



VX4372
Slave Scanner Module
Service Manual

Tektronix

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VX4372

Slave Scanner Module

Section 1

Introduction

The VX4372 is a VXIbus "C" size, 48 channel, two wire, slave scanner. It is designed to be used in a system with up to 11 slave scanners controlled by a master scanner, such as the VX4332, via the VXIbus local bus.

The VX4372 may be used as a 48 channel scanner, selecting one of 48 2-wire inputs, or as two 24 channel scanners, each independently selecting one of 24 2-wire inputs. The VX4372 can also be part of a scanning system in multiple mainframes with up to three masters, each master with up to 11 slaves.

Only the digital control signals of the slave modules connect to the VXIbus backplane, using the VXIbus local bus. Since all analog signals are completely isolated from the VXIbus backplane, both master and slave scanners can route signals up to ± 200 volts in amplitude. The slave module's control signal access to the Local Bus is controlled by a series of Local Bus Out Enable switches on the slave module.

Built in Test Equipment (BITE) is provided by the scan master. See the specific scan master's manual for details. Refer to the master's Operating Manual for information on programming the module.

Section 1

Section 2 Adjustment and Calibration

No adjustment or calibration is required for this module.

Section 2

Section 3

Assembly And Disassembly

The VX4372 is shipped fully assembled. A schematic diagram that may also be used as a reference is included with this manual.

Section 3

Section 4

Parts List

The following lists give the name and part number for all field replaceable parts of the VX4372. To order replacement parts, call your Tektronix representative.

