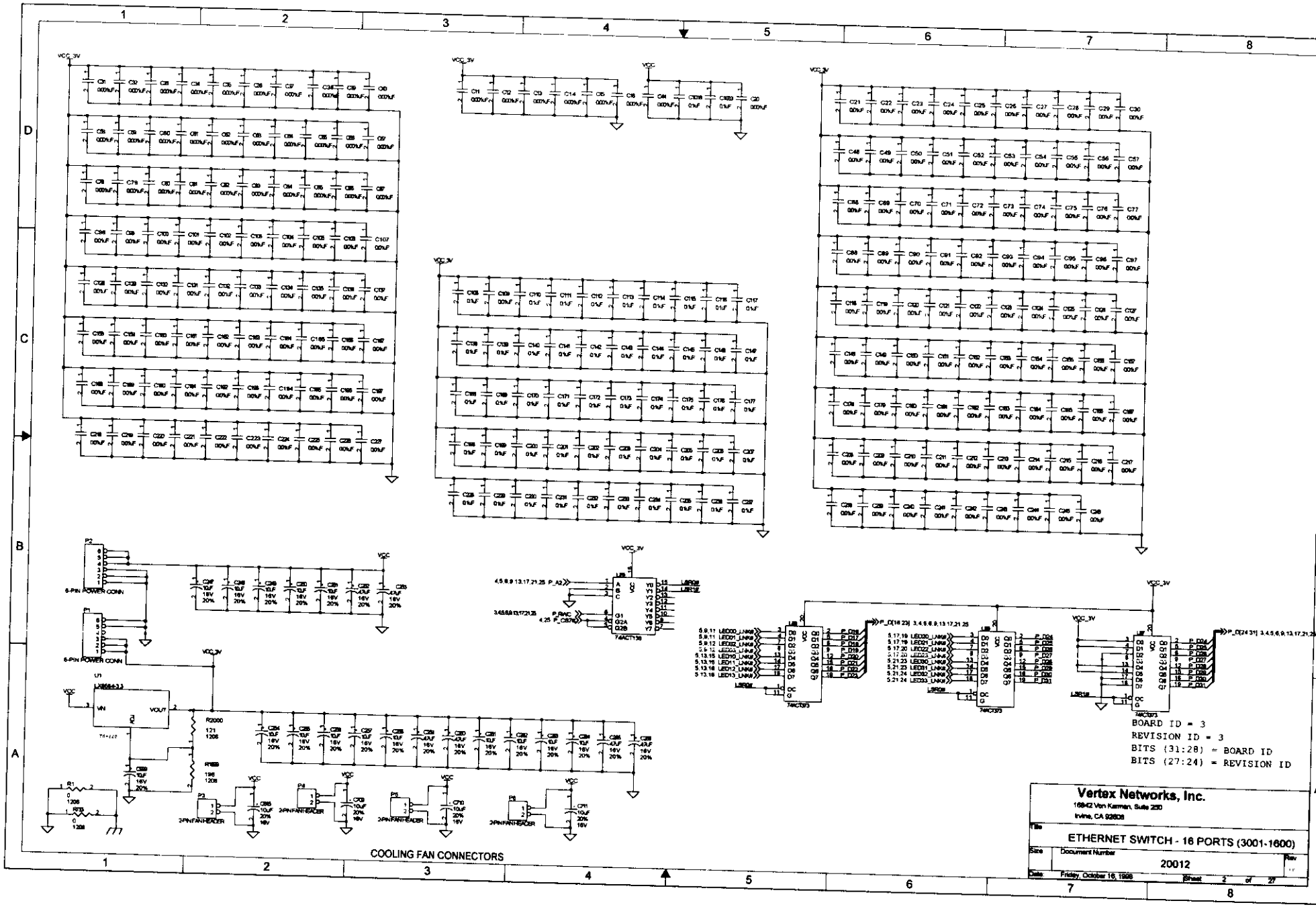
# *EXHIBIT D*

## *Circuit Diagram*




**Vertex Networks, Inc.**
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Irvine, CA 92606

Title: ETHERNET SWITCH - 16 PORTS (3001-1600)

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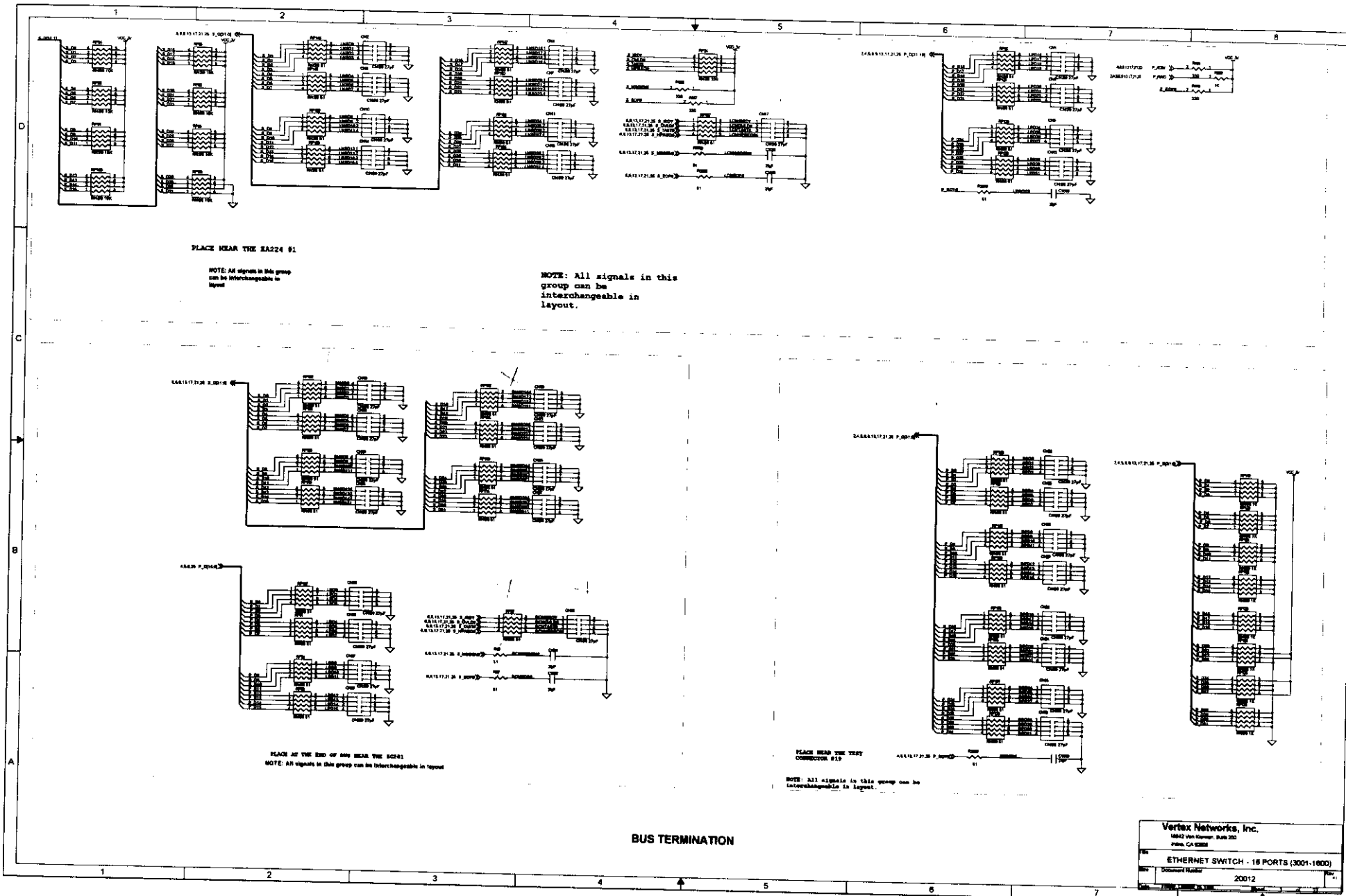
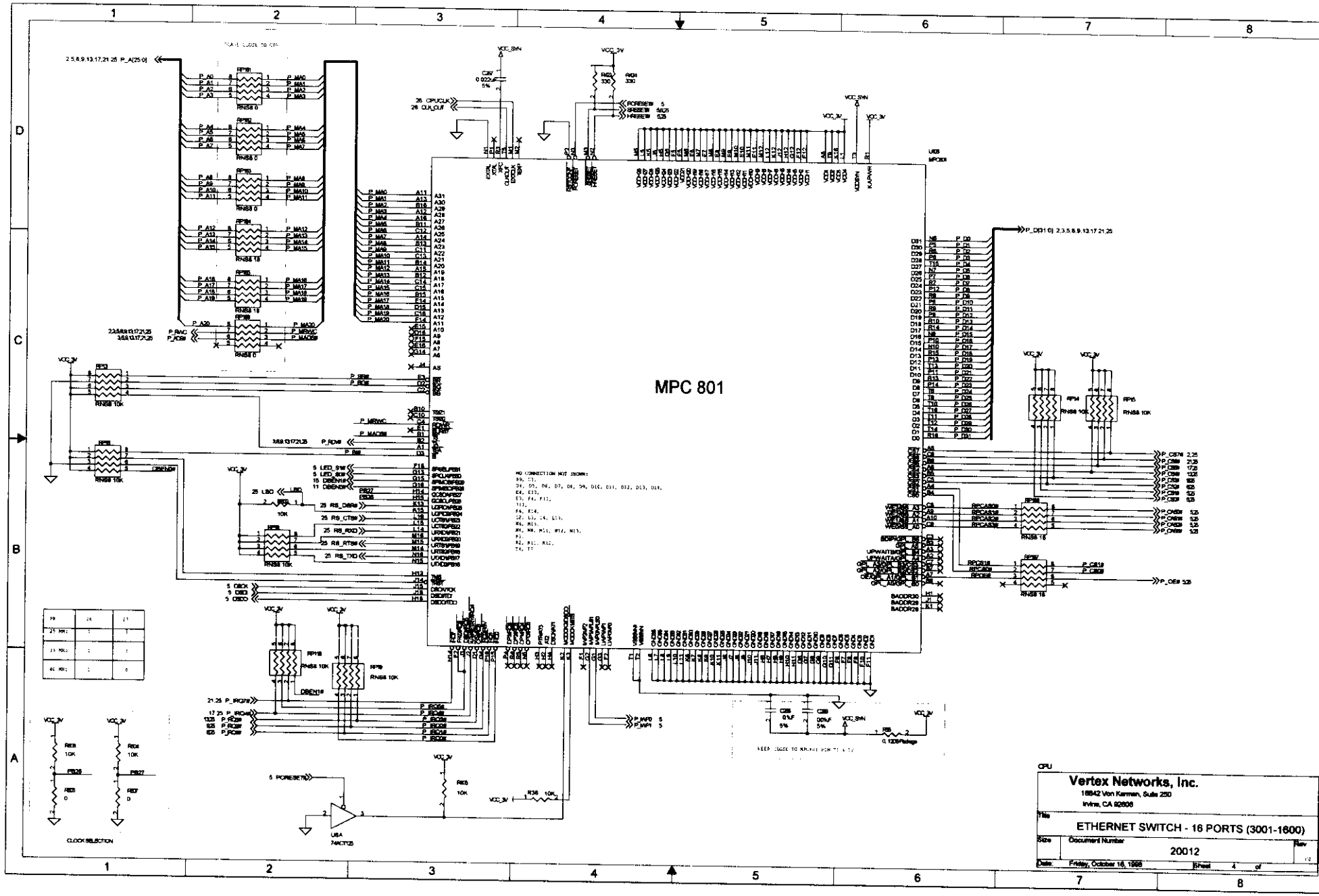

PLACE NEAR THE XA224 #1
NOTE: All signals in this group can be interchangeable in layout
NOTE: All signals in this group can be interchangeable in layout.
PLACE AT THE END OF BUS NEAR THE SCSI
NOTE: All signals in this group can be interchangeable in layout
PLACE NEAR THE TEST CONNECTOR #19
NOTE: All signals in this group can be interchangeable in layout.
BUS TERMINATION
Vertex Networks, Inc.
ETHERNET SWITCH - 16 PORTS (3001-1600)
20012


