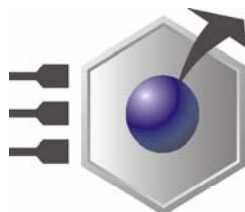


EmbeddedDNA[®]



An0058

CPU-1850 Cable-set

Rev. 4.0

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ABOUT THIS MANUAL

This application note contains information regarding cable-set components for the CPU-1850



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Conventions

The following table lists conventions used throughout this guide.

| Icon | Notice Type | Description |
|---|-------------------------|--|
|  | Information note | Important features or instructions |
|  | Warning | Information to alert you to potential damage to a program, system or device or potential personal injury |

Abbreviations

NC: Not Connected

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Chapter 1 Component details

This chapter gives a brief description of all the components available in the cable-sets and also additionally available components, please refer to the table below for the revision numbers of the cable-sets:

| Cable-set Part Number | For use with: | Cable-set Revision Date |
|-----------------------|---------------|-------------------------|
| CBL-1850-00 | CPU-1850-xx | 13 Jan 2005 |

Cable-set components

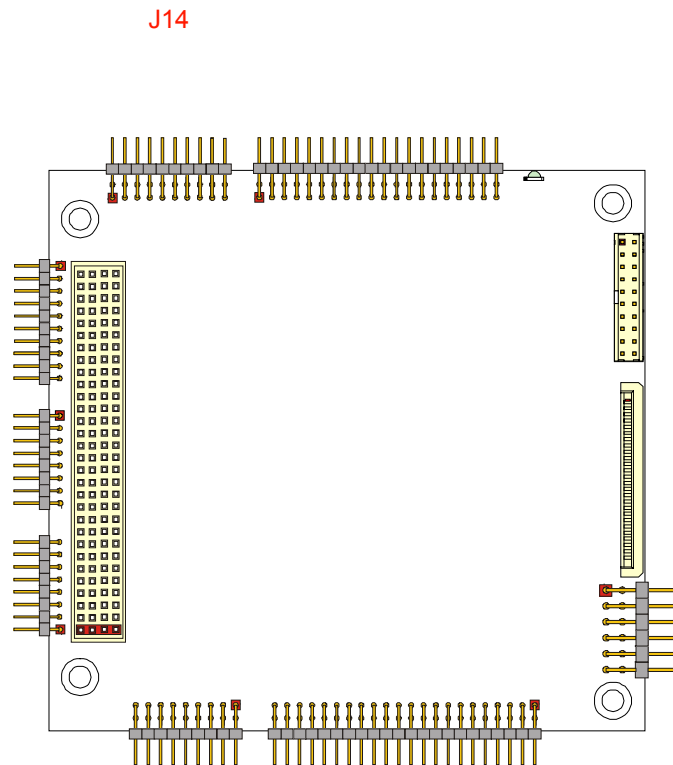


Figure 1 Connector layout of the CPU-1850 module (for reference only)

| Eurotech Part # | Qty. | CPU Connector | Type | Description | page |
|-----------------|------|---------------|---------|-------------------------------|------|
| 7000000045 | 1 | J5 | Cable | IDE / Disk-On-Module | 12 |
| 7000000071 | 1 | J8 | Cable | Serial 1, Serial 2 & Parallel | 13 |
| 7000000124 | 1 | J4 | Cable | Multifunction & VGA | 14 |
| ACS-9072-00 | 1 | -- | Adaptor | Mouse, Keyboard & Battery | 16 |
| 7020000011 | 1 | J9 | Cable | Auxiliary power | 15 |

Table 1 Components available in the CBL-1850-00 Cable-set

Additional components

The following table shows a list of accessories that can be ordered separately, for pricing and availability contact your supplier quoting the Eurotech Part number and Quantity required:

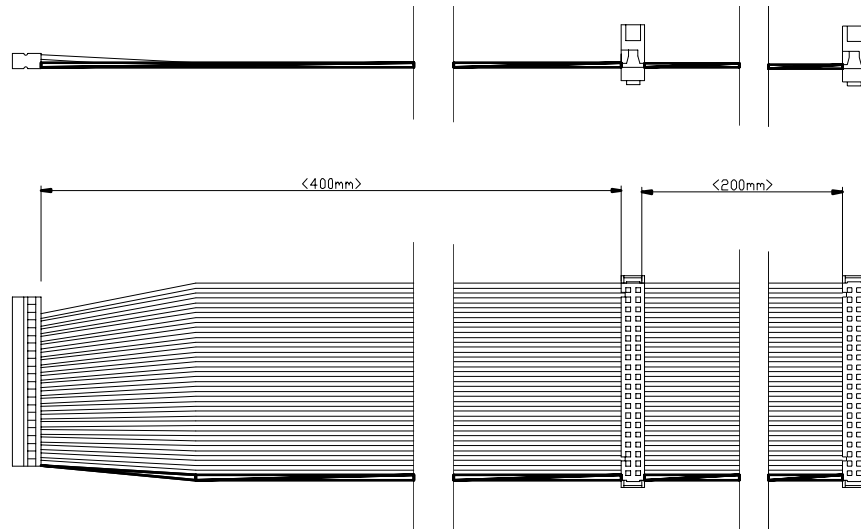
| Eurotech Part # | Qty. | CPU Connector | Type | Description | Ref page |
|------------------------|-------------|----------------------|-------------|------------------------|-----------------|
| ACS-9076-01 | 1 | J14 | Adaptor set | AC97 Audio CODEC | 18 |
| ACS-9071-08 | 1 | J12 | Adaptor set | RJ45 10/100MB Ethernet | 17 |
| ACS-9075-02 | 1 | J14 and J12 | Adaptor set | 2x 2-Port USB 1.1 | 17 |

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Chapter 2 Technical information

The following pages describe the assorted cables and adaptors in more detail.

700000045: IDE / Disk-On-Module



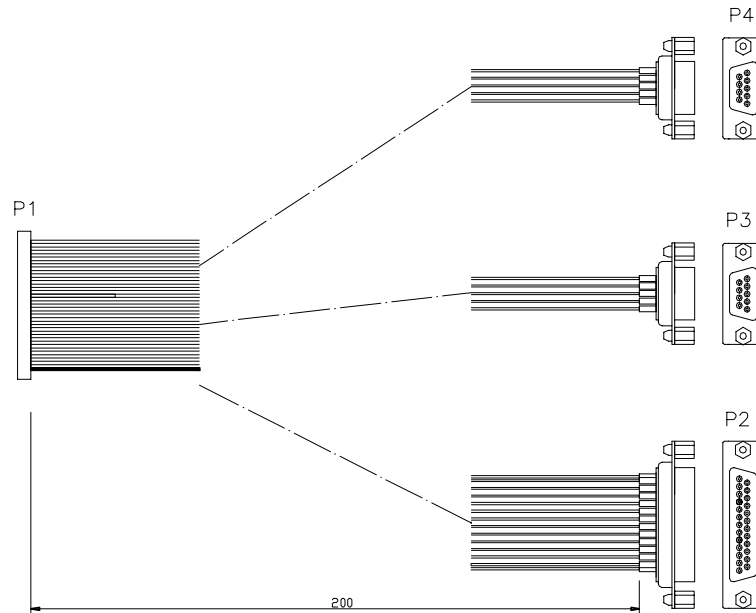
| Connector # | Name | QTY Pins | Format | Pitch (mm) |
|-------------|------------|----------|--------|------------|
| P1 | CPU J5 | 44 | 22x2 | 2.00 |
| P2 & P3 | Disc 1 & 2 | 40 | 20x2 | 2.54 |