SERVICE MANUAL

VX4372

SLAVE RELAY SCANNER-2 WIRE 48 CHANNEL MODULE

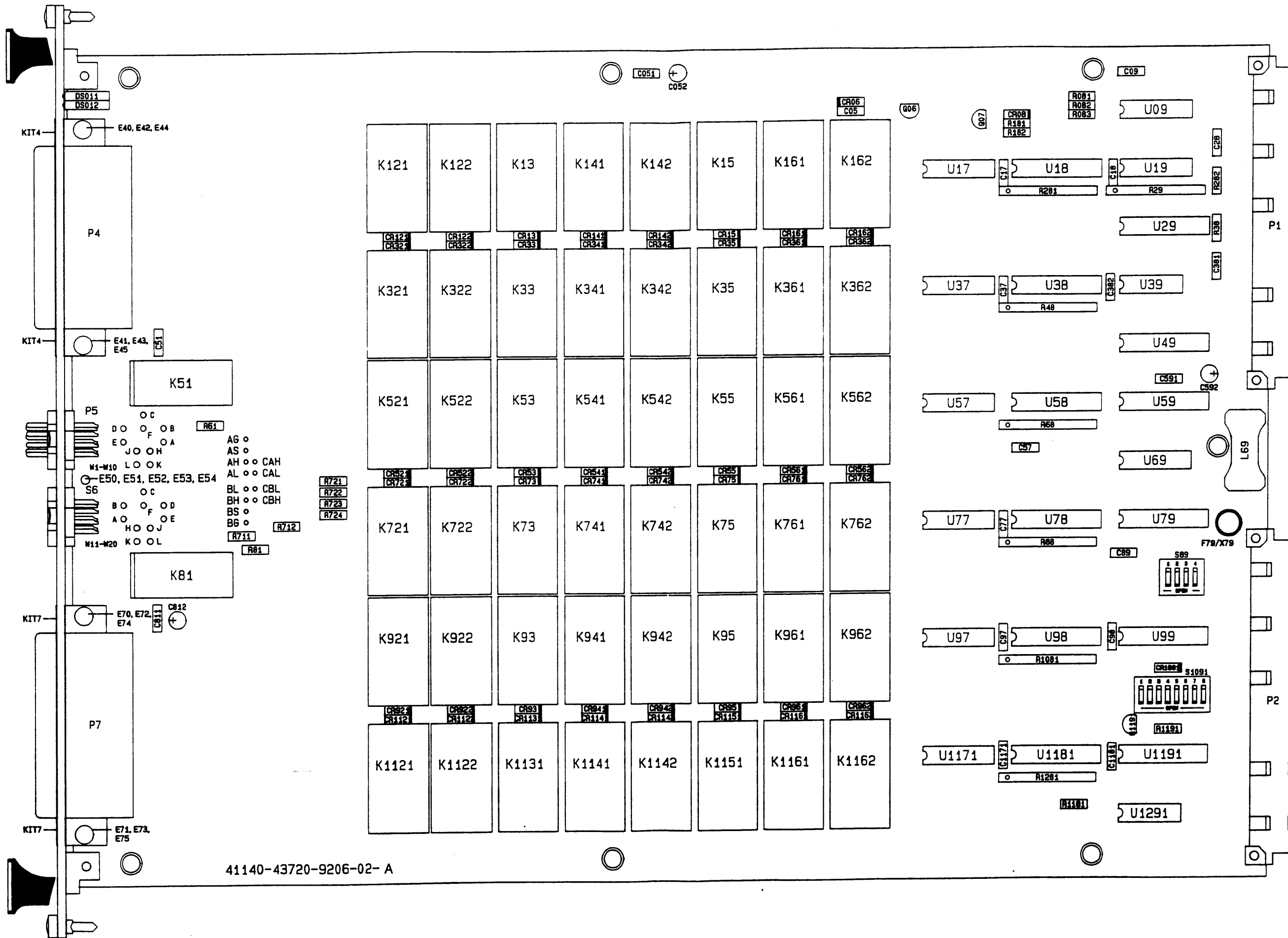
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| REFERENCE DESIGNATOR | CDS PART NUMBER | QTY. | PART DESCRIPTION | MFG. NUM. | MFG. PART NUMBER |
|---|-----------------|------|---|-----------|--------------------|
| FOR USE WITH KIT 4,7 | 45008-20418 | 4 | SCREW LOCK ASSEMBLY FOR D CONNECTOR | 0108 | D-20418-2 |
| C05 | 20128-10005 | 1 | CAP FXD CER .01UF 20% 50VDCW | 0106 | 1C2525U103M050B |
| C051,09,1171,1181,17,18,37,382 51,57,591,77,811,89,97,98 | 20128-10006 | 16 | CAP FXD CER .1UF 20% 50VDCW | 0058 | C322C104M5U5CA |
| C052,592,812 | 22022-20008 | 3 | CAP FXD TA 22UF 10-20% 20-25VDCW | 0106 | 199D226X9025CA1 |
| C28,381 | 20128-10004 | 2 | CAP FXD CER .001UF 10% STABLE 100VDCW | 0058 | CK05BX102K |
| CR06 | 32000-05248 | 1 | DIODE ZENER 18V .5W 5% | 0107 | 1N5248B |
| CR08,1091,1121,1122,1131,1141 1142,1151,1161,1162,121,122,13 141,142,15,161,162,321,322,33 341,342,35,361,362,521,522,53 541,542,55,561,562,721,722,73 741,742,75,761,762,921,922,93 941,942,95,961,962 | 32000-04148 | 50 | DIODE SILICON 75V 1A 5% | 0078 | 1N4148 |
| DCL1 | 40408-14372 | 1 | LABEL VX4372 -03272 REV 9107 | 0026 | 40408-14372 |
| DCL2 | 40409-14372 | 1 | LABEL VX4372 -03273 REV 9107 | 0026 | 40409-14372 |
| DS011,012 | 32000-02303 | 2 | DIODE LIGHT EMITTING GREEN WITH RESISTOR | 0039 | 547-2303 |
| E40,41,70,71 | 92301-00440 | 4 | SCREW PHIL PNHD 4-40X5-16 BRITZINC | 0137 | 4-40X5-16 PHIL PNH |
| E42,43,52,53,72,73 | 92302-00440 | 6 | WASHER STAR NUMBER 4 INTERNAL ZINC | 0137 | 4 IN STAR WASH ZIN |
| E44,45,54,74,75 | 92303-00440 | 5 | HEX MACHINE NUT 4-40 ZINC | 0137 | HEX MACH NUT 4-40 |
| E50 | 47000-74065 | 1 | BRACKET 73A FRONT PANEL CENTER DRW 01676 REV 890 | 0026 | 47000-74065 |
| E51 | 92301-10440 | 1 | SCREW PHIL PNHD 4-40 X .1875 BRITE ZINC | 0137 | 4-40X3-16 PHIL PNH |
| F79 | 42202-73020 | 1 | FUSE MICRO 2AMP 125V FAST PLUG IN CLEAR CAP | 0061 | 273 002 |