MPC 801
CPU
Vertex Networks, Inc.
16842 Von Karman, Suite 250
Irvine, CA 92606
ETHERNET SWITCH - 16 PORTS (3001-1600)
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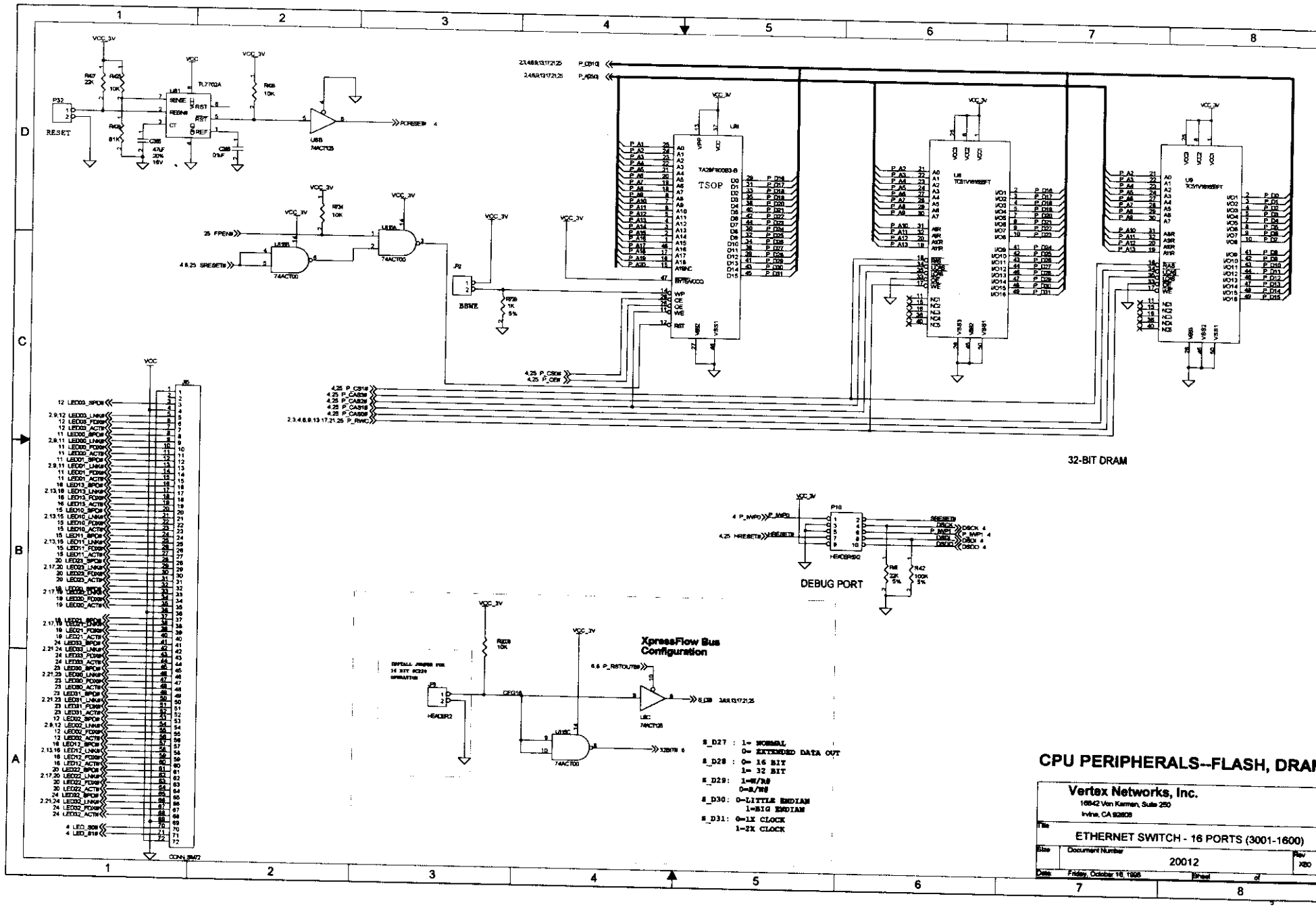


## CPU PERIPHERALS--FLASH, DRAI

| | |
|---|---|
| Vertex Networks, Inc. | 16842 Von Karman, Suite 250, Irvine, CA 92606 |
| Title | ETHERNET SWITCH - 16 PORTS (3001-1600) |
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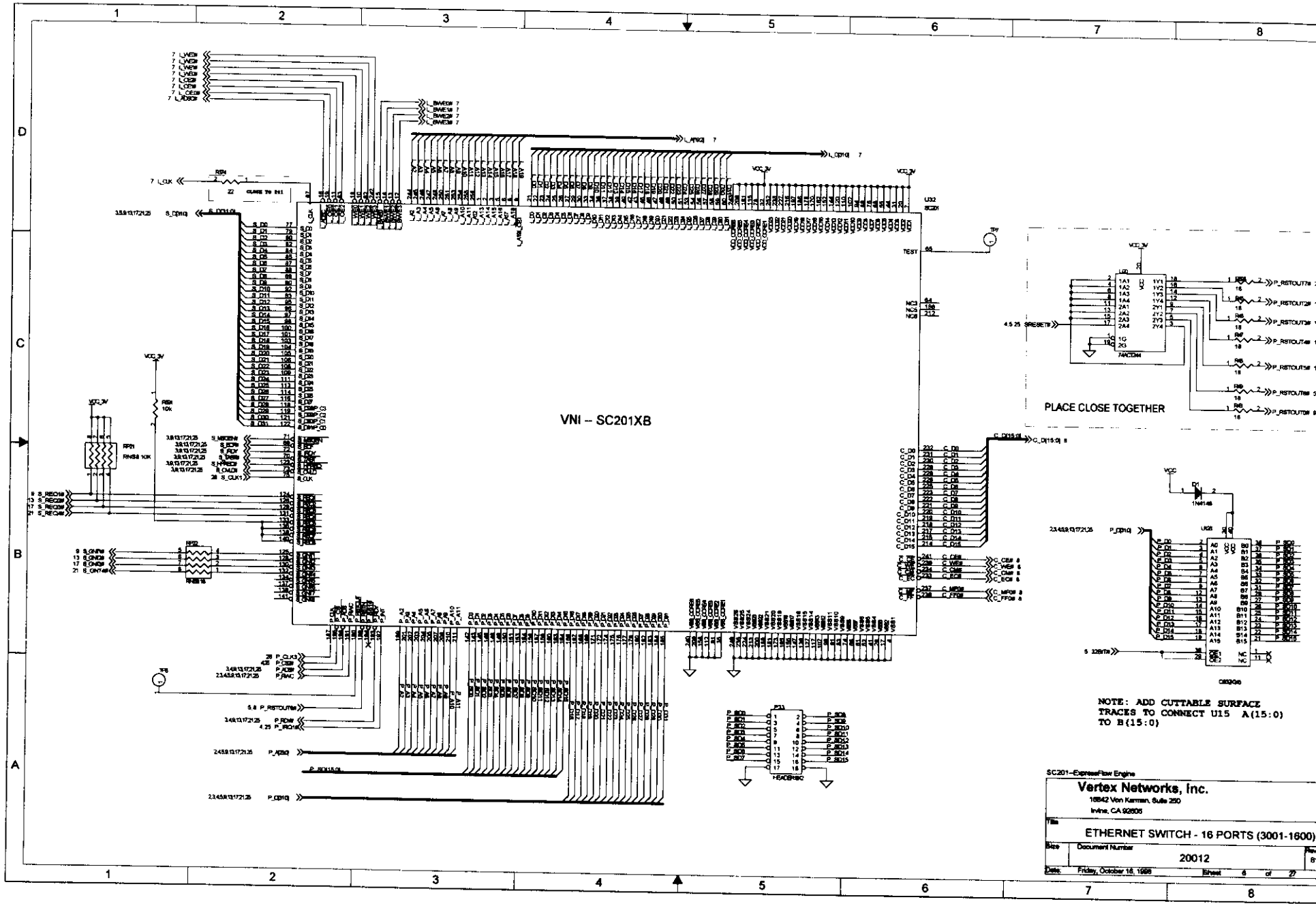
VNI – SC201XB
PLACE CLOSE TOGETHER
NOTE: ADD CUTTABLE SURFACE TRACES TO CONNECT U15 A(15:0) TO B(15:0)
SC201-ExpressFlow Engine
Vertex Networks, Inc.
16842 Von Karman, Suite 250
Irvine, CA 92606
ETHERNET SWITCH - 16 PORTS (3001-1600)
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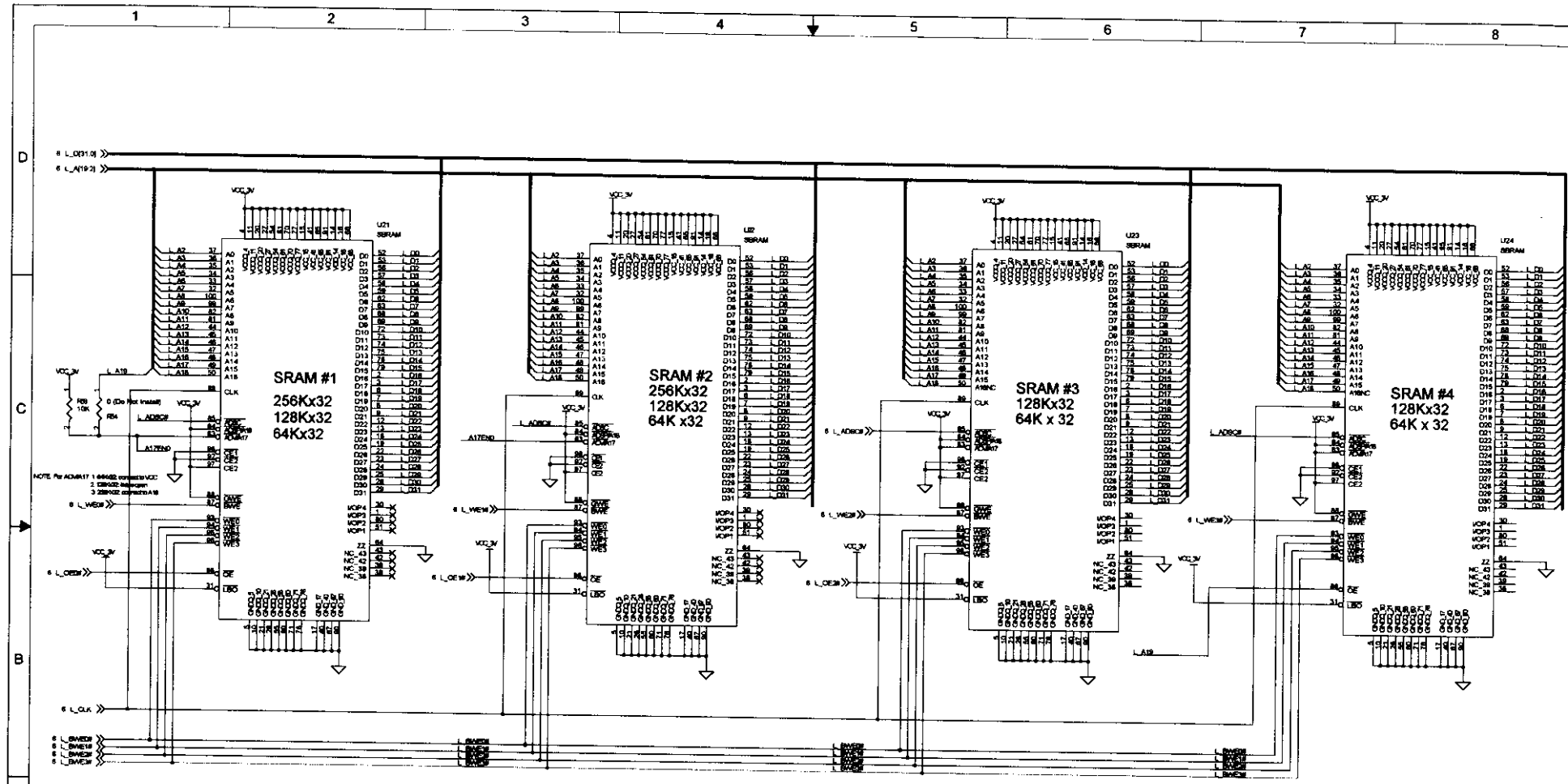


**SRAM Installation Option** SC201

| SRAM Type: | Total SRAM Size: | SRAM #1: | SRAM #2: | SRAM #3: | SRAM #4: |
|---|---|---|---|---|---|
| 64Kx32 | 256K Bytes | Yes | No | No | No |
| 64Kx32 | 512K Bytes | Yes | Yes | No | No |
| 64Kx32 | 1M Bytes | Yes | Yes | Yes | Yes |
| 128Kx32 | 512K Bytes | Yes | No | No | No |
| 128Kx32 | 1M Bytes | Yes | Yes | No | No |
| 256Kx32 | 1M Bytes | Yes | No | No | No |
| | | | | | |
| | | | | | |

OPTIONAL FOR SC220

| SRAM Type: | Total SRAM Size: | SRAM #1: | SRAM #2: | SRAM #3: | SRAM #4: |
|---|---|---|---|---|---|
| 64Kx32 | 256K Bytes | Yes | No | No | No |
| 64Kx32 | 512K Bytes | Yes | Yes | No | No |
| 64Kx32 | 1M Bytes | Yes | Yes | Yes | Yes |
| 128Kx32 | 512K Bytes | Yes | No | No | No |
| 128Kx32 | 1M Bytes | Yes | Yes | No | No |
| 128Kx32 | 2M Bytes | Yes | Yes | Yes | Yes |
| 256Kx32 | 1M Bytes | Yes | No | No | No |
| 256Kx32 | 2M Bytes | Yes | Yes | No | No |
| | | | | | |

SC201 SRAM

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Title: ETHERNET SWITCH - 16 PORTS (3001-1600)

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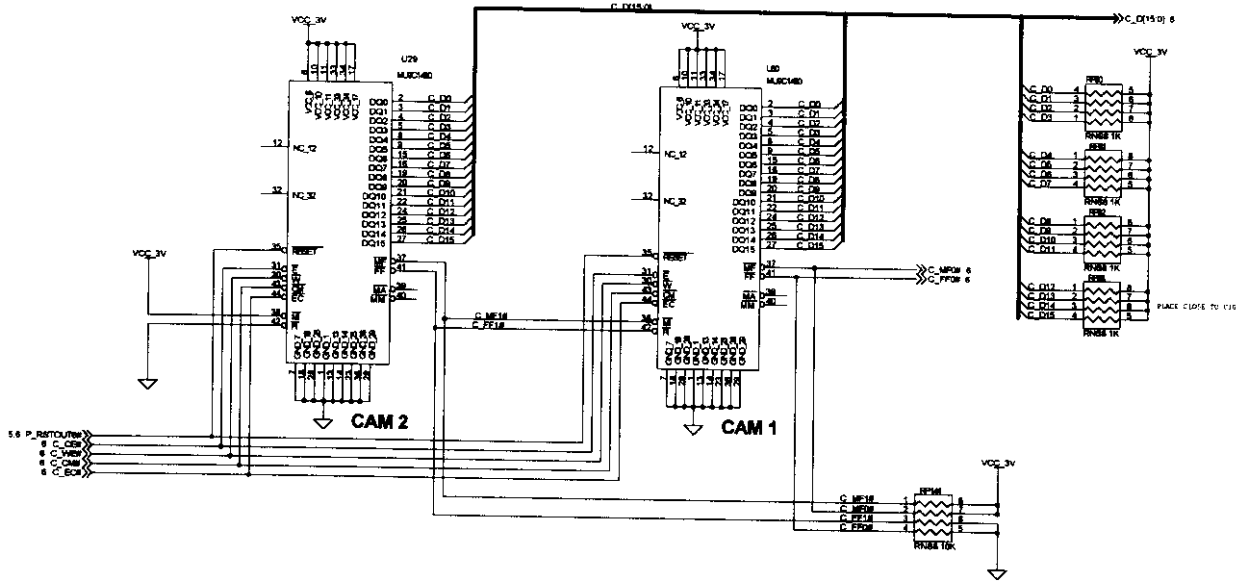