| P1 Pin | Description | Direction | Connector | Pin | P1 Pin | Description | Direction | Connector | Pin |
|--------|-------------|-----------|-----------|-----|--------|-------------|-----------|-----------|-----|
| 1 | RESET | > | P2 / P3 | 1 | 23 | DIOW* | > | P2 / P3 | 23 |
| 2 | Ground | | P2 / P3 | 2 | 24 | Ground | | P2 / P3 | 24 |
| 3 | DD7 | <> | P2 / P3 | 3 | 25 | DIOR* | > | P2 / P3 | 25 |
| 4 | DD8 | <> | P2 / P3 | 4 | 26 | Ground | | P2 / P3 | 26 |
| 5 | DD6 | <> | P2 / P3 | 5 | 27 | IORDY | < | P2 / P3 | 27 |
| 6 | DD9 | <> | P2 / P3 | 6 | 28 | Reserved | | P2 / P3 | 28 |
| 7 | DD5 | <> | P2 / P3 | 7 | 29 | DMACK* | > | P2 / P3 | 29 |
| 8 | DD10 | <> | P2 / P3 | 8 | 30 | Ground | | P2 / P3 | 30 |
| 9 | DD4 | <> | P2 / P3 | 9 | 31 | INTRQ | < | P2 / P3 | 31 |
| 10 | DD11 | <> | P2 / P3 | 10 | 32 | IOCS16* | < | P2 / P3 | 32 |
| 11 | DD3 | <> | P2 / P3 | 11 | 33 | DA1 | > | P2 / P3 | 33 |
| 12 | DD12 | <> | P2 / P3 | 12 | 34 | PDIAG* | ** | P2 / P3 | 34 |
| 13 | DD2 | <> | P2 / P3 | 13 | 35 | DA0 | > | P2 / P3 | 35 |
| 14 | DD13 | <> | P2 / P3 | 14 | 36 | DA2 | > | P2 / P3 | 36 |
| 15 | DD1 | <> | P2 / P3 | 15 | 37 | CS1FX* | > | P2 / P3 | 37 |
| 16 | DD14 | <> | P2 / P3 | 16 | 38 | CS3FX* | > | P2 / P3 | 38 |
| 17 | DD0 | <> | P2 / P3 | 17 | 39 | DASP* | < | P2 / P3 | 39 |
| 18 | DD15 | <> | P2 / P3 | 18 | 40 | Ground | | P2 / P3 | 40 |
| 19 | Ground | | P2 / P3 | 19 | 41 | NC | - | - | - |
| 20 | Key Pin | | P2 / P3 | 20 | 42 | NC | - | - | - |
| 21 | DMARQ | < | P2 / P3 | 21 | 43 | NC | - | - | - |
| 22 | Ground | | P2 / P3 | 22 | 44 | NC | - | - | - |

Notes:

- * = Active Low
- > = To drive from controller
- < = To controller from drive
- ** = Drive to drive intercommunication

700000071: Parallel, Serial 1 & Serial 2

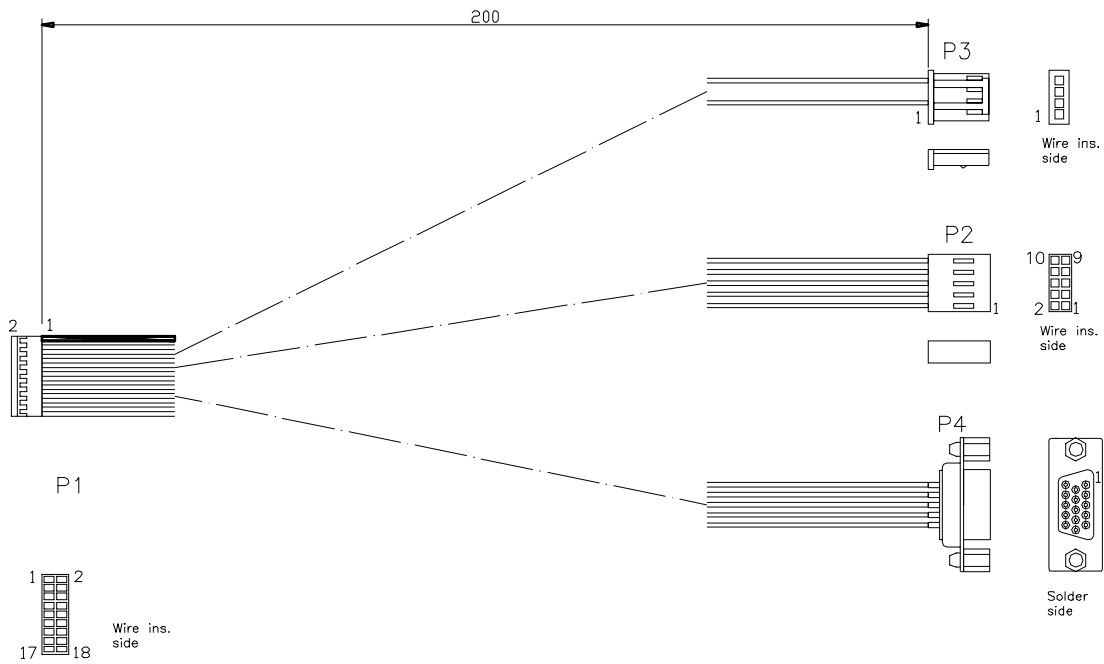


| Connector # | Name | QTY Pins | Format | Pitch |
|-------------|----------|----------|-------------|--------|
| P1 | CPU J8 | 40 | 20x2 | 2.00mm |
| P2 | Parallel | 25 | DB25 Female | - |
| P3 | Serial 1 | 9 | DB9 Male | - |
| P4 | Serial 2 | 9 | DB9 Male | - |