| REFERENCE DESIGNATOR | CDS PART NUMBER | QTY. | PART DESCRIPTION | MFG. NUM. | MFG. PART NUMBER |
|--|-----------------|------|--|-----------|--------------------|
| FP1 | 47006-14372 | 1 | FACE PLATE VX4372 -02341 REV 9107 | 0026 | 47006-14372 |
| FP10,11 | 92505-25005 | 2 | WASHER WAVY 2.7MM | 0026 | 92505-25005 |
| FP12,13 | 92501-25010 | 1 | SCREW M2.5X10 CHEESEHEAD | 0026 | 92501-25010 |
| FP14 | 92502-25008 | 1 | SCREW PHIL M 2.5 X 8 CSK BRITE ZINC | 0137 | PHIL M 2.5 X 8 CSK |
| FP15 | 92500-25008 | 1 | SCREW M 2.5 X 8 SELF TAP | 0266 | 21100-710 |
| FP17 | 92500-25025 | 1 | HEX NUT M2.5 ZINC | 0266 | 21100-144 |
| FP18,20 | 92500-25011 | 2 | COLLAR SCREW M 2.5 X 11 SL NICKEL | 0266 | 21100-379 |
| FP19,21 | 92510-00464 | 2 | SLEEVE CAPTIVE SCREW GRAY | 0266 | 21100-464 |
| FP2,22,4,8 | 40406-00140 | 1 | EJECTOR HANDLE C-TOP VX1400 | 0266 | 20817-328 |
| FP23,3,5,9 | 40406-00141 | 1 | EJECTOR HANDLE C-BOTTOM VX1400 | 0266 | 20817-327 |
| FP30 | 47000-74102 | 1 | KEY VXI TTL LEFT AND RIGHT 01669 REV 9003 | 0026 | 47000-74102 |
| FP31,32,6,7 | 92500-25005 | 4 | SCREW 2.5MM PHIL CSK 5MM | 0026 | 92500-25005 |
| K1121,1122,1131,1141,1142,1151 1161,1162,121,122,13,141,142,15 161,162,321,322,33,341,342,35 361,362,521,522,53,541,542,55 561,562,721,722,73,741,742,75 761,762,921,922,93,941,942,95 961,962 | 83000-00092 | 48 | RELAY REED 3PST 350 OHMS 5V | 0138 | 3600-0031 |
| K51,81 | 83500-20002 | 2 | RELAY 4-A POLARIZED 130 OHM 5V | 0013 | S4EB5V |
| L69 | 27051-50007 | 1 | INDUCTOR 5 UH 5A .015 OHMS 50MHZ FR | 0037 | IHA-501 |
| P1,2 | 45003-09600 | 2 | CONNECTOR DIN 96 PIN MALE RT ANGLE SOLDER | 0265 | 10-8457-096-002097 |
| P4,7 | 45008-50003 | 2 | RT ANGLE DD-50 PIN PC MOUNT | 0193 | 147-1150P-02-D4338 |
| P5 | 91100-10001 | 1 | WIRE ASSY 10 PIN MALE | 0000 | |
| PCB1 | 41140-43720 | 1 | P.C. BOARD VERSION 6L | 0498 | 41140-43720 |