**CAM Installation Option**

| CAM Type: | Total CAM Size: | CAM #1: | CAM #2: |
|---|---|---|---|
| 1K x 64 | 1K Entries | Yes | No |
| 1K x 64 | 2K Entries | Yes | Yes |
| 2K x 64 | 2K Entries | Yes | No |
| 2K x 64 | 4K Entries | Yes | Yes |

CAM

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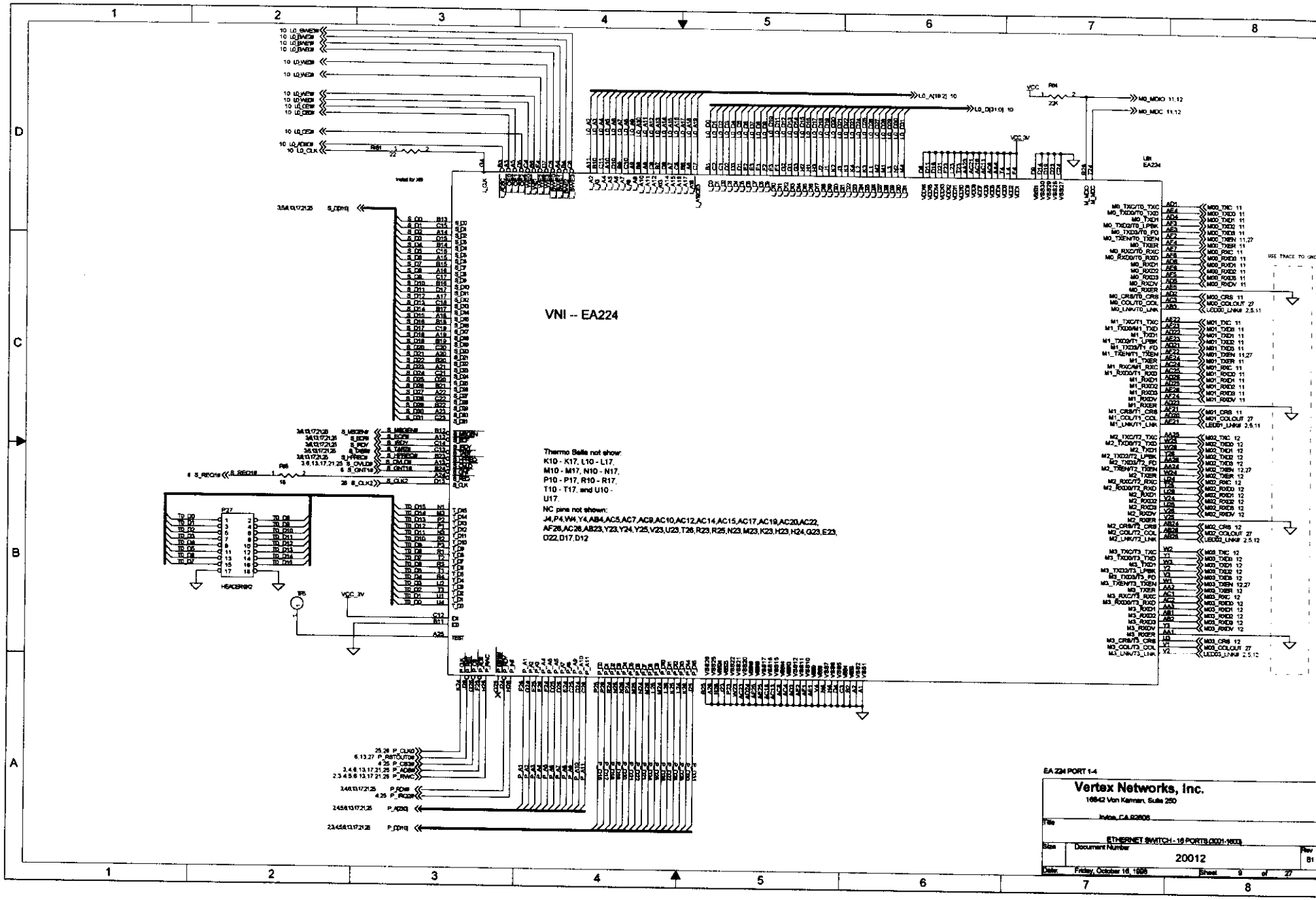
VNI -- EA224
Thermo Balls not show:
K10 - K17, L10 - L17,
M10 - M17, N10 - N17,
P10 - P17, R10 - R17,
T10 - T17, and U10 - U17.
NC pins not shown:
J4,P4,W4,Y4,AB4,AC5,AC7,AC8,AC10,AC12,AC14,AC15,AC17,AC19,AC20,AC22,
AF26,AC26,AB23,Y23,Y24,Y25,V23,U23,T26,R23,R25,N23,M23,K23,H23,H24,G23,E23,
D22,D17,D12
EA 224 PORT 1-4
Vertex Networks, Inc.
16642 Von Karman, Suite 250
Irvine, CA 92606
Title
ETHERNET SWITCH - 16 PORTS (0001-9000)
Size
Document Number
20012
Rev
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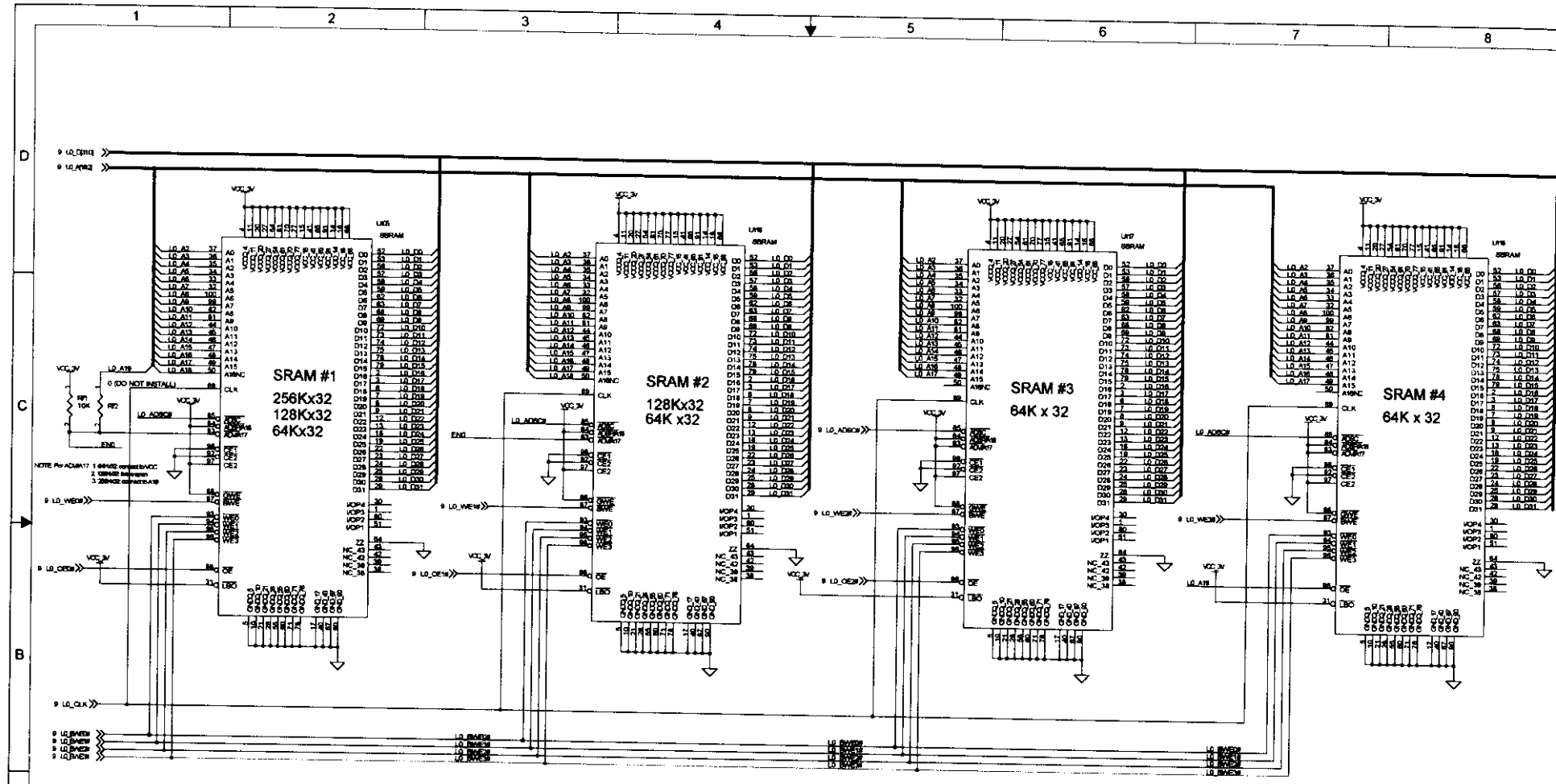


**SRAM Installation Option**

| SRAM Type: | Total SRAM Size: | SRAM #1: | SRAM #2: | SRAM #3: | SRAM #4: |
|---|---|---|---|---|---|
| 64Kx32 | 256K Bytes | Yes | No | No | No |
| 64Kx32 | 512K Bytes | Yes | Yes | No | No |
| 64Kx32 | 1M Bytes | Yes | Yes | Yes | Yes |
| 128Kx32 | 512K Bytes | Yes | No | No | No |
| 128Kx32 | 1M Bytes | Yes | Yes | No | No |
| 256Kx32 | 1M Bytes | Yes | No | No | No |
| | | | | | |
| | | | | | |
| | | | | | |

EA:224 PORT 1-4 SRAM

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Title: ETHERNET SWITCH - 16 PORTS (3001-1600)