| P1 Pin # | Description | Connector # | Pin # |
|----------|-------------|-------------|-------|
| 1 | Strobe | P2 | 1 |
| 2 | AUTOFD | P2 | 14 |
| 3 | PD0 | P2 | 2 |
| 4 | ERROR | P2 | 15 |
| 5 | PD1 | P2 | 3 |
| 6 | INIT | P2 | 16 |
| 7 | PD2 | P2 | 4 |
| 8 | SLCTIN | P2 | 17 |
| 9 | PD3 | P2 | 5 |
| 10 | GND | P2 | 18 |
| 11 | PD4 | P2 | 6 |
| 12 | GND | P2 | 19 |
| 13 | PD5 | P2 | 7 |
| 14 | GND | P2 | 20 |
| 15 | PD6 | P2 | 8 |
| 16 | GND | P2 | 21 |
| 17 | PD7 | P2 | 9 |
| 18 | ACK | P2 | 10 |
| 19 | BUSY | P2 | 11 |
| 20 | PE | P2 | 12 |

| P1 Pin # | Description | Connector # | Pin # |
|----------|---------------|-------------|-------|
| 21 | SLCT | P2 | 13 |
| 22 | Not Connected | P2 | 26 |
| 23 | DCD 1 | P3 | 1 |
| 24 | DSR 1 | P3 | 6 |
| 25 | RX 1 | P3 | 2 |
| 26 | RTS 1 | P3 | 7 |
| 27 | TX 1 | P3 | 3 |
| 28 | CTS 1 | P3 | 8 |
| 29 | DTR 1 | P3 | 4 |
| 30 | RI 1 | P3 | 9 |
| 31 | GND 1 | P3 | 5 |
| 32 | DCD 2 | P4 | 1 |
| 33 | DSR 2 | P4 | 6 |
| 34 | RX 2 | P4 | 2 |
| 35 | RTS 2 | P4 | 7 |
| 36 | TX 2 | P4 | 3 |
| 37 | CTS 2 | P4 | 8 |
| 38 | DTR 2 | P4 | 4 |
| 39 | RI 2 | P4 | 9 |
| 40 | GND 2 | P4 | 5 |

700000124: Multifunction & VGA

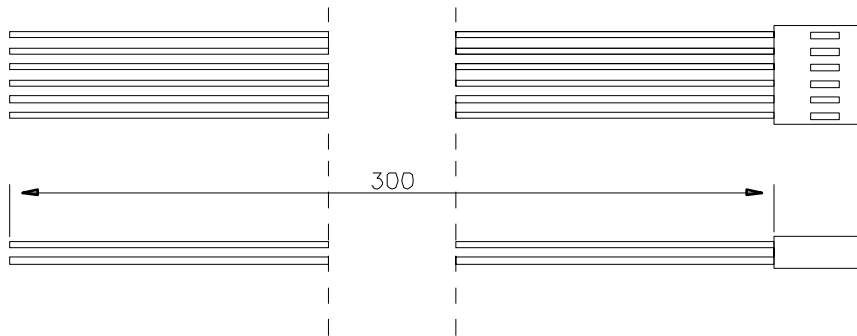


| Connector # | Name | QTY Pins | Format | Pitch (mm) |
|-------------|---------------|----------|--------------|------------|
| P1 | CPU J4 | 18 | 9x2 | 2.00 |
| P2 | Multifunction | 10 | 5x2 | 2.54 |
| P3 | Mouse | 4 | 4x1 | 2.54 |
| P4 | VGA | 15 | D-Sub Female | - |

| P1 Pin # | Description | Connector # | Pin # |
|----------|-------------|-------------|-------|
| 1 | GND MF | P2 | 7 |
| 2 | VDD MF | P2 | 8 |
| 3 | KB DAT | P2 | 5 |
| 4 | KB CLK | P2 | 6 |
| 5 | BATT IN | P2 | 9 |
| 6 | SPKR | P2 | 1 |
| 7 | RES PB | P2 | 3 |
| 8 | MSDAT | P3 | 4 |
| 9 | MSCLK | P3 | 2 |

| P1 Pin # | Description | Connector # | Pin # |
|----------|-------------|-------------|---------|
| 10 | GND VDIG | P4 | 5, 10 |
| 11 | H SYNC | P4 | 13 |
| 12 | V SYNC | P4 | 14 |
| 13 | RED | P4 | 1 |
| 14 | GREEN | P4 | 2 |
| 15 | DDC1 SCL | P4 | 15 |
| 16 | DD0 SDA | P4 | 12 |
| 17 | GND VGA | P4 | 6, 7, 8 |
| 18 | BLUE | P4 | 3 |

