## JNB1

HAP100 (MALE)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 99 | +5V | 100 | 0V | 49 | EA18 | 50 | EA19 |
| 97 | +5V | 98 | SYSCLK | 47 | EA16 | 48 | EA17 |
| 95 | +5V | 96 | 0V | 45 | EA14 | 46 | EA15 |
| 93 | +5V | 94 | 0V | 43 | EA12 | 44 | EA13 |
| 91 | +5V | 92 | *HDIINT | 41 | EA10 | 42 | EA11 |
| 89 | +5V | 90 | *VSYINT | 39 | EA08 | 40 | EA09 |
| 87 | +5V | 88 | *RVRDY0 | 37 | EA06 | 38 | EA07 |
| 85 | +5V | 86 | *RVRDY1 | 35 | EA04 | 36 | EA05 |
| 83 | +5V | 84 | *RD | 33 | EA02 | 34 | EA03 |
| 81 | 0V | 82 | *WR | 31 | ED15 | 32 | EA01 |
| 79 | 0V | 80 | *BE0 | 29 | ED13 | 30 | ED14 |
| 77 | +15V | 78 | *BE1 | 27 | ED11 | 28 | ED12 |
| 75 | 0V | 76 | *PF | 25 | ED09 | 26 | ED10 |
| 73 | 0V | 74 | *RN | 23 | ED07 | 24 | ED08 |
| 71 | -15V | 72 | *SYSCLR | 21 | ED05 | 22 | ED06 |
| 69 | 0V | 70 | *SYSFAIL | 19 | ED03 | 20 | ED04 |
| 67 | 0V | 68 | *SYSTMR | 17 | ED01 | 18 | ED02 |
| 65 | +24V | 66 | *SYSITP | 15 | | 16 | ED00 |
| 63 | +24V | 64 | *PMCTMR | 13 | GD06 | 14 | |
| 61 | +24V | 62 | *I/O | 11 | GD05 | 12 | *EXRDY |
| 59 | 0V | 60 | *MAT | 9 | GD04 | 10 | *EXSTB1 |
| 57 | 0V | 58 | *CHTMEM | 7 | GD03 | 8 | *EXSTB2 |
| 55 | 0V | 56 | *DISP | 5 | GD02 | 6 | *EXDEN |
| 53 | MCLK | 54 | HI | 3 | GD01 | 4 | DIR |
| 51 | 0V | 52 | TEST | 1 | GD00 | 2 | *IOIDRD |

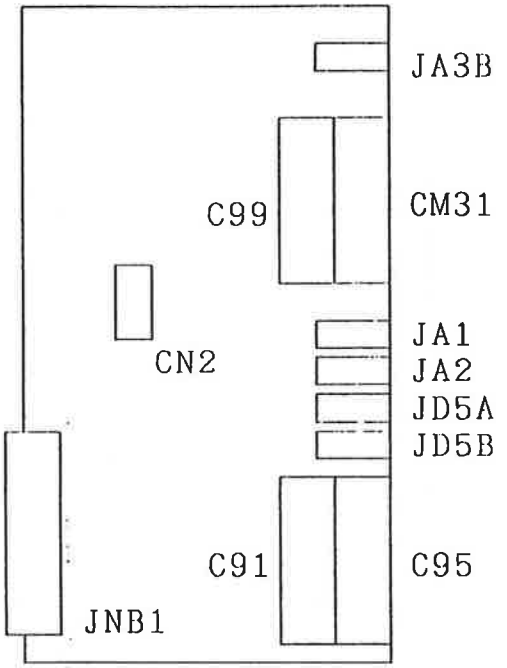
BA03

## CN2

Con
F JAEPS20

| | A | B |
|---|---|---|
| 01 | *PF | HI |
| 02 | *SR | TEST |
| 03 | | |
| 04 | +5V | +5V |
| 05 | +5V | +5V |
| 06 | +5V | 0V |
| 07 | 0V | 0V |
| 08 | 0V | 0V |
| 09 | -15V | 0V |
| 10 | +15V | +24V |

BI01




| NO. | FUNCTION |
|---|---|
| A16C-2201-0732 | FOR 9 INCH CRT 21.622MHZ |
| A16C-2201-0737 | FOR 7.2 INCH LCD 25.175MHZ |
| A16C-2201-0739 | FOR MMC-IV |

CONNECTOR TABLE 1

BA01

| MARK | DATE | DESIG | CHECK | DESCRIPTION | APPD |
|---|---|---|---|---|---|
| BASIC | 95.03.03 | OKITA | | | |

TITLE: FS20 I/O BOARD A CIRCUIT DIAGRAM

DRAW NO. A16C-2201-0730-0739/04 | CONT.