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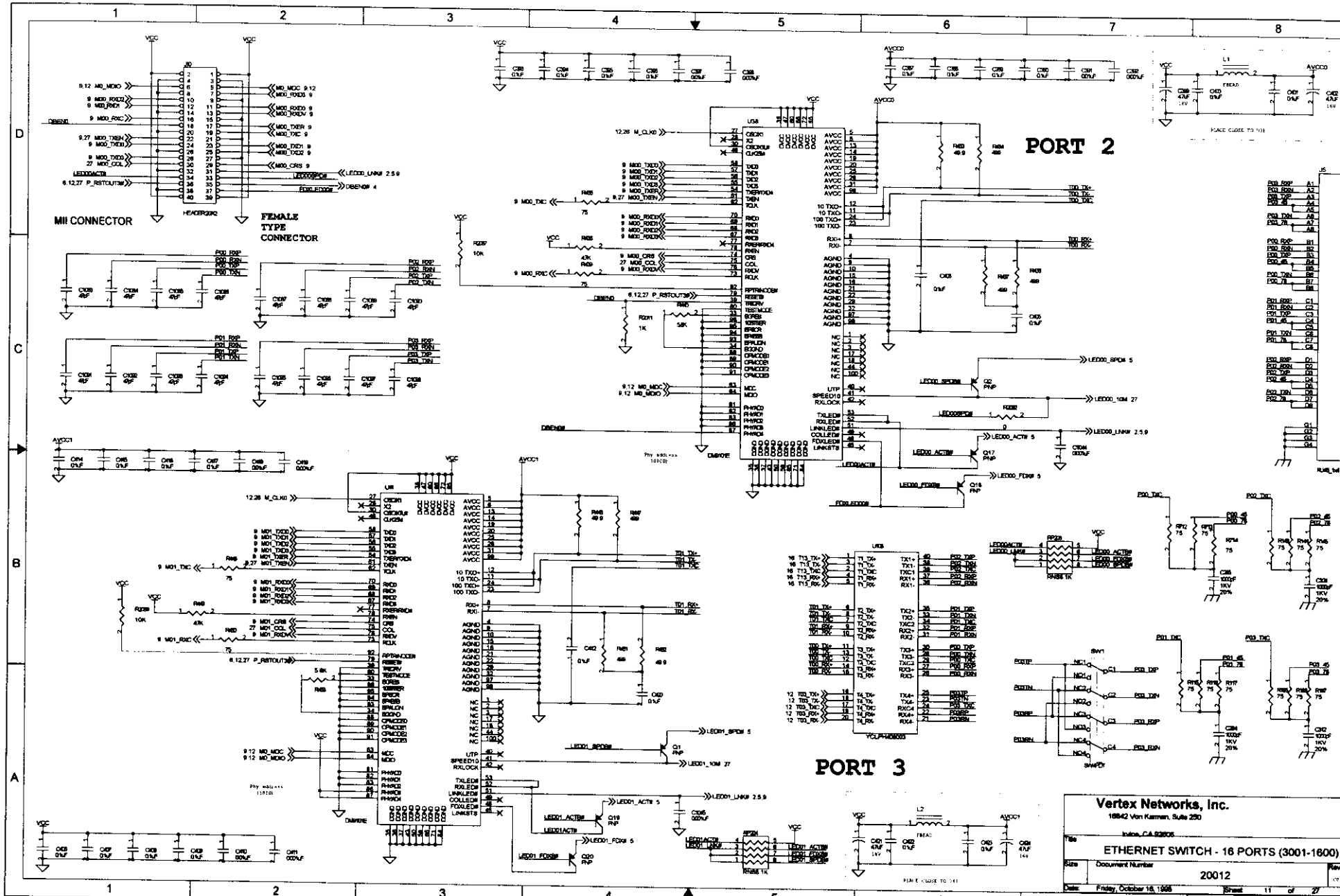
MII CONNECTOR
FEMALE TYPE CONNECTOR
PORT 2
PORT 3
Vertex Networks, Inc.
16842 Von Karman, Suite 250
Irvine, CA 92606
ETHERNET SWITCH - 16 PORTS (3001-1600)
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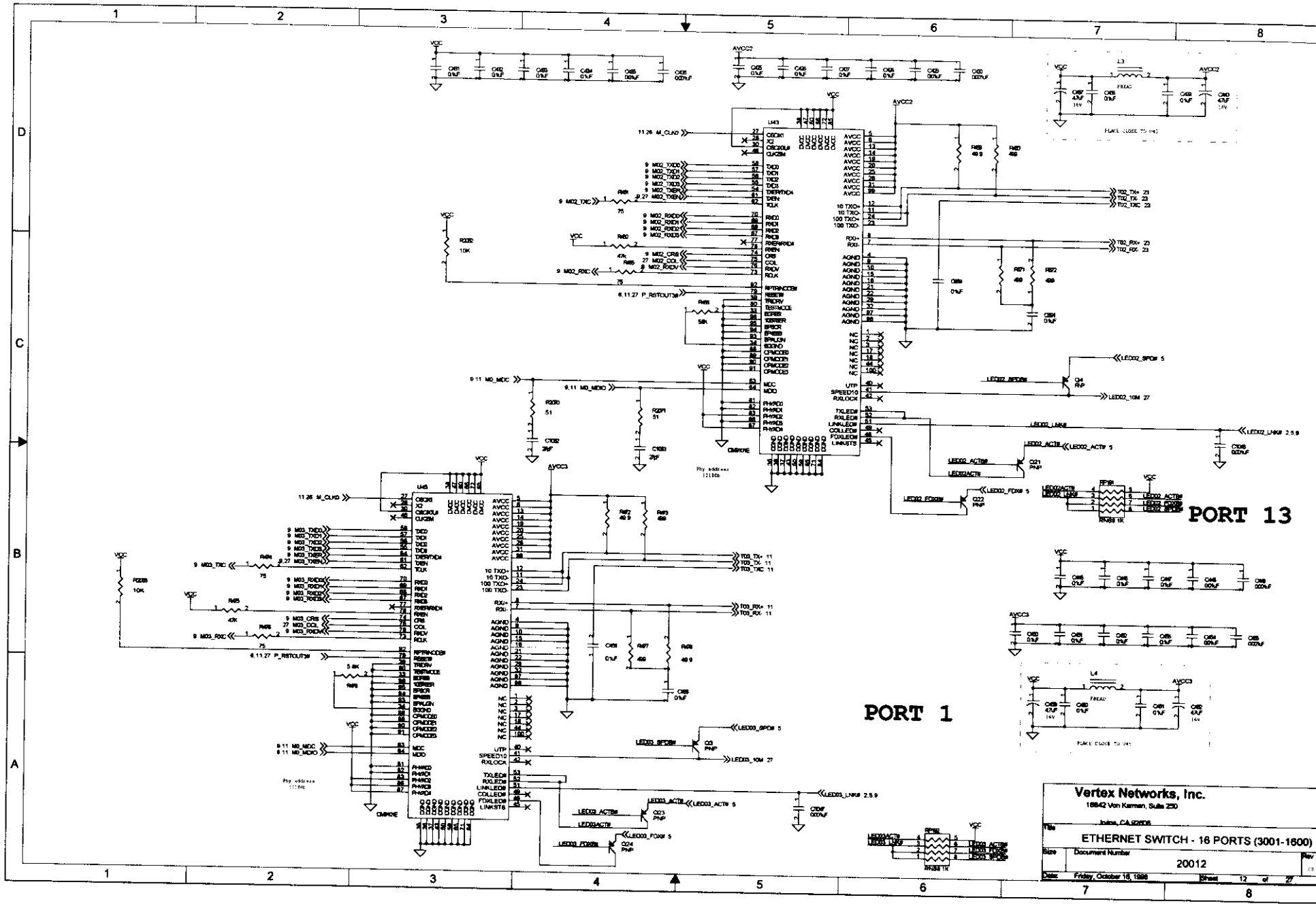
PORT 13
PORT 1
Vertex Networks, Inc.
16842 Von Karman, Suite 250
Irvine, CA 92606
ETHERNET SWITCH - 16 PORTS (3001-1600)
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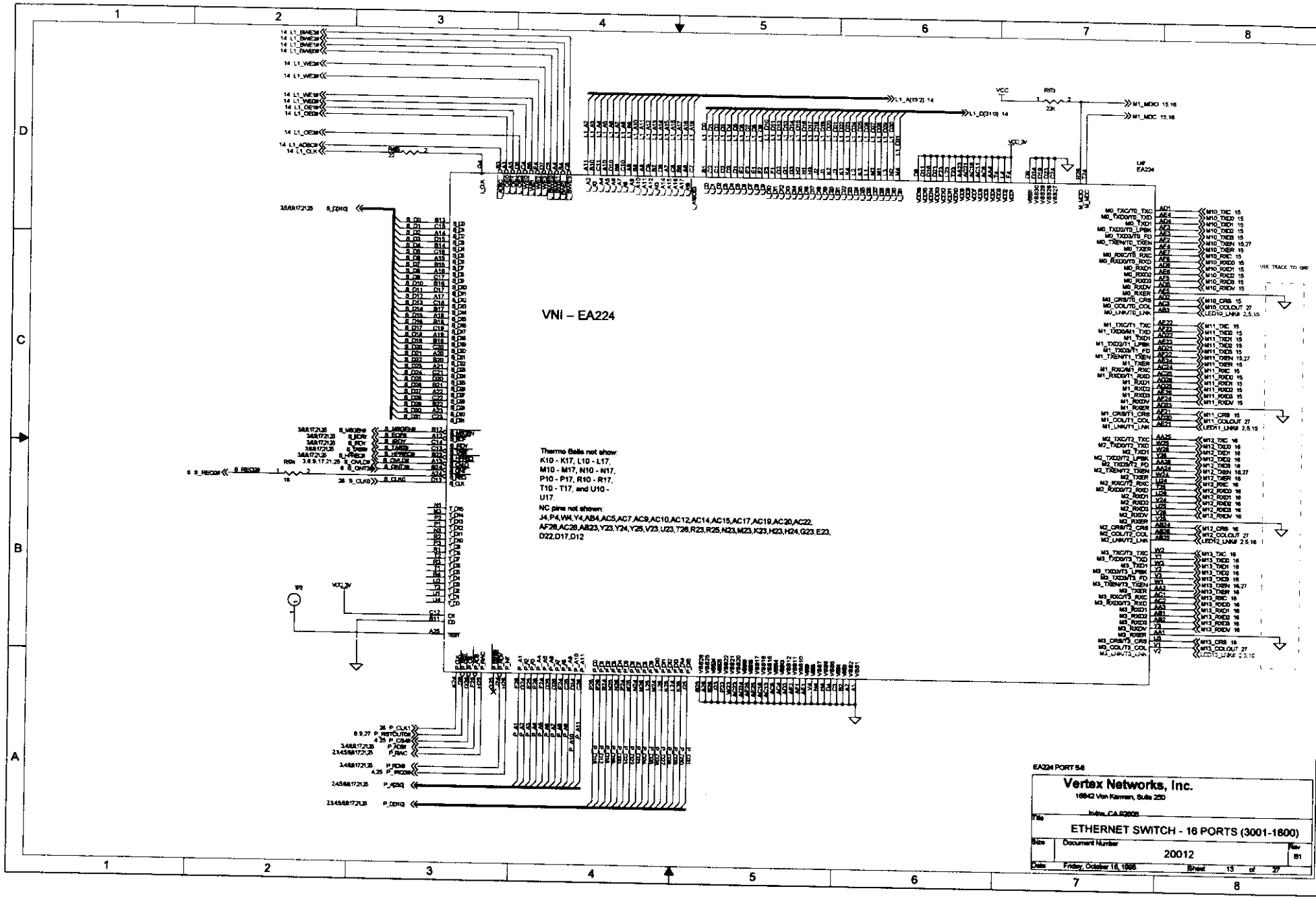
VNI – EA224
Thermo Balls not show:
K10 - K17, L10 - L17,
M10 - M17, N10 - N17,
P10 - P17, R10 - R17,
T10 - T17, and U10 - U17.
NC pins not shown:
J4,P4,W4,Y4,AB4,AC5,AC7,AC9,AC10,AC12,AC14,AC15,AC17,AC19,AC20,AC22,
AF28,AC28,AB23,Y23,Y24,Y25,V23,U23,T26,R23,R25,N23,M23,K23,H23,H24,G23,E23,
D22,D17,D12
EA224 PORT 58
Vertex Networks, Inc.
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Irvine, CA 92606
ETHERNET SWITCH - 16 PORTS (3001-1600)
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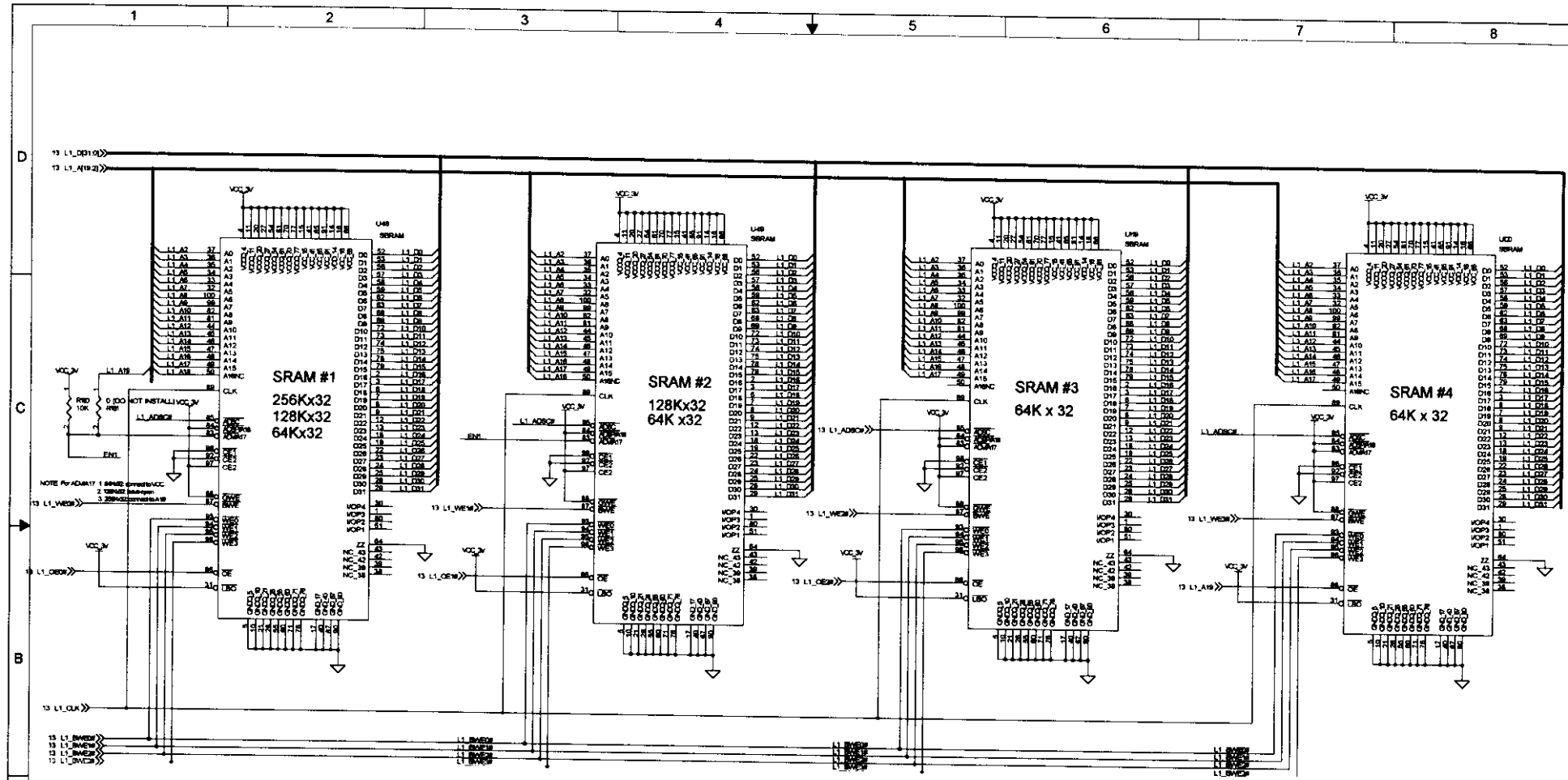


| SRAM Type: | Total SRAM Size: | SRAM #1: | SRAM #2: | SRAM #3: | SRAM #4: |
|---|---|---|---|---|---|
| 64Kx32 | 256K Bytes | Yes | No | No | No |
| 64Kx32 | 512K Bytes | Yes | Yes | No | No |
| 64Kx32 | 1M Bytes | Yes | Yes | Yes | Yes |
| 128Kx32 | 512K Bytes | Yes | No | No | No |
| 128Kx32 | 1M Bytes | Yes | Yes | No | No |
| 256Kx32 | 1M Bytes | Yes | No | No | No |
| | | | | | |
| | | | | | |
| | | | | | |