702000011: Auxiliary Power



| Connector # | Name | QTY Pins | Format | Pitch (mm) |
|-------------|--------|----------|--------|------------|
| P1 | CPU J9 | 12 | 6x2 | 2.54 |

| Pin # | Signal | Cable Colour |
|-------|---------|---------------|
| 1 | GND | Red |
| 2 | VDD | Black |
| 3 | N.C. | Yellow |
| 4 | +12v | Not Connected |
| 5 | -5V | Green |
| 6 | -12V | Orange |
| 7 | GND | Red |
| 8 | VDD | Black |
| 9 | N.C. | Not Connected |
| 10 | PWRBTN# | Black |
| 11 | +5VSB | Grey |
| 12 | PSOEN# | Purple |

Notes:

- +5VSB: +5 Volts-Always from the ATX Power supply
- PSOEN#: Power-On command to ATX Power supply

ACS-9072-00: Multifunction Adaptor

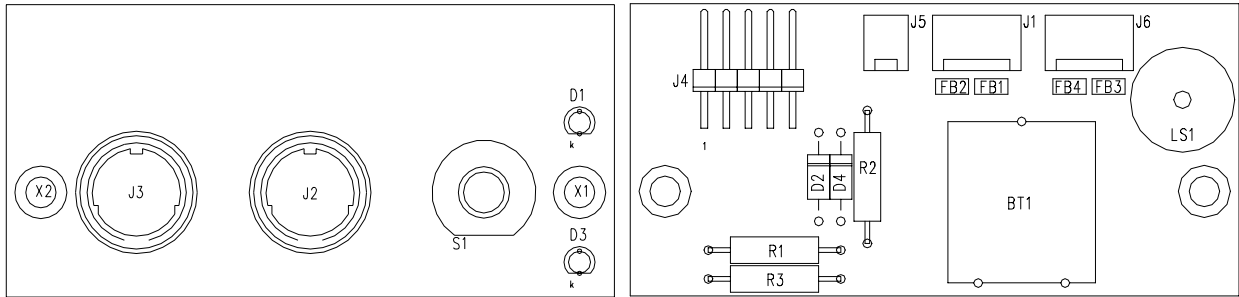


Figure 2 ACS-9072-00 Top / Bottom View

| Component Label | Location | Description | Pins | Format | Pitch (mm) |
|-----------------|----------|------------------------|------|----------|------------|
| BT1 | Bottom | Battery, 3.6V, 60mAh | - | - | - |
| LS1 | Bottom | Speaker, | - | - | - |
| D1 | Top | LED (Green), Power | - | - | - |
| D3 | Top | LED (Yellow), Speaker | - | - | - |
| S1 | Top | Reset Button | - | - | - |
| J1 | Bottom | Extension Keyboard | 4 | 4x1 | 2.54 |
| J2 | Top | Keyboard Input | 6 | Mini DIN | - |
| J3 | Top | Mouse Input | 6 | Mini DIN | - |
| J4 | Bottom | Multifunction Output | 10 | 5x2 | 2.54 |
| J5 | Bottom | Not Used with this CPU | 2 | 2x1 | 2.54 |
| J6 | Bottom | Mouse Output | 4 | 4x1 | 2.54 |

| Connector | Description | Pin # | Signal |
|-----------|---------------------|-------|-------------|
| J1 | Ext. Keyboard Input | 1 | VCC |
| | | 2 | KB Clock |
| | | 3 | Ground |
| | | 4 | KB Data |
| J2 | Keyboard Input | 1 | KB Data |
| | | 2 | NC |
| | | 3 | Ground |
| | | 4 | VCC |
| | | 5 | KB Clock |
| | | 6 | NC |
| J3 | Mouse Input | 1 | Mouse Data |
| | | 2 | NC |
| | | 3 | Ground |
| | | 4 | VCC |
| | | 5 | Mouse Clock |
| | | 6 | NC |

| Connector | Description | Pin # | Signal |
|-----------|-----------------------------------|-------|-------------|
| J4 | Multifunction Output To CPU J4 | 1 | SPKR |
| | | 2 | NC |
| | | 3 | RES_PB_IN |
| | | 4 | NC |
| | | 5 | KBDAT |
| | | 6 | KBCLK |
| | | 7 | GND |
| | | 8 | +5V |
| | | 9 | BATT_IN |
| | | 10 | NC |
| J6 | Mouse output | 1 | VCC |
| | | 2 | Mouse Clock |
| | | 3 | Ground |
| | | 4 | Mouse Data |