FANUC LTD | SHEET 001/32

## C95

FAP-50

| | A | B |
|---|---|---|
| 01 | +24V | +24V |
| 02 | +24V | *SRSP |
| 03 | *RMS | EMC |
| 04 | OTR | Y08.0 |
| 05 | Y08.1 | Y08.2 |
| 06 | Y08.3 | Y08.4 |
| 07 | Y08.5 | Y08.6 |
| 08 | Y08.7 | Y09.0 |
| 09 | Y09.1 | Y09.2 |
| 10 | Y09.3 | Y09.4 |
| 11 | Y09.5 | Y09.6 |
| 12 | Y09.7 | Y10.0 |
| 13 | Y10.1 | Y10.2 |
| 14 | Y10.3 | Y10.4 |
| 15 | Y10.5 | Y10.6 |
| 16 | Y10.7 | Y11.0 |
| 17 | Y11.1 | Y11.2 |
| 18 | Y11.3 | Y11.4 |
| 19 | Y11.5 | Y11.6 |
| 20 | Y11.7 | Y12.0 |
| 21 | Y12.1 | Y12.2 |
| 22 | Y12.3 | Y12.4 |
| 23 | Y12.5 | X12.4 |
| 24 | 0V | 0V |
| 25 | 0V | 0V |

BB01-07

## C91

FAP-50

| | A | B |
|---|---|---|
| 01 | +24V | +24V |
| 02 | +24V | |
| 03 | X08.0 | Y12.6 |
| 04 | X08.1 | Y12.7 |
| 05 | X10.7 | Y13.0 |
| 06 | X10.6 | X10.5 |
| 07 | X10.3 | X08.2 |
| 08 | X10.1 | X10.4 |
| 09 | X11.0 | X10.2 |
| 10 | X08.3 | X10.0 |
| 11 | X08.6 | X08.7 |
| 12 | COM0 | X08.5 |
| 13 | X08.4 | X09.4 |
| 14 | Y13.1 | X09.0 |
| 15 | Y13.2 | X09.1 |
| 16 | Y13.3 | X11.1 |
| 17 | X11.2 | X11.3 |
| 18 | X09.2 | X11.4 |
| 19 | X11.5 | X11.6 |
| 20 | X11.7 | X12.0 |
| 21 | X12.1 | X09.3 |
| 22 | X09.7 | X09.6 |
| 23 | X09.5 | COM1 |
| 24 | 0V | 0V |
| 25 | 0V | 0V |

BB01-07

## CM31

FAP-50

| | A | B |
|---|---|---|
| 01 | +24V | +24V |
| 02 | DICOM1 | DICOM2 |
| 03 | DICOM3 | DICOM4 |
| 04 | *DIDD0 | *DIDD1 |
| 05 | *DIDD2 | *DIDD3 |
| 06 | *DIDD4 | *DIDD5 |
| 07 | *DIDD6 | *DIDD7 |
| 08 | *DIDD8 | *DIDD9 |
| 09 | *DID10 | *DID11 |
| 10 | *DID12 | *DID13 |
| 11 | *DID14 | *DID15 |
| 12 | DOCOM1 | DOCOM2 |
| 13 | DOCOM3 | DOCOM4 |
| 14 | *DOD0 | *DOD1 |
| 15 | *DOD2 | *DOD3 |
| 16 | *DOD4 | *DOD5 |
| 17 | *DOD6 | *DOD7 |
| 18 | *DOD8 | *DOD9 |
| 19 | *DOD10 | *DOD11 |
| 20 | *DOD12 | *DOD13 |
| 21 | *DOD14 | *DOD15 |
| 22 | OFF | ON |
| 23 | COM | OTR |
| 24 | *EMS | EMC |
| 25 | 0V | 0V |