SRAM FOR PORT 58

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Irvine, CA 92606

Title: ETHERNET SWITCH - 16 PORTS (3001-1600)

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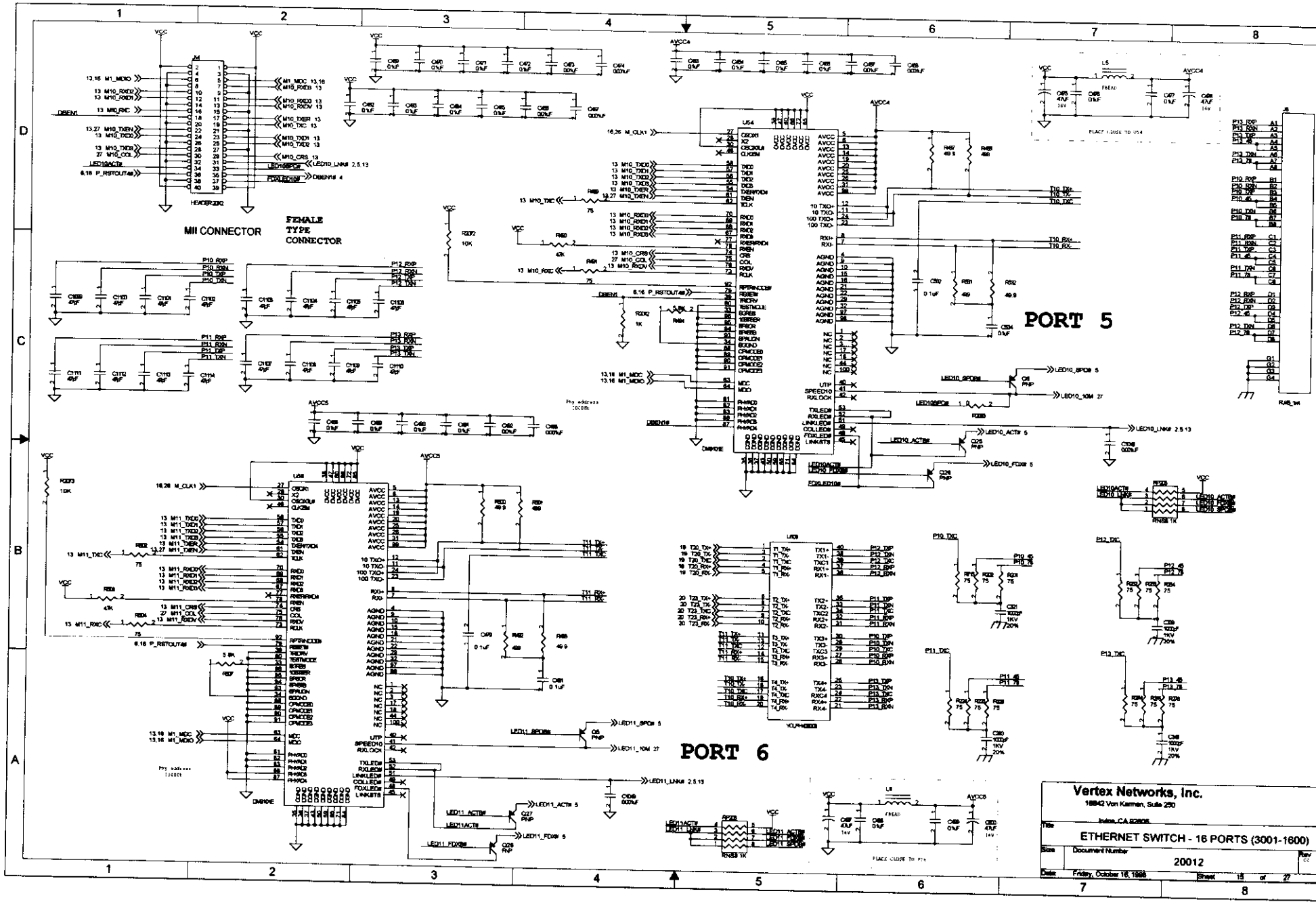
MII CONNECTOR
FEMALE TYPE CONNECTOR
PORT 5
PORT 6
Vertex Networks, Inc.
16842 Von Karman, Suite 250
Irvine, CA 92606
ETHERNET SWITCH - 16 PORTS (3001-1600)
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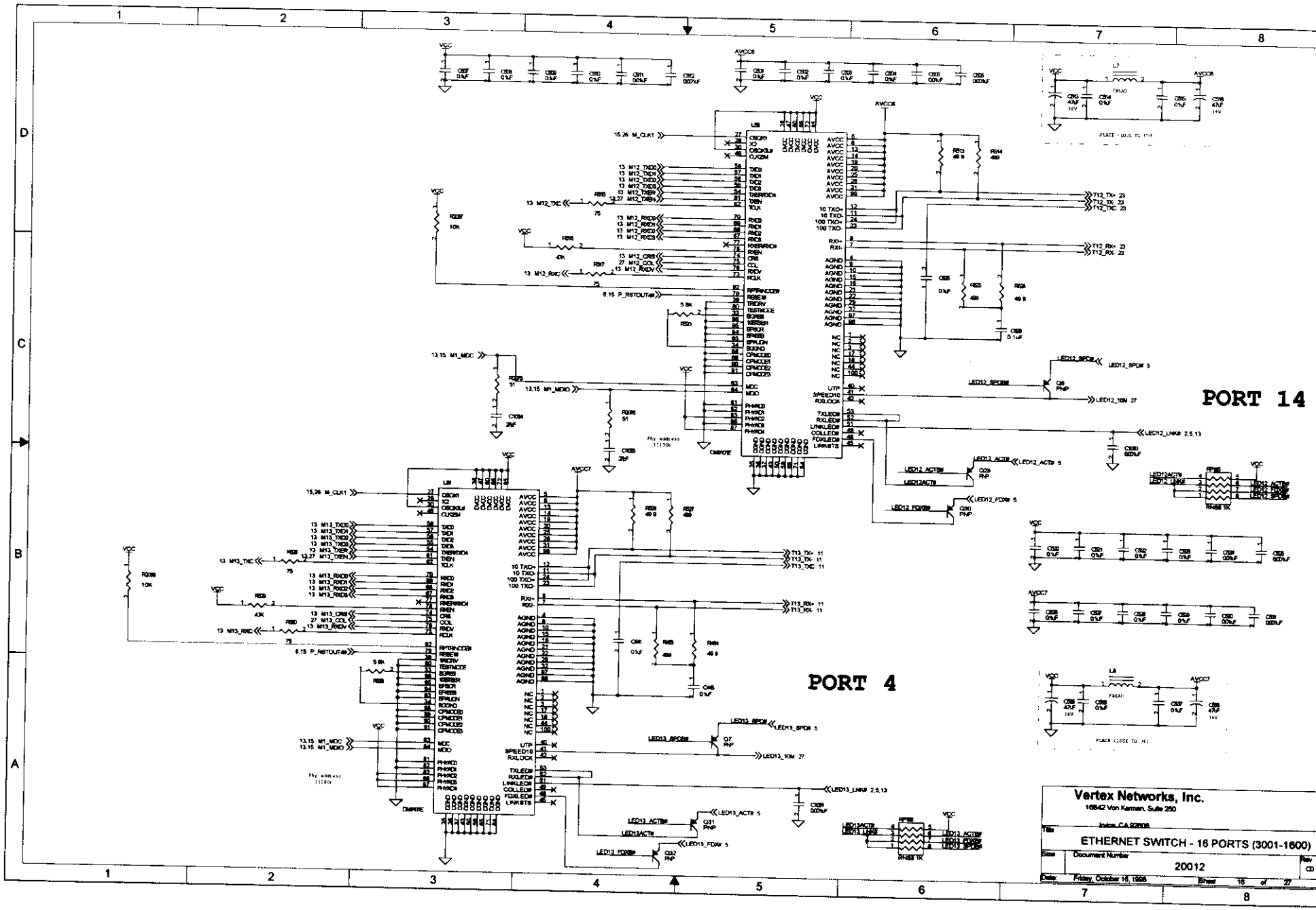
PORT 14
PORT 4
Vertex Networks, Inc.
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Irvine, CA 92606
ETHERNET SWITCH - 16 PORTS (3001-1600)
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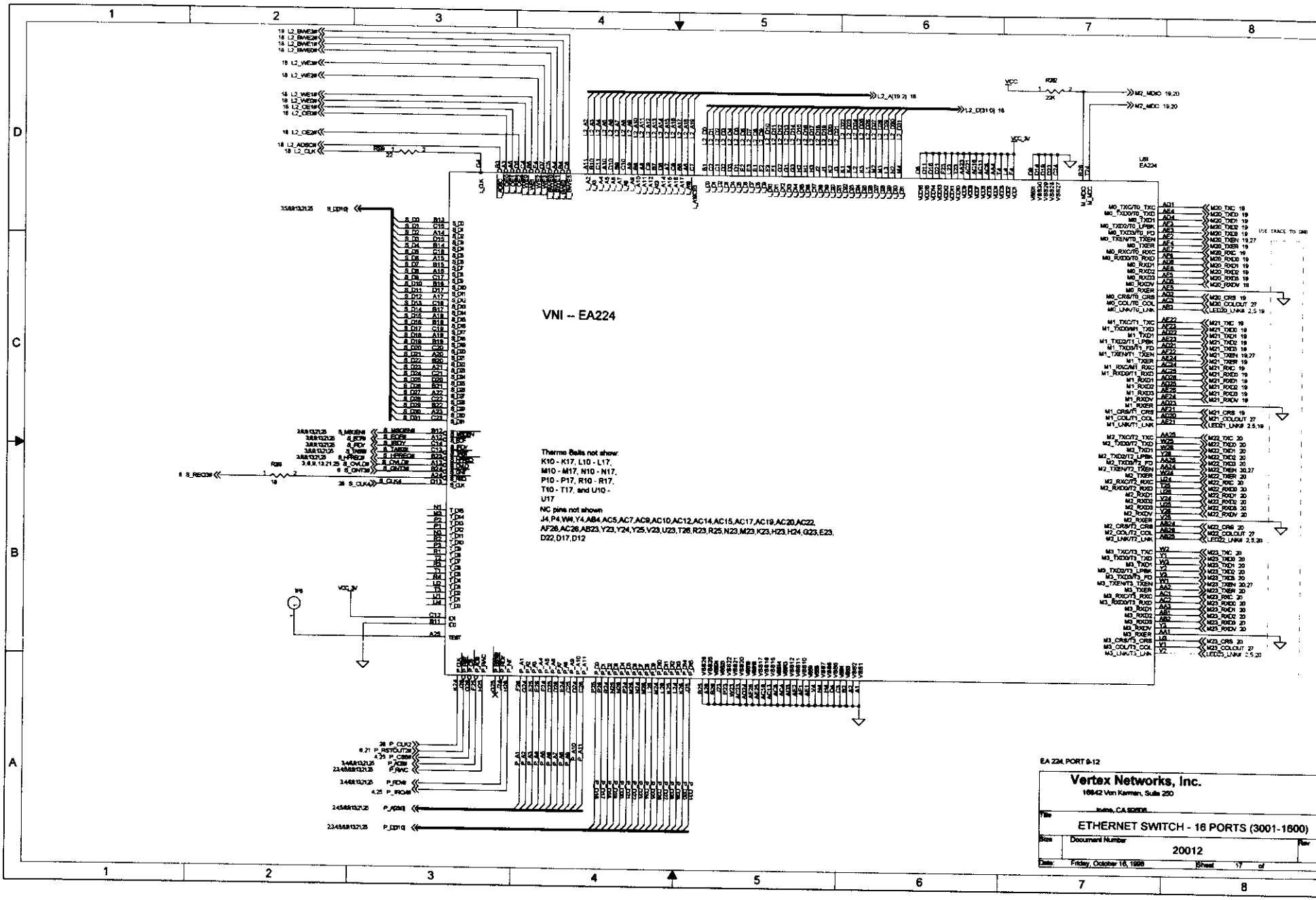
VNI -- EA224
Thermo Balls not show:
K10 - K17, L10 - L17,
M10 - M17, N10 - N17,
P10 - P17, R10 - R17,
T10 - T17, and U10 - U17
NC pins not shown
J4,P4,W4,Y4,AB4,AC5,AC7,AC9,AC10,AC12,AC14,AC15,AC17,AC19,AC20,AC22,
AF28,AC26,AB23,Y23,Y24,Y25,V23,U23,T26,R23,R25,N23,M23,K23,H23,H24,G23,E23,
D22,D17,D12
EA 224, PORT 9-12
Vertex Networks, Inc.
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Irvine, CA 92606
ETHERNET SWITCH - 16 PORTS (3001-1600)
Size
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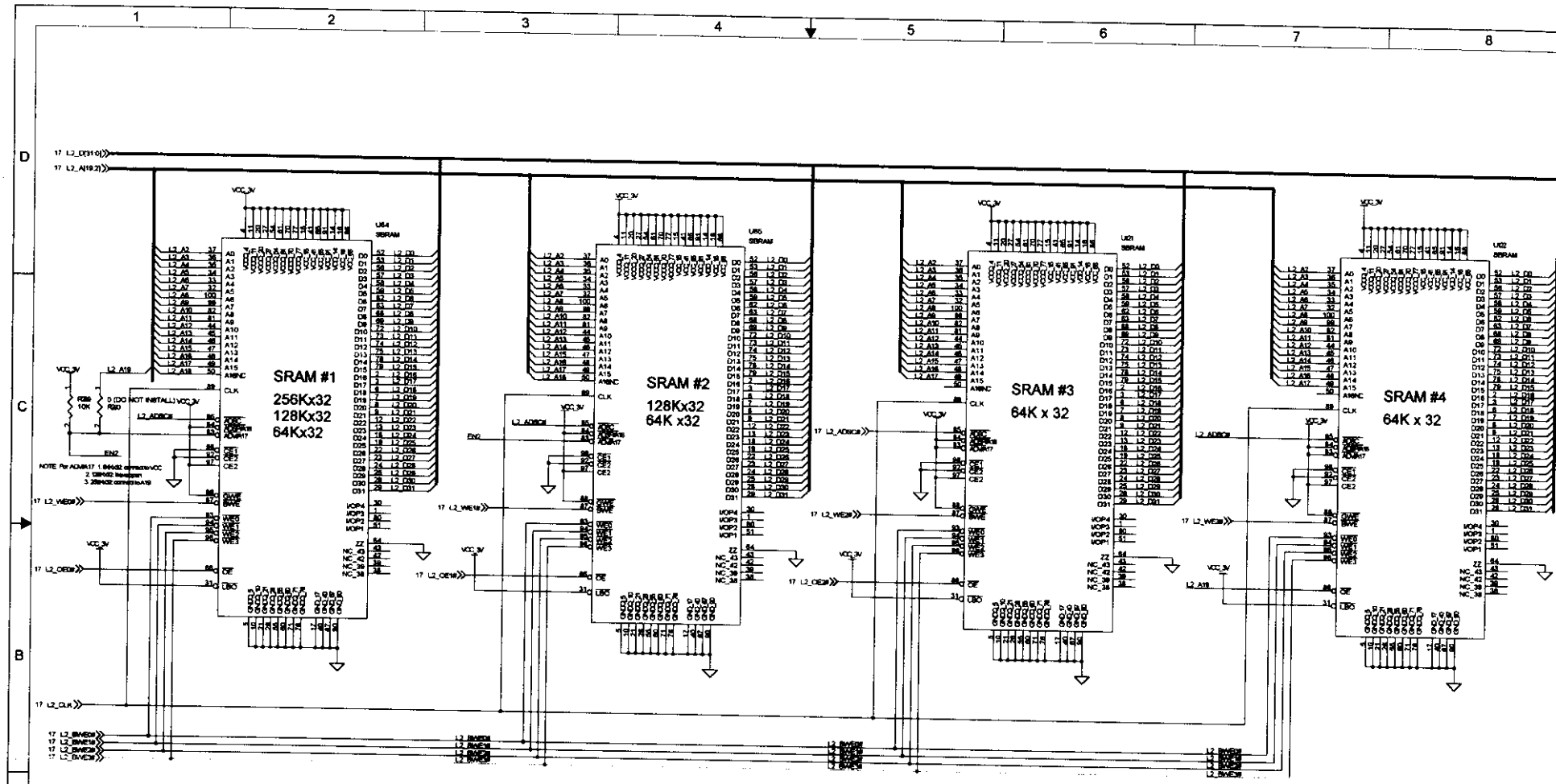