| REFERENCE DESIGNATOR | CDS PART NUMBER | QTY. | PART DESCRIPTION | MFG. NUM. | MFG. PART NUMBER |
|----------------------------------|-----------------|------|---|-----------|------------------|
| Q06 | 51100-04402 | 1 | TRANSISTOR PNP SILICON GP | 0107 | 2N4402 |
| Q07,1191 | 51100-00300 | 2 | TRANSISTOR VMOS N-FET | 0102 | VN0300L |
| R081,082,083,1181,181 | 10117-33004 | 5 | 3.3K RES COMP 1-4W 5% | 0087 | R25J-3.3K-5% |
| R1081,1281,281,48,68,88 | 12008-22003 | 6 | 220 OHM RES NETWORK SIP 5% 1.5W 9-PKG | 0027 | 750-101-R220 |
| R1191 | 10117-33005 | 1 | 33K RES COMP 1-4W 5% | 0087 | R25J-33K-5% |
| R182 | 10117-39003 | 1 | 390 OHM RES COMP 1-4W 5% | 0087 | R25J-390-5% |
| R282,38 | 10117-10004 | 2 | 1K RES COMP 1-4W 5% | 0087 | R25J-1K-5% |
| R29 | 12008-10005 | 1 | 10K RES NETWORK SIP 5% 1.5 9-PKG | 0027 | 750-101-R10K |
| R61,711,712,81 | 10000-00000 | 4 | USER INSTALLED RESISTOR | 0026 | 10000-00000 |
| R721,722,723,724 | 10117-00000 | 4 | 0 OHM RESISTOR | 0054 | ZEROHM |
| S1091 | 42050-10108 | 1 | SWITCH DIP 8POS SPST | 0048 | 76SB08S |
| S6 | 91100-10000 | 1 | WIRE ASSY 10 PIN FEMALE | 0000 | |
| S89 | 42050-10104 | 1 | SWITCH DIP 4POS SPST | 0048 | 76SB04S |
| SH1 | 47007-74372 | 1 | SHIELD FRONT 372 CARD -01821 REV 9008 | 0026 | 47007-74372 |
| SH10,11,13,14,17,2,20,31,4,5,7,8 | 92500-25010 | 12 | SCREW M 2.5 X 10 CSK OVAL PHIL NIK PL | 0266 | 21100-500 |
| SH12,3,6,9 | 92519-25019 | 4 | STANDOFF HEX M2.5 X 19.5MM DRW 01801 REV 900 | 0026 | 92519-25019 |
| SH15,18,21,33 | 92201-19451 | 4 | STANDOFF HEX M2.5 THRU X .538L DRW 01673 REV 920 | 0026 | 92201-19451 |
| SH16,19,30,34 | 92500-25017 | 4 | SCREW 2.5MM X 16MM 90 DEG CSK FLHD PHIL STAINLS | 0420 | DIN965M2.5X16 |
| SH22 | 47007-74002 | 1 | SHIELD BACK CONN MTG CONFIG -01816 REV 9004 | 0026 | 47007-74002 |
| SH23,24,25,26,27,28,29,32 | 92519-25004 | 8 | REAR SHIELD SPACER 73A DRW 01807 REV 890 | 0212 | 19501-A-0029 |
| U09 | 75401-74165 | 1 | IC TTL LS 8-BIT SHIFT REGISTER | 0078 | 74LS165 |
| U1171,17,19,37,57,77,97 | 79000-07445 | 7 | IC TTL BCD-DEC DECODER DRIVER OC 30V 80 MA | 0107 | 7445 |

| REFERENCE DESIGNATOR | CDS PART NUMBER | QTY. | PART DESCRIPTION | MFG. NUM. | MFG. PART NUMBER |
|----------------------|-----------------|------|---|-----------|------------------|
| U1181,18,38,58,78,98 | 79814-00342 | 6 | PAL PROGRAMMED C16L8 REV B 73A SCANNERS | 0000 | |
| U1191 | 73309-74244 | 1 | IC HCT OCTAL BUFFER NON-INVERTING | 0107 | 74HCT244 |
| U1291,39 | 75401-74164 | 2 | IC TTL LS 8-BIT SERIAL SHIFT REGISTER | 0107 | 74LS164 |
| U29 | 79814-00341 | 1 | PAL PROGRAMMED C16L8 REV B 73A SCANNERS | 0000 | |
| U49 | 79814-00366 | 1 | PAL PROGRAMMED C16L8 REV A 73A SCANNERS | 0000 | |
| U59 | 79814-00344 | 1 | PAL PROGRAMMED C16L8 REV B 73A-372 | 0026 | 79814-00344 |
| U69 | 71210-04040 | 1 | IC HCT 12-STAGE BINARY RIPPLE COUNTER | 0088 | CD74HCT4040 |
| U79 | 79814-00343 | 1 | PAL PROGRAMMED C16L8 REV B 73A SCANNERS | 0000 | |
| U99 | 79814-00340 | 1 | PAL PROGRAMMED C16L8 REV B 73A SCANNERS | 0000 | |
| X79 | 42300-28105 | 1 | FUSE SOCKET MICRO VERTICAL .025 LEADS .1 CNT | 0061 | 281 005 |



41140-43720-9206-02-A