ACS-9071-08: 1x RJ45 Ethernet 10/100MB adaptor

Package Contents:

| Qty | Part Number | Description |
|-----|-------------|--------------------------------|
| 1 | ACS-9071 | RJ45 10/100MB Ethernet adaptor |
| 1 | 7030000163 | Cable, CPU J12 to Adaptor |

Refer to Application Note "An0059: ACS-9071 User manual" for further details.

ACS-9075-02: 2x 2-Port USB 1.1 Adaptors

Package Contents:

| Qty | Part Number | Description |
|-----|-------------|---------------------------|
| 2 | ACS-9075 | 2-Port USB 1.1 adaptors |
| 1 | 7030000240 | Cable, CPU J14 to adaptor |
| 1 | 7000000160 | Cable, CPU J1 to adaptor |

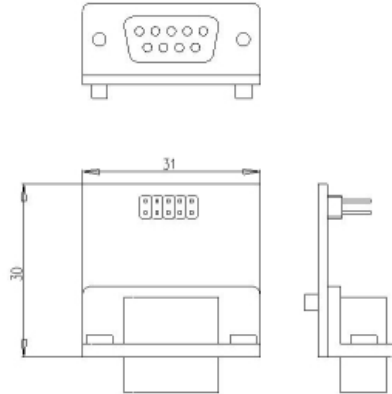
Refer to Application Note "An0064: ACS-9075 User manual" for further details.

ACS-9076-01: AC97 Audio CODEC

Package Contents:

| Qty | Part Number | Description |
|-----|-------------|--------------------------------------|
| 1 | ACS-9076-01 | AC97 Audio CODEC |
| 1 | 7030000240 | Cable CPU J14 to USB & AC97 |
| 1 | 7030000300 | AC97 to 3 x 3.5mm Female Stereo Jack |

ACS-9076-01:



| Component Label | Description | Pins | Format | Pitch (mm) |
|-----------------|----------------------|------|------------|------------|
| J1 | CPU J14 | 10 | 5x2 | 2.00 |
| J2 | Audio Input / Output | 9 | DB9 Female | - |

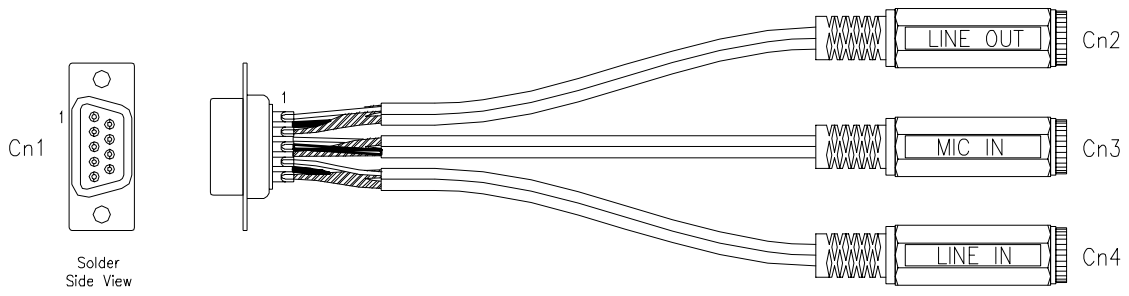
J1 Pinout (Analogue In / Out):

| Pin # | Signal |
|-------|-----------------|
| 1 | Line Out Left |
| 2 | Ground |
| 3 | VREF Microphone |
| 4 | Line In Left |
| 5 | Ground |
| 6 | Line Out Right |
| 7 | Microphone In |
| 8 | Ground |
| 9 | Line In Right |

J2 Pinout (AC97 from CPU J14):

| Pin # | Signal |
|-------|------------|
| 1 | VDD |
| 2 | Ground |
| 3 | SDATA OUT |
| 4 | BIT CLOCK |
| 5 | PC BEEP |
| 6 | GROUND |
| 7 | RESET |
| 8 | SYNC |
| 9 | SDATA IN |
| 10 | AC97 Clock |