BC01-03

## C99

FAP-50

| | A | B |
|---|---|---|
| 01 | +24V | +24V |
| 02 | +24V | |
| 03 | X13.0 | *SRSP |
| 04 | X13.1 | EMC |
| 05 | X12.7 | Y13.4 |
| 06 | X12.6 | X12.5 |
| 07 | X12.3 | X13.2 |
| 08 | AIN1 | |
| 09 | AIN2 | X12.2 |
| 10 | X13.3 | |
| 11 | X13.6 | X13.7 |
| 12 | COM2 | X13.5 |
| 13 | X13.4 | *HDI4 |
| 14 | Y13.5 | *HDI0 |
| 15 | Y13.6 | *HDI1 |
| 16 | Y13.7 | *RMS |
| 17 | | OTR |
| 18 | *HDI2 | OFF |
| 19 | ON | COM |
| 20 | AIN3 | |
| 21 | AIN4 | *HDI3 |
| 22 | *HDI7 | *HDI6 |
| 23 | *HDI5 | |
| 24 | 0V | 0V |
| 25 | 0V | 0V |

BB01-07
HDI:BD01
AIN:BD02

## JA1

PCR E20

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9 | | 10 | +24V | 19 | +24V | 20 | |
| 7 | | 8 | | 17 | | 18 | HSYNC |
| 5 | VDOB | 6 | 0V | 15 | | 16 | 0V |
| 3 | VDOG | 4 | 0V | 13 | | 14 | 0V |
| 1 | VDOR | 2 | 0V | 11 | | 12 | VSYNC |

BB06

## JA2

PCR E20

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9 | *KCM8 | 10 | *KCM10 | 19 | *KCM9 | 20 | *KCM11 |
| 7 | *KCM4 | 8 | *KCM6 | 17 | *KCM5 | 18 | *KCM7 |
| 5 | *KCM0 | 6 | *KCM2 | 15 | *KCM1 | 16 | *KCM3 |
| 3 | KBYD4 | 4 | KBYD6 | 13 | KBYD5 | 14 | KBYD7 |
| 1 | KBYD0 | 2 | KBYD2 | 11 | KBYD1 | 12 | KBYD3 |

BF05

## JD5A

PCR E20

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9 | | 10 | +24V | 19 | +24V | 20 | |
| 7 | CDA | 8 | 0V | 17 | | 18 | |
| 5 | CTSA | 6 | 0V | 15 | RTSA | 16 | 0V |
| 3 | DSRA | 4 | 0V | 13 | DTRA | 14 | 0V |
| 1 | RXDA | 2 | 0V | 11 | TXDA | 12 | 0V |

BF04

## JD5B

PCR E20

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9 | | 10 | +24V | 19 | +24V | 20 | |
| 7 | CDB | 8 | 0V | 17 | | 18 | |
| 5 | CTSB | 6 | 0V | 15 | RTSB | 16 | 0V |
| 3 | DSRB | 4 | 0V | 13 | DTRB | 14 | 0V |
| 1 | RXDB | 2 | 0V | 11 | TXDB | 12 | 0V |

BF04

## JA3B

PCR E20

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 9 | +5V | 10 | +5V | 19 | +5V | 20 | +5V |
| 7 | HA4 | 8 | HB4 | 17 | +5V | 18 | +5V |
| 5 | HA3 | 6 | HB3 | 15 | 0V | 16 | 0V |
| 3 | HA2 | 4 | HB2 | 13 | 0V | 14 | 0V |
| 1 | HA1 | 2 | HB1 | 11 | 0V | 12 | 0V |