**SRAM Installation Option**

| SRAM Type: | Total SRAM Size: | SRAM #1: | SRAM #2: | SRAM #3: | SRAM #4: |
|---|---|---|---|---|---|
| 64Kx32 | 256K Bytes | Yes | No | No | No |
| 64Kx32 | 512K Bytes | Yes | Yes | No | No |
| 64Kx32 | 1M Bytes | Yes | Yes | Yes | Yes |
| 128Kx32 | 512K Bytes | Yes | No | No | No |
| 128Kx32 | 1M Bytes | Yes | Yes | No | No |
| 256Kx32 | 1M Bytes | Yes | No | No | No |
| | | | | | |
| | | | | | |
| | | | | | |

SRAM FOR EA22A PORT 9-12

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Irvine, CA 92606

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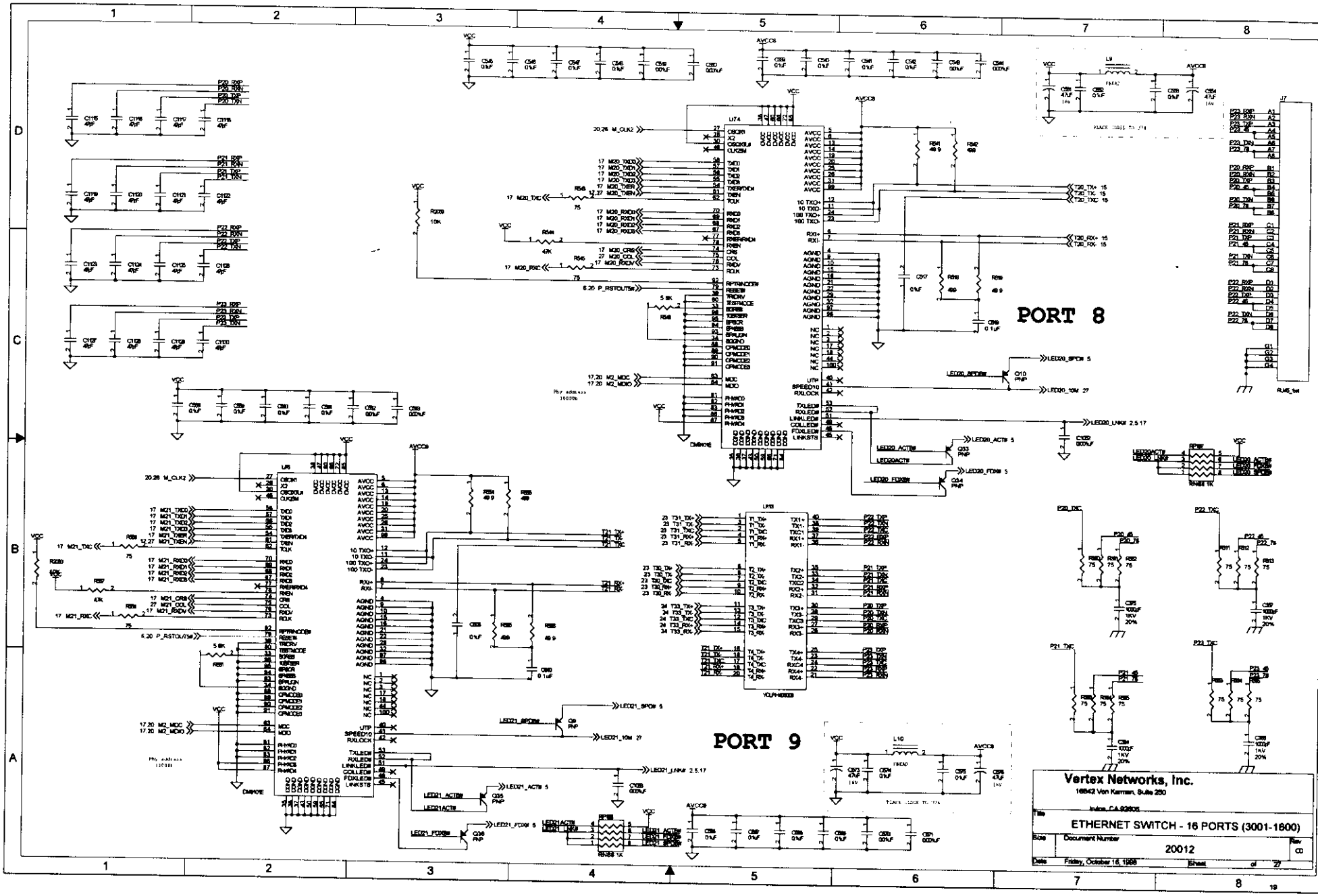
PORT 8
PORT 9
Vertex Networks, Inc.
16842 Von Karman, Suite 250
Irvine, CA 92606
ETHERNET SWITCH - 16 PORTS (3001-1600)
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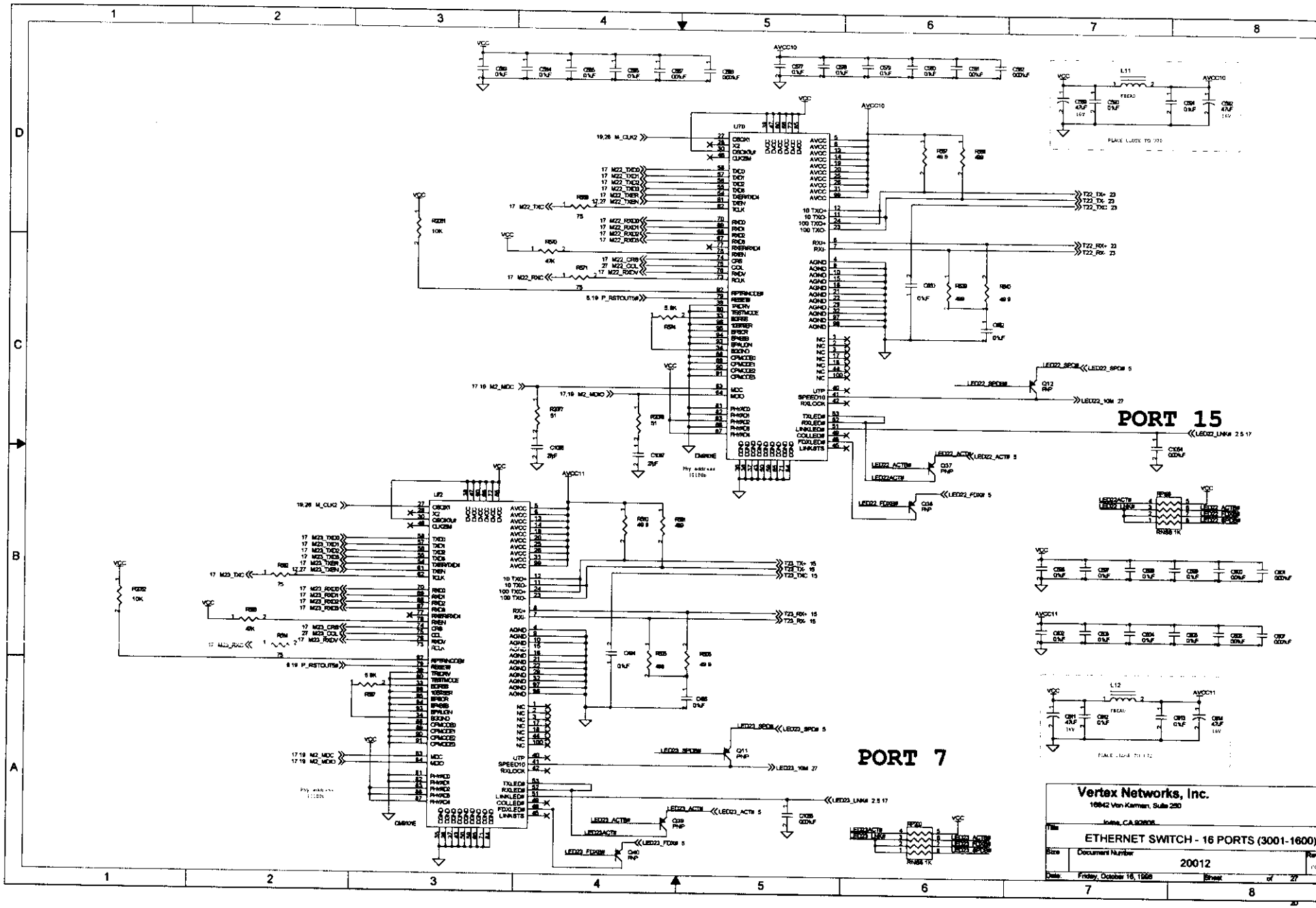
PORT 15
PORT 7
Vertex Networks, Inc.
16842 Von Karman, Suite 250
Irvine, CA 92606
ETHERNET SWITCH - 16 PORTS (3001-1600)
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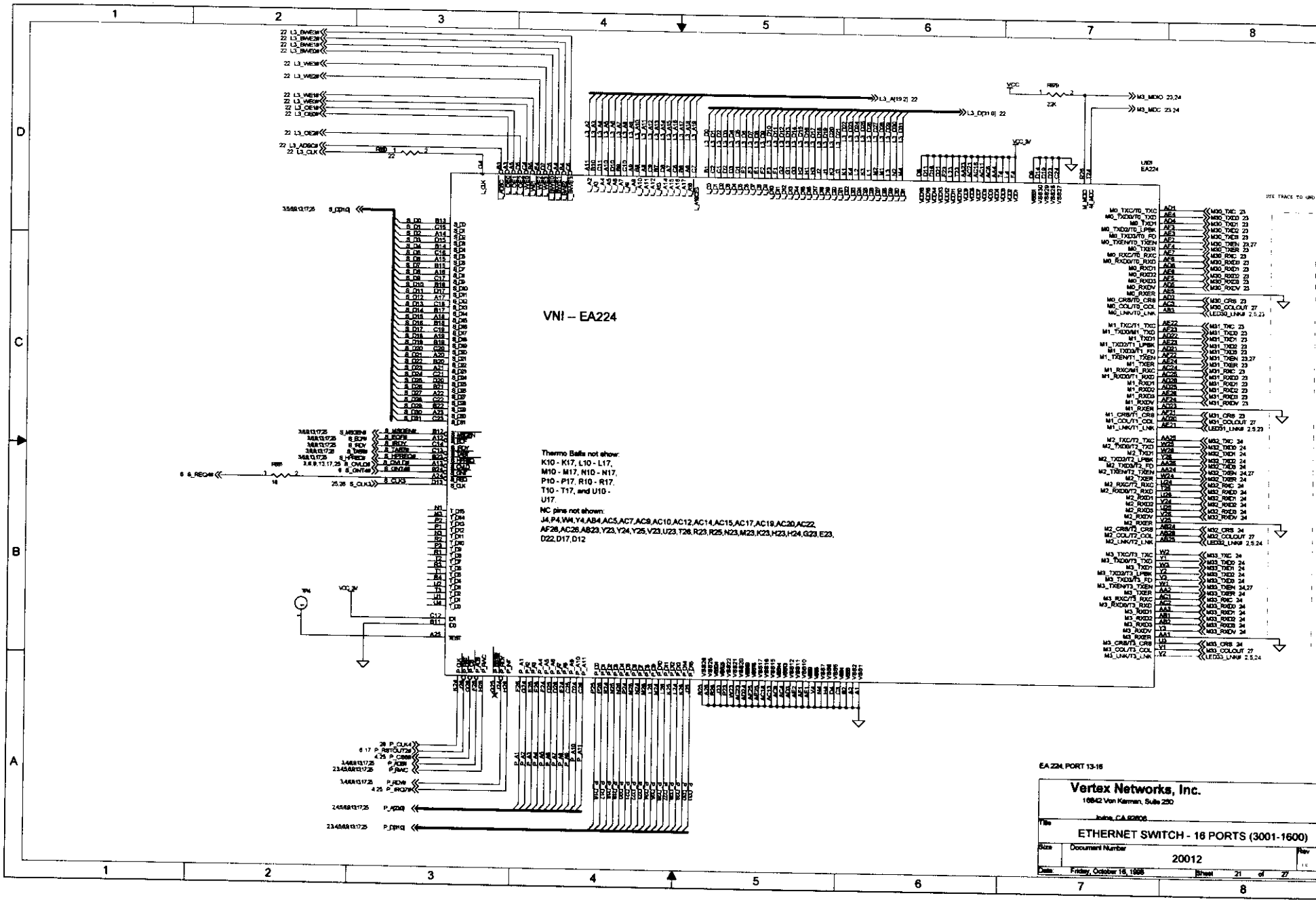
VNI – EA224
Thermo Balls not show:
K10 - K17, L10 - L17,
M10 - M17, N10 - N17,
P10 - P17, R10 - R17,
T10 - T17, and U10 - U17.
NC pins not shown:
J4,P4,W4,Y4,AB4,AC5,AC7,AC9,AC10,AC12,AC14,AC15,AC17,AC19,AC20,AC22,
AF28,AC26,AB23,Y23,Y24,Y25,V23,U23,T26,R23,R25,N23,M23,K23,H23,H24,G23,E23,
D22,D17,D12
EA 224, PORT 13-16
Vertex Networks, Inc.
16842 Von Karman, Suite 250
Irvine, CA 92606
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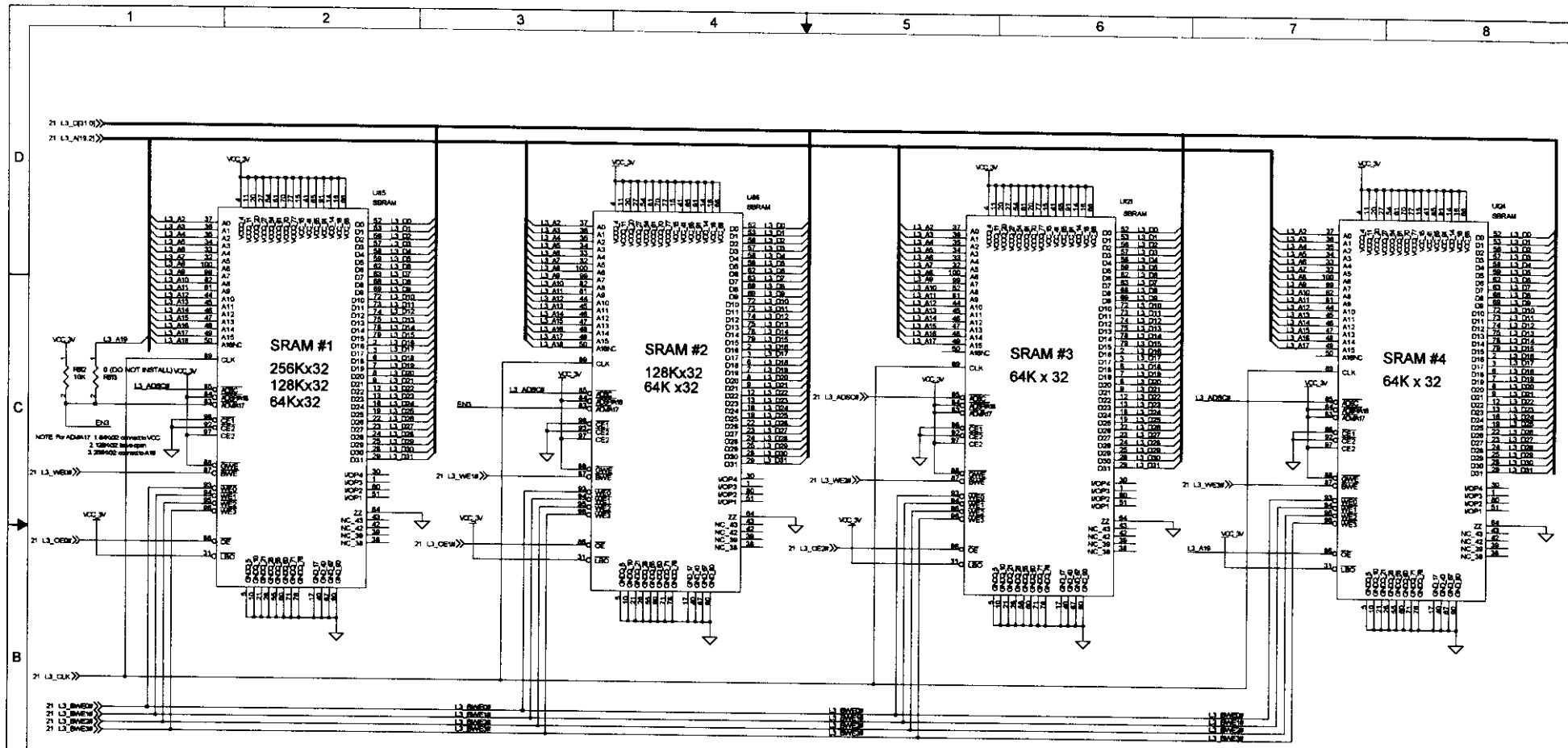


