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PCB: 907-0300-00 REMOTE  
907-0301-00 CONSOLE  
PCBA: 907-0001-XX REMOTE  
907-0002-XX CONSOLE

FOCAL  
APPROVED

PROGRAMMING PORT  
(FACTORY ONLY)

PIN 8 . . . . . PIN 1

J7 POWER INPUT  
PIN 2 = +VIN  
PIN 1 = GND

INPUT FUSE

FIBER BUSHING  
(ST or FC)

WDM

OPTICAL TRANSCEIVER  
RX  
TX

PC/104 CONNECTOR

VIDEO CHANNEL 1

VIDEO CHANNEL 2

VIDEO CHANNEL 3

DATA CONN A  
CHANNELS 1 & 2  
(BOTH RS-232)

DATA CONN B  
CHANNELS 3 & 4  
(BOTH RS-232)

DATA CONN C  
CHANNEL 5  
(RS-485/422/TTL)  
CHANNEL 6  
(RS-485/422)

HEADER PIN LOCATIONS

MATING DATA CONNECTOR:  
MOLEX 43025-0800 MICROFIT WITH  
CRIMP TERMINALS P/N 43030-0007  
(20-24 AWG WIRE)

DATA CONNECTOR PIN OUTS

| PIN | CONN A  | CONN B  | CONN C                         |
|-----|---------|---------|--------------------------------|
| 1   | CH1 GND | CH3 GND | CH5A 485+, 422 RX+, TTL IN+    |
| 2   | CH1 RXD | CH3 RXD | CH5B 485-, 422 RX-             |
| 3   | CH1 TXD | CH3 TXD | CH5Y 422 TX+, TTL OUT+, KRAFT+ |
| 4   | OPEN    | OPEN    | CH5Z 422 TX-, TTL GND, KRAFT-  |
| 5   | CH2 GND | CH4 GND | CH6A 485+, 422 RX+             |
| 6   | CH2 RXD | CH4 RXD | CH6B 485-, 422 RX-             |
| 7   | CH2 TXD | CH4 TXD | CH6Y 422 TX+, KRAFT+           |
| 8   | OPEN    | OPEN    | CH6Z 422 TX-, KRAFT-           |

INPUT RATINGS

| SIGNAL                  | MAX. DATA RATE OR BANDWIDTH | OPERATIONAL RANGE | ABSOLUTE* MAX. INPUT | PROTECTION           |
|-------------------------|-----------------------------|-------------------|----------------------|----------------------|
| POWER                   | N/A                         | 4.5 - 5.5 VDC**   | 6 VDC                | FUSE, POLARITY CHECK |
| VIDEO/NON-VIDEO         | 5.5 MHz                     | 1.2 Vpp           | 3 Vpp                | AC-COUPLED, 75 OHMS  |
| RS-232                  | 120 kb/s NRZ                | +/- 15 V          | +/- 25 V             | +/- 10 kV ESD        |
| RS-422/485<br>TTL/KRAFT | 2.5 Mb/s NRZ                | -7 V, +12 V       | -7 V, +12 V          | +/- 15 kV ESD        |

NOTES:

1. INPUT POWER MUST BE REGULATED +5VDC (+/- 10%). CURRENT DRAW IS 1 A TYPICAL. MATING CONNECTOR IS MOLEX P/N 26-03-4020 WITH CRIMP TERMINALS P/N 08-52-0113. ALL POWER, DIGITAL, AND ANALOG/VIDEO GROUNDS ARE CONNECTED ON BOARD. FOR POWER AND DATA ISOLATION, USE AN ISOLATION CARD, SUCH AS P/N 907-0003-00. FOR VIDEO ISOLATION, HIGH QUALITY EXTERNAL VIDEO TRANSFORMERS ARE SUGGESTED.

2. INPUT FUSE IS LITTELFUSE 2A SLO-BLO, REPLACEABLE SURFACE MOUNT TYPE, P/N R452002.

3. VIDEO CHANNELS ARE CONFIGURED FOR NTSC/PAL COMPOSITE SIGNALS. VIDEO AND NON-VIDEO INPUTS ARE 75 OHMS WITH CORE = SIGNAL, SHIELD = GND. MAX. VIDEO AND NON-VIDEO INPUT TO MAINTAIN SPECIFICATIONS IS 1.2 Vpp. MATING VIDEO/NON-VIDEO CONNECTORS ARE TYPE SMB.

4. VIDEO SIGNALS ARE INPUT AT THE REMOTE UNIT AND OUTPUT AT THE CONSOLE UNIT. DATA SIGNALS ARE ALL BIDIRECTIONAL UNLESS CONFIGURED AS SIMPLEX.

5. VIA DIP SWITCHES ON THE CONSOLE UNIT, VIDEO INPUTS MODES CAN BE SELECTED TO BE, 8 BIT VIDEO, 10 BIT VIDEO (CHANNEL 2 DISABLED), NON-VIDEO(CHANNEL 1 ONLY), S-VIDEO(CHANNEL 1 LUMINANCE AND CHANNEL 3 CHROMINANCE), AND RGB(CHANNEL 1 SYNC SIGNAL) VIDEO.

5. REMOTE AND CONSOLE MODULE DATA I/O PINS HAVE THE SAME DATA DIRECTION RELATIVE TO THE MODULE. FOR EXAMPLE, DATA CONNECTOR A, PIN 2, IS FOR RS-232 DATA COMING INTO THE MODULE AT BOTH THE REMOTE AND CONSOLE END.

6. UNITS MAY BE CONFIGURED WITH NO WDM, SINGLEMODE WDM (SHOWN), OR MULTIMODE WDM. WITH NO WDM, FIBER CONNECTIONS ARE MADE DIRECTLY TO THE OPTICAL TRANSCEIVER.

7. A MINIMUM 5 dB OPTICAL ATTENUATION IS REQUIRED BETWEEN THE REMOTE AND CONSOLE MODULES TO ENSURE THE SPECIFIED OPTICAL BIT ERROR RATE OF 1E-10.

TOLERANCES  
(EXCEPT AS NOTED)

1. DIMENSIONS IN INCHES  
2. 3 DECIMAL PLACES +/- 0.005  
3. 2 DECIMAL PLACES +/- 0.010  
4. FRACTIONS +/- 1/32  
5. ANGLES +/- 0.5 DEGREE

ESD SENSITIVE PARTS  
MAY BE USED. TAKE  
PRECAUTIONS.

MATERIAL

N/A

FINISH

N/A

SCALE

NTS

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DRAWN

I MACKAY

CHECKED

APPROVED

DATE

2002-04-08

FILENAME

907-2001-00G.CDR

SHEET

1 OF 3

FOCAL TECHNOLOGIES CORPORATION

77 FRAZEE AVENUE

DARTMOUTH, NS CANADA, B3B 1Z4

TITLE

MODEL 907 CONFIGURATION

SIZE

B

TYPE

SK

DRAWING NO.

907-2001-00

ISSUE

G



