MULTIMODE BACKPLANE

ASYMMETRICAL DRIVER WITH BIAS TERMINATOR

ALL SLOTS IN BACKPLANE HAVE 22/22/11 pF LOADS (~ 10% HIGHER THAN SPEC)

(APPEARS TO BE OK WITHOUT EXPANDER IN THIS CASE)
DATA AT A0, FAST 40 RATES, WORST CASE DATA PATTERN

NOTE: DIFFERENTIAL SIGNAL IS OFFSET BY ~50 mV DUE TO ONLY ONE BIASING TERMINATION BEING USED
ULTRA-2 MULTIMODE BACKPLANE SYSTEM WITH NO EXPANDER

HOST SYSTEM

ASYMMETRICAL DRIVER WITH BIAS TERMINATOR

10 METER CABLE

120 W TERMINATOR WITH NO BIAS ACROSS + AND - SIGNALS

MULTIMODE BACKPLANE

ALL SLOTS IN BACKPLANE HAVE 22/22/11 pF LOADS (~ 10% HIGHER THAN SPEC)

(Should use expander on backplane for this config)
DATA AT A0, FAST 40 RATES, WORST CASE DATA PATTERN

NOTE: DIFFERENTIAL SIGNAL IS OFFSET BY ~50 mV
DUE TO ONLY ONE BIASING TERMINATION BEING USED

SW2_0012

BILHAM DIGITAL EQUIPMENT SPI-2 WORKING GROUP APRIL 18, 1997
ULTRA-3 MULTIMODE BACKPLANE SYSTEM WITH NO EXPANDER

T10/97-168r0

120 W TERMINATOR WITH NO BIAS ACROSS + AND - SIGNALS

HOST SYSTEM

3 METER CABLE

ASYMMETRICAL DRIVER WITH BIAS TERMINATOR

ALL SLOTS IN BACKPLANE HAVE 22/22/11 pF LOADS (~ 10% HIGHER THAN SPEC)

MULTIMODE BACKPLANE

(A MUST USE EXPANDER ON BACKPLNAE FOR THIS CONFIG)

DATA AT A0, FAST 80 RATES, WORST CASE DATA PATTERN

NOTE: DIFFERENTIAL SIGNAL IS OFFSET BY ~50 mV DUE TO ONLY ONE BIASING TERMINATION BEING USED

SW2_0023
ULTRA-3 MULTIMODE BACKPLANE SYSTEM WITH NO EXPANDER

HOST SYSTEM: T

ASYMMETRICAL DRIVER WITH BIAS TERMINATOR

10 METER CABLE

MULTIMODE BACKPLANE: T

A0

ALL SLOTS IN BACKPLANE HAVE 22/22/11 pF LOADS (~10% HIGHER THAN SPEC)

NOTE: DIFFERENTIAL SIGNAL IS OFFSET BY ~50 mV DUE TO ONLY ONE BIASING TERMINATION BEING USED

120 W TERMINATOR WITH NO BIAS ACROSS + AND - SIGNALS

DATA AT A0, FAST 80 RATES, WORST CASE DATA PATTERN

SW2_0021