**SRAM Installation Option**

| SRAM Type: | Total SRAM Size: | SRAM #1: | SRAM #2: | SRAM #3: | SRAM #4: |
|---|---|---|---|---|---|
| 64Kx32 | 256K Bytes | Yes | No | No | No |
| 64Kx32 | 512K Bytes | Yes | Yes | No | No |
| 64Kx32 | 1M Bytes | Yes | Yes | Yes | Yes |
| 128Kx32 | 512K Bytes | Yes | No | No | No |
| 128Kx32 | 1M Bytes | Yes | Yes | No | No |
| 256Kx32 | 1M Bytes | Yes | No | No | No |
| | | | | | |
| | | | | | |
| | | | | | |

SRAM FOR EA224, PORT 13-16

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Irvine, CA 92606

Title: ETHERNET SWITCH - 16 PORTS (3001-1600)

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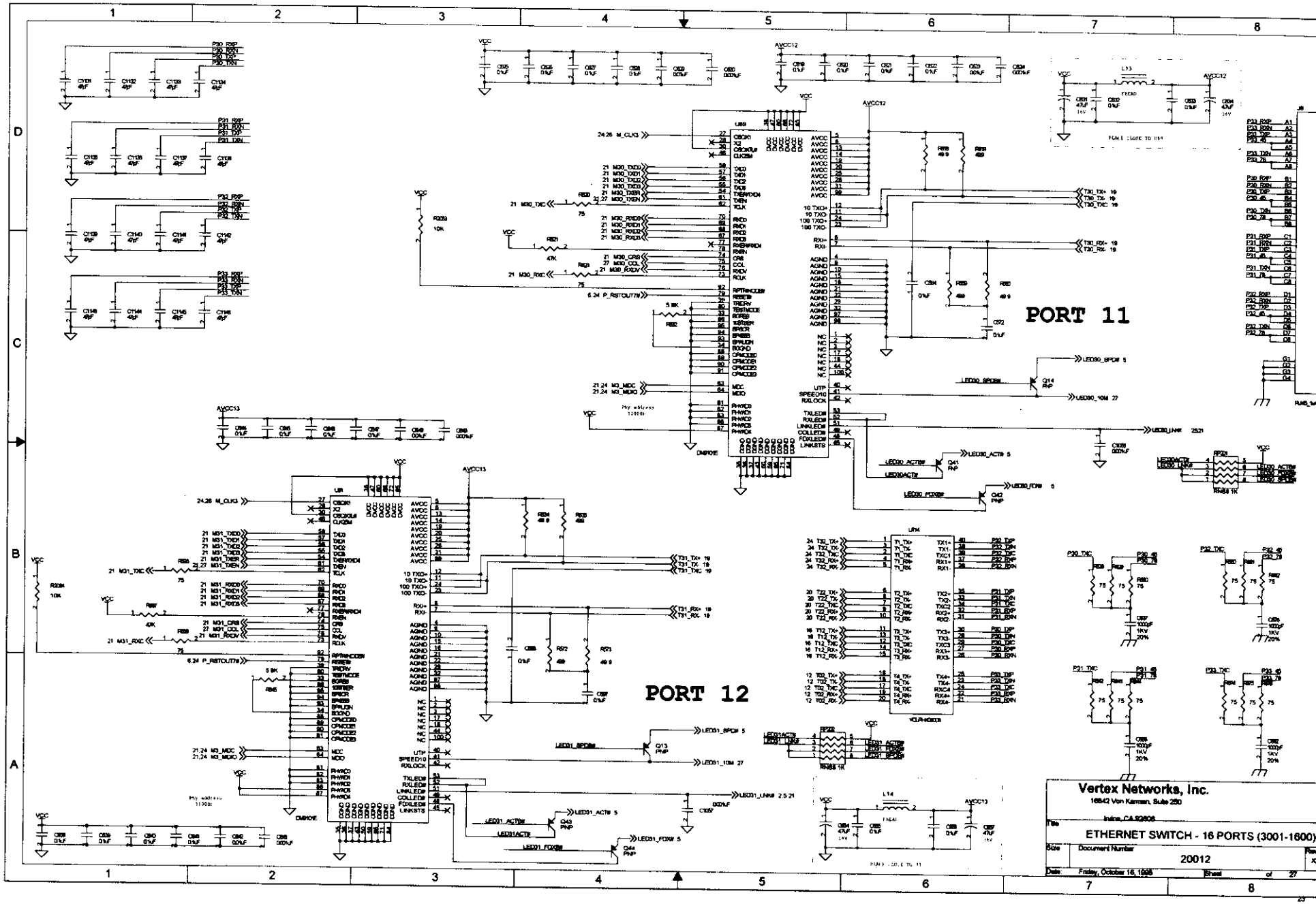
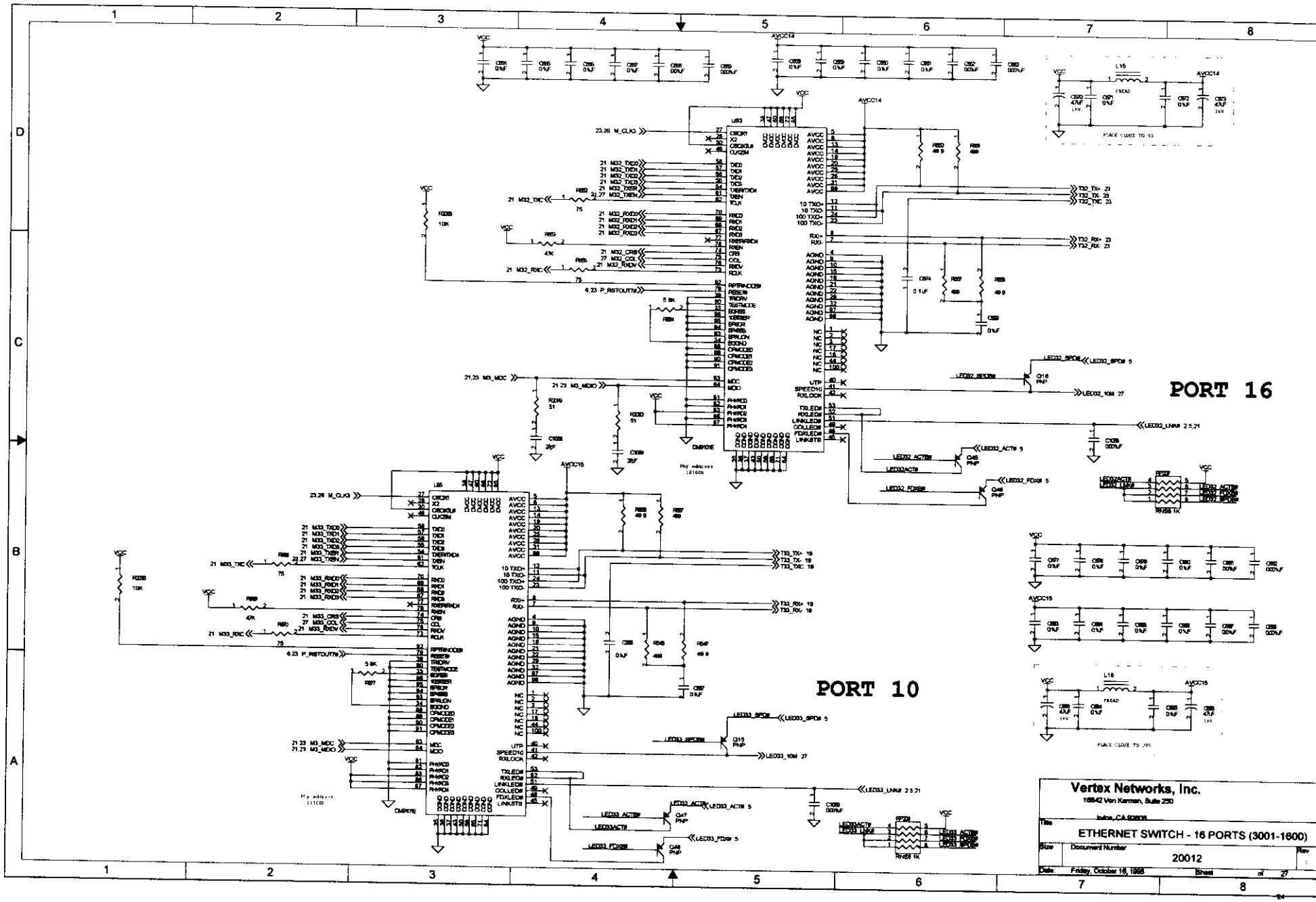