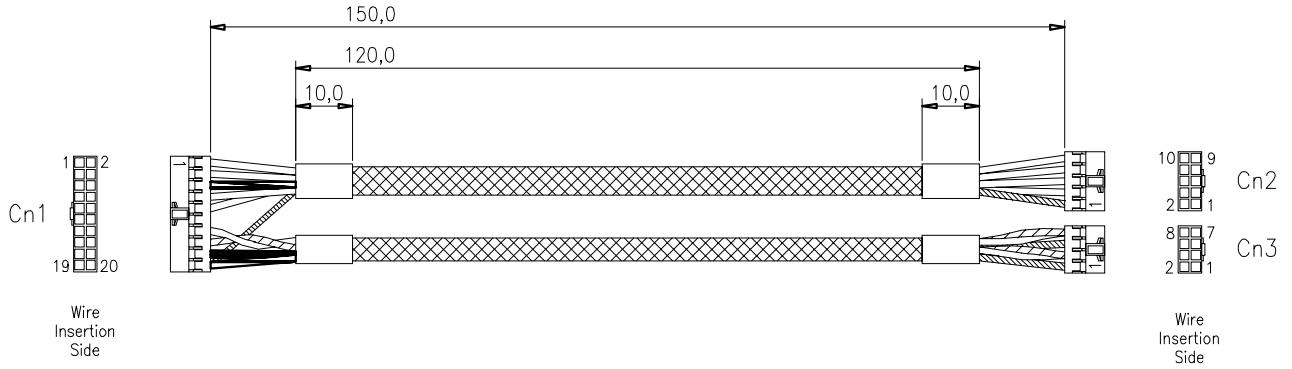
703000300:



| Component Label | Description | Pins | Format |
|-----------------|------------------|------|--------------------------|
| CN1 | From ACS-9076 J2 | 9 | DB9 Male |
| CN2 | Line Out | - | 3.5mm Stereo Jack Socket |
| CN3 | Microphone In | - | 3.5mm Stereo Jack Socket |
| CN4 | Line In | - | 3.5mm Stereo Jack Socket |

| CN1 Pin # | To | Tab | Signal | Wire |
|-----------|-----|--------|-----------------|--------------|
| 1 | CN2 | Left | Line Out Left | White |
| 6 | CN2 | Right | Line Out Right | Red |
| 2 | CN2 | Shield | Ground | Cable Shield |
| 7 | CN3 | Left | Microphone In | White |
| 3 | CN3 | Right | Microphone VREF | Red |
| 8 | CN3 | Shield | Ground | Cable Shield |
| 4 | CN4 | Left | Line In Left | White |
| 9 | CN4 | Right | Line In Right | Red |
| 5 | CN4 | Shield | Ground | Cable Shield |

703000240:



| Component Label | Description | Pins | Format | Pitch (mm) |
|-----------------|-------------|------|--------|------------|
| CN1 | CPU J14 | 20 | 10x2 | 2.00 |
| CN2 | AC97 | 10 | 5x2 | 2.00 |
| CN3 | USB0 & USB1 | 8 | 4x2 | 2.00 |

| CN1 Pin # | To | Pin # | Signal |
|-----------|-----|-------|----------|
| 1 | CN2 | 5 | SPKR |
| 2 | NC | - | SDIN1 |
| 3 | CN2 | 3 | SDOUT |
| 4 | NC | - | CDC_EN# |
| 5 | CN2 | 2 | Ground |
| 6 | CN2 | 6 | Ground |
| 7 | CN2 | 9 | SDIN0 |
| 8 | CN2 | 4 | BITCLK |
| 9 | CN2 | 7 | RST |
| 10 | CN2 | 8 | SYNC |
| 11 | NC | - | Ground |
| 12 | NC | - | USB_OC1# |
| 13 | CN3 | 4 | USB_P0N |
| 14 | CN3 | 8 | USB_P1N |
| 15 | CN3 | 3 | USB_P0P |
| 16 | CN3 | 7 | USB_P1P |
| 17 | CN3 | 2 | Ground |
| 18 | CN3 | 1, 5 | +5V |
| 19 | CN3 | 6 | Ground |
| 20 | CN2 | 1 | +5V |

Related Documents

For further information please refer to the CPU-1850 User manual

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