BF06

# CONNECTOR TABLE 2

BA02

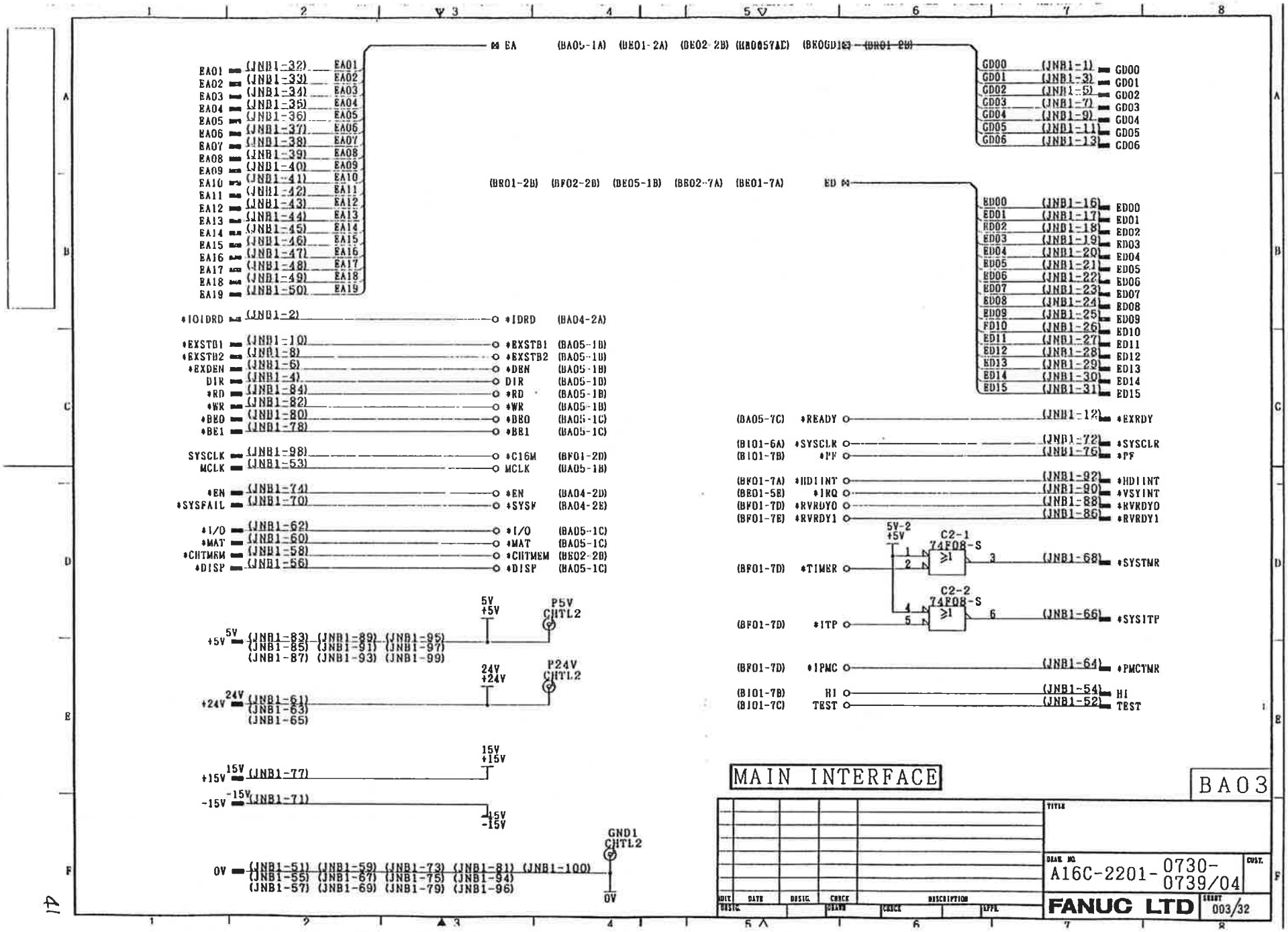
| MOD. BASIC | DATE | DRAWN | CHECK | DESCRIPTION | DRAWN | CHECK | APPR. | TITLE |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