PORT 11
PORT 12
Vertex Networks, Inc.
16842 Von Karman, Suite 250
Irvine, CA 92606
ETHERNET SWITCH - 16 PORTS (3001-1600)
Document Number
20012
Friday, October 16, 1998


PORT 16
PORT 10
Vertex Networks, Inc.
18842 Von Karman, Suite 250
Irvine, CA 92606
ETHERNET SWITCH - 16 PORTS (3001-1600)
Document Number
20012
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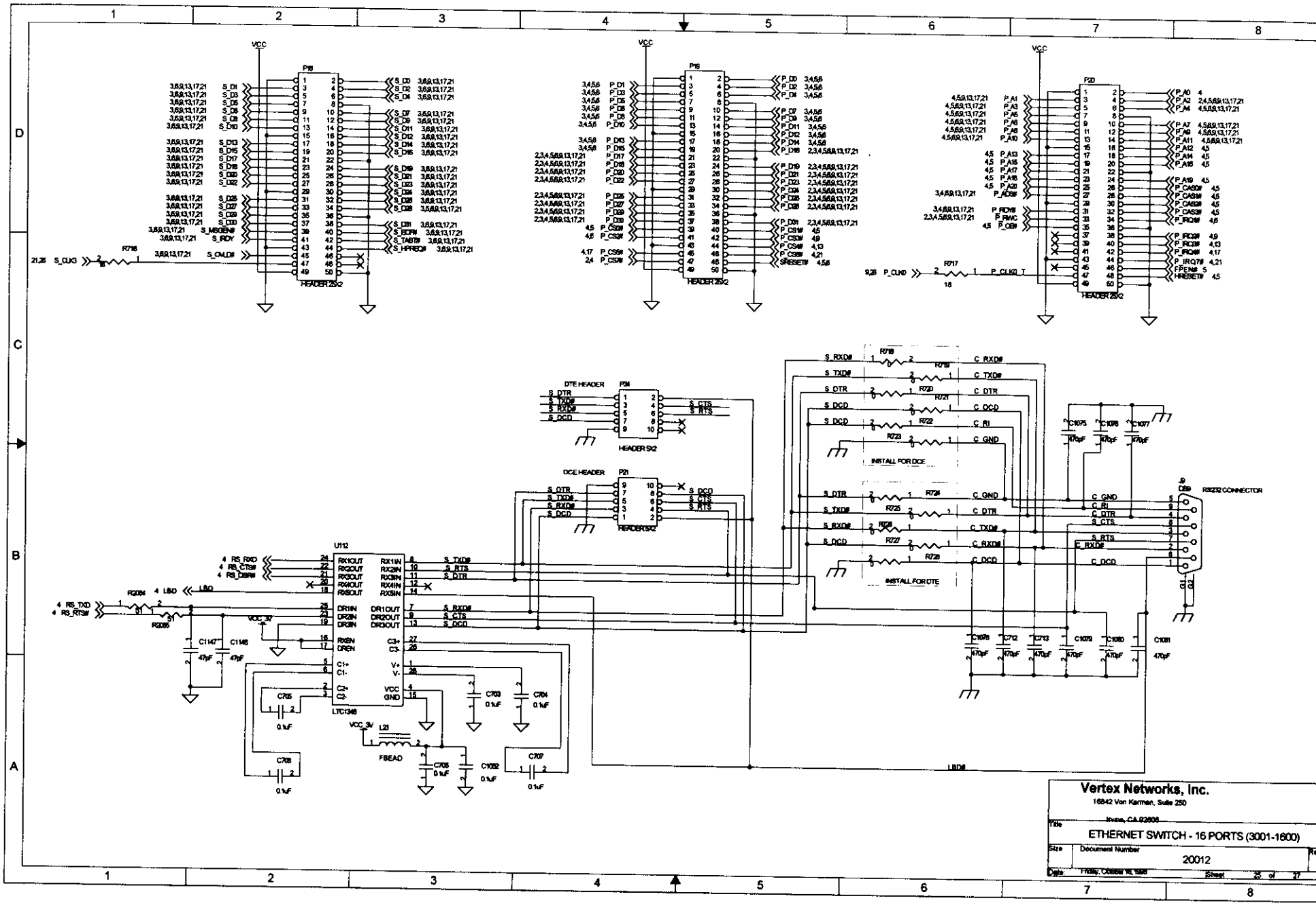
Vertex Networks, Inc.
16842 Von Karman, Suite 250
Irvine, CA 92606
ETHERNET SWITCH - 16 PORTS (3001-1600)
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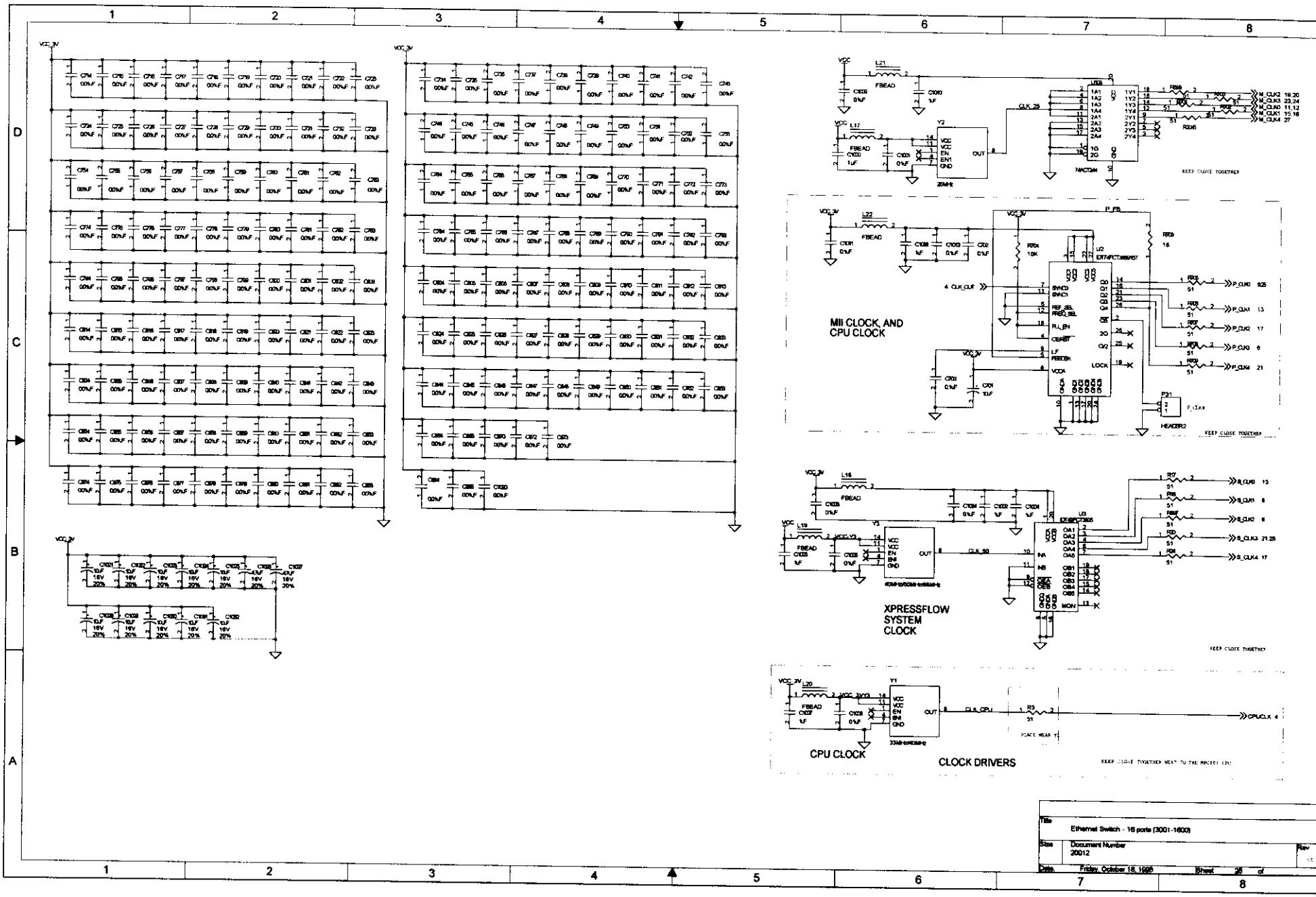
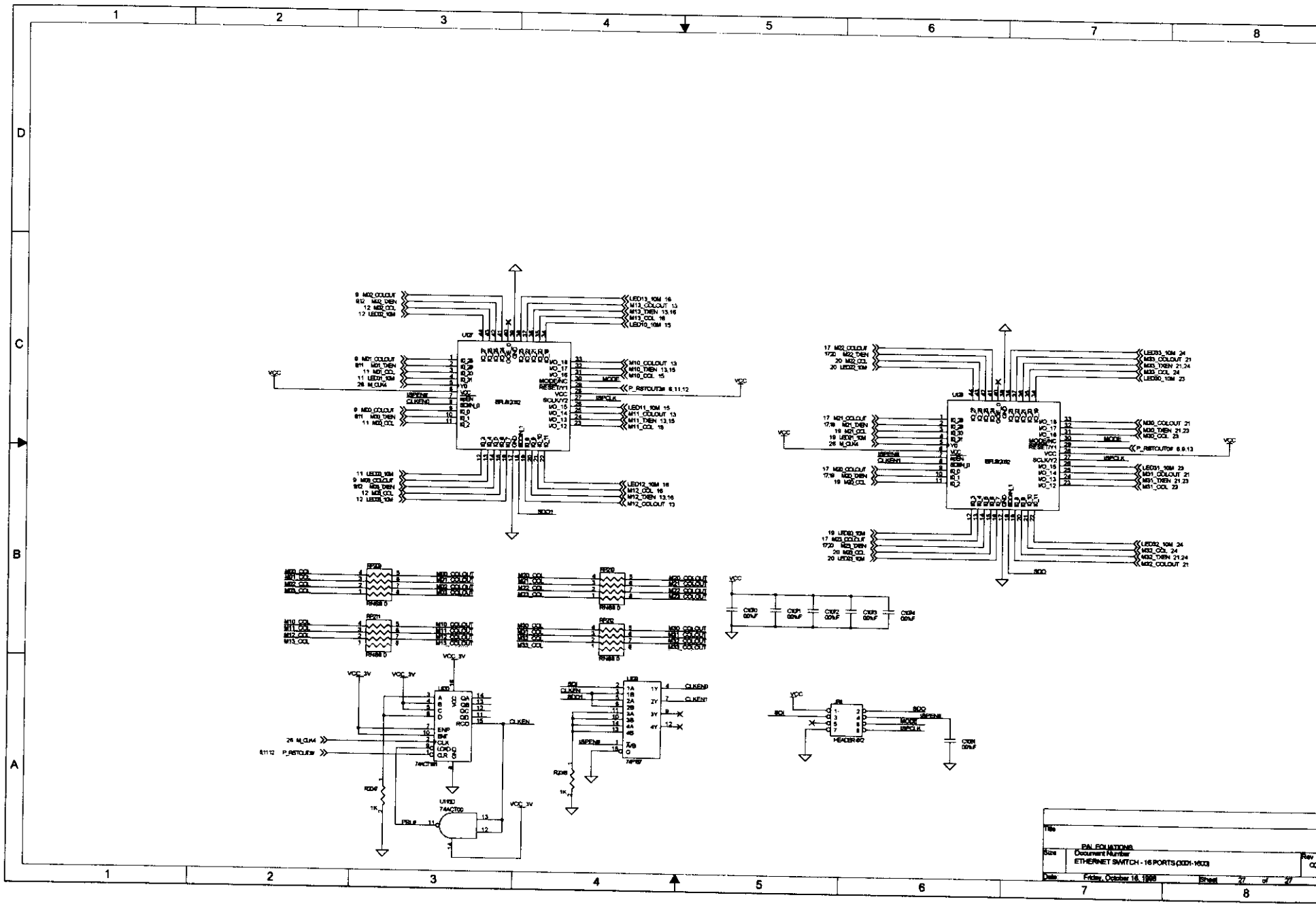
HEADER 25X2
DTE HEADER
DCE HEADER
HEADER 5X2
INSTALL FOR DCE
INSTALL FOR DTE
RS232 CONNECTOR
LTC1348
FBEAD
VCC
VCC_3V
VCC_5V
LBD#


MII CLOCK, AND
CPU CLOCK
XPRESSFLOW
SYSTEM
CLOCK
CPU CLOCK
CLOCK DRIVERS
Ethernet Switch - 16 ports (3001-1600)
Document Number
20012
Friday, October 18, 1996


PAL EQUATIONS
ETHERNET SWITCH - 16 PORTS (3001-1600)
Friday, October 16, 1998
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