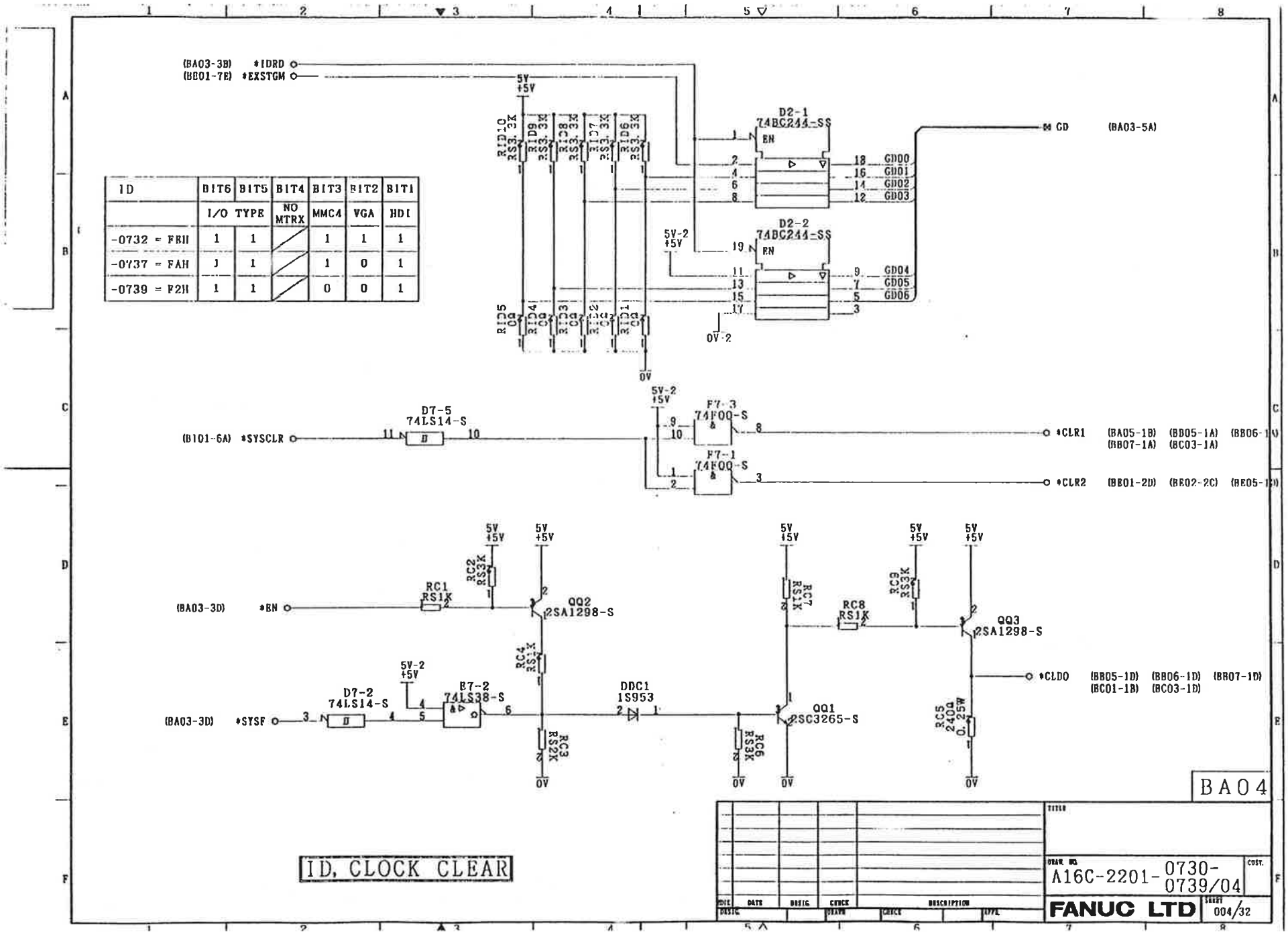
DRAW. NO. A16C-2201-0730-0739/04

COST

FANUC LTD

SHEET 002/32


MAIN INTERFACE
BA03
FANUC LTD
A16C-2201-0730-0739/04
003/32
EA (BA05-1A) (BE01-2A) (BE02-2B) (BR0057AC) (BR0GD1E2) (BR01-2B)
ED (BR01-2B) (BF02-2B) (BE05-1B) (BE02-7A) (BE01-7A)
GD00 GD01 GD02 GD03 GD04 GD05 GD06
ED00 ED01 RD02 ED03 ED04 ED05 ED06 ED07 ED08 ED09 FD10 ED11 ED12 ED13 ED14 ED15
EA01 EA02 EA03 EA04 EA05 EA06 EA07 EA08 EA09 EA10 EA11 EA12 EA13 EA14 EA15 EA16 EA17 EA18 EA19
*IOIDRD *IDRD (BA04-2A)
*EXSTB1 *EXSTB2 *DBN DIR *RD *WR *BE0 *BE1
SYSCLK MCLK
*EN *SYSF
*I/O *MAT *CHTMEM *DISP
(BA05-7C) *READY EXRDY
(BI01-6A) *SYSCLR SYSCLR
(BI01-7B) *PF PF
(BF01-7A) *HDIINT HDIINT
(BE01-5B) *IRQ VSYINT
(BF01-7D) *RVRDY0 RVRDY0
(BF01-7E) *RVRDY1 RVRDY1
C2-1 74F08-S
C2-2 74F08-S
(BF01-7D) *TIMER SYSTMR
(BF01-7D) *ITP SYSITP
(BF01-7D) *IPMC PMCTMR
(BI01-7B) HI
(BI01-7C) TEST
5V +5V P5V CHTL2
24V +24V P24V CHTL2
15V +15V
-15V -15V
0V GND1 CHTL2




| ID | BIT6 | BIT5 | BIT4 | BIT3 | BIT2 | BIT1 |
|---|---|---|---|---|---|---|
| | I/O TYPE | | NO MTRX | MMC4 | VGA | HDI |
| -0732 = FBH | 1 | 1 | | 1 | 1 | 1 |
| -0737 = FAH | 1 | 1 | | 1 | 0 | 1 |
| -0739 = F2H | 1 | 1 | | 0 | 0 | 1 |

BA04

ID, CLOCK CLEAR

| MDL DESIG. | DATE | DESIG. | CHECK | DESCRIPTION |
|---|---|---|---|---|
| | | DRAWN | CHECK | APPD. |

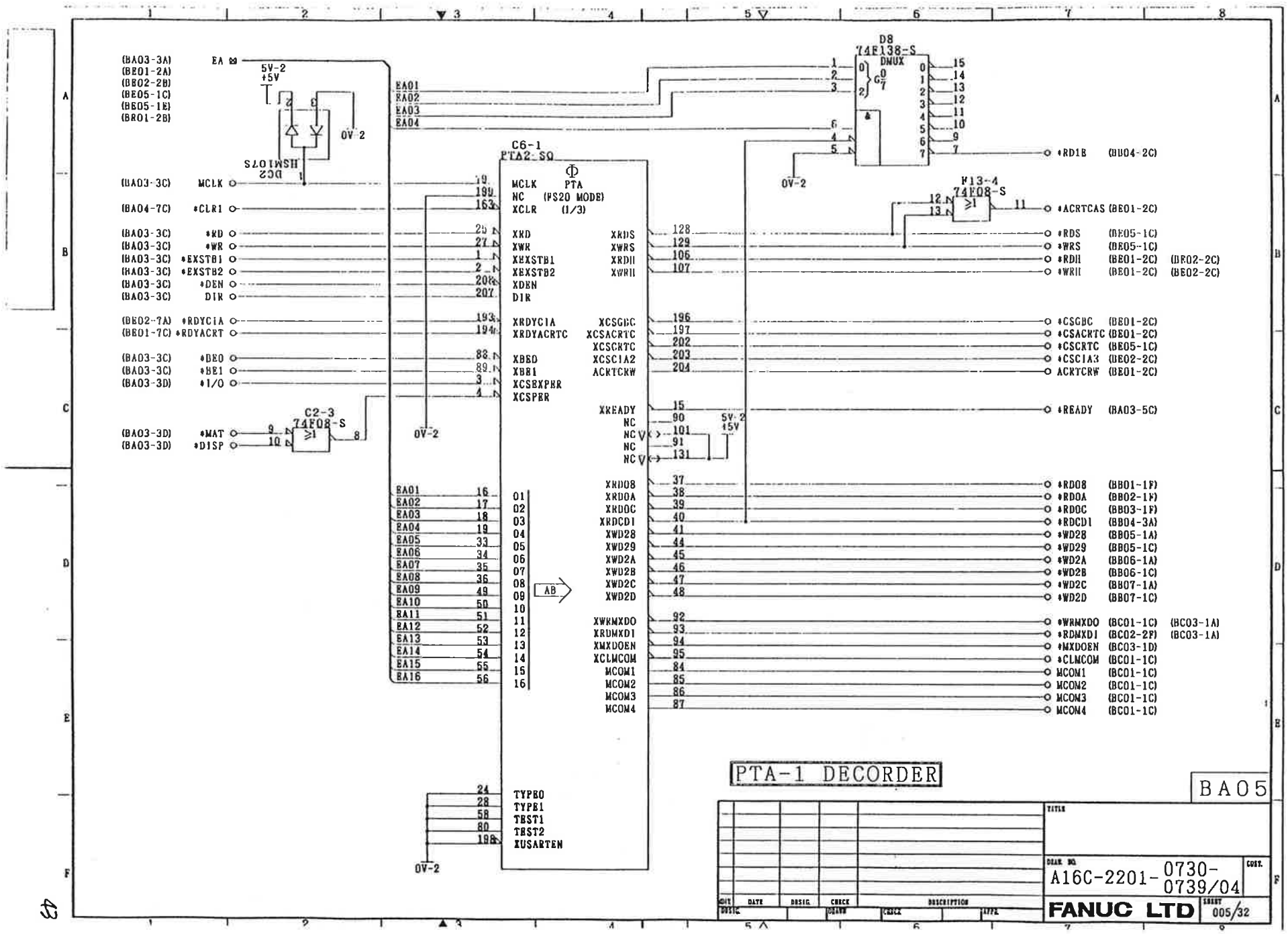
TITLE

DRAW NO. A16C-2201-0730-0739/04

COST.

FANUC LTD

SHEET 004/32


D8
74E138-S
DMUX
C6-1
PTA2-SQ
PTA
MCLK
NC (PS20 MODE)
XCLR (1/3)
XRD
XWR
XEXSTB1
XEXSTB2
XDEN
DIR
XRDYC1A
XRDYACRTC
XBE0
XBE1
XCSEXPER
XCSPER
XREADY
NC
NC
NC
NC
XRD08
XRD0A
XRD0C
XRDCD1
XWD28
XWD29
XWD2A
XWD2B
XWD2C
XWD2D
XWRMXDO
XRDMXD1
XMXDOEN
XCLMCOM
MCOM1
MCOM2
MCOM3
MCOM4
XRDS
XWRS
XRDII
XWRII
XCSGBC
XCSACRTC
XCSCRTC
XCSC1A2
ACRTCRW
TYPE0
TYPE1
TEST1
TEST2
XUSARTEN
C2-3
74F08-S
F13-4
74F08-S
5V-2
+5V
0V-2
DC2
HSM107S
AB
*RD1B (BB04-2C)
*ACRTCAS (BE01-2C)
*RDS (BE05-1C)
*WRS (BE05-1C)
*RDII (BE01-2C) (BE02-2C)
*WRII (BE01-2C) (BE02-2C)
*CSGBC (BE01-2C)
*CSACRTC (BE01-2C)
*CSCRTC (BE05-1C)
*CSC1A3 (BE02-2C)
ACRTCRW (BE01-2C)
*READY (BA03-5C)
*RD08 (BB01-1F)
*RD0A (BB02-1F)
*RD0C (BB03-1F)
*RDCD1 (BB04-3A)
*WD28 (BB05-1A)
*WD29 (BB05-1C)
*WD2A (BB06-1A)
*WD2B (BB06-1C)
*WD2C (BB07-1A)
*WD2D (BB07-1C)
*WRMXDO (BC01-1C) (BC03-1A)
*RDMXD1 (BC02-2F) (BC03-1A)
*MXDOEN (BC03-1D)
*CLMCOM (BC01-1C)
MCOM1 (BC01-1C)
MCOM2 (BC01-1C)
MCOM3 (BC01-1C)
MCOM4 (BC01-1C)
MCLK
*CLR1
*RD
*WR
*EXSTB1
*EXSTB2
*DEN
DIR
*RDYC1A
*RDYACRT
*BE0
*BE1
*I/O
*MAT
*DISP
EA01
EA02
EA03
EA04
EA05
EA06
EA07
EA08
EA09
EA10
EA11
EA12
EA13
EA14
EA15
EA16
PTA-1 DECORDER
BA05
A16C-2201-0730-0739/04
FANUC LTD
005/32