Solving Interconnect Problems Quickly Since 1966

Visit www.MERITEC.com to access Meritec's new Flat Flex Configurator for ease of specifying and ordering.

Flat Flex Cable Assemblies
Meritec offers the following stocked FPDI-1 cable assemblies that are likely to be in stock at Meritec or your local Meritec Distributor.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Product Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9803FFA1T3-3.00</td>
<td>Female to Female, 31 position, A1 orientation, 3&quot; in length</td>
</tr>
<tr>
<td>9803FFA1T3-6.00</td>
<td>Female to Female, 31 position, A1 orientation, 6&quot; in length</td>
</tr>
<tr>
<td>9803FFA1T3-12.0</td>
<td>Female to Female, 31 position, A1 orientation, 12&quot; in length</td>
</tr>
<tr>
<td>9803FFA1T4-3.00</td>
<td>Female to Female, 41 position, A1 orientation, 3&quot; in length</td>
</tr>
<tr>
<td>9803FFA1T4-6.00</td>
<td>Female to Female, 41 position, A1 orientation, 6&quot; in length</td>
</tr>
<tr>
<td>9803FFA1T4-12.0</td>
<td>Female to Female, 41 position, A1 orientation, 12&quot; in length</td>
</tr>
<tr>
<td>9803FFA1T5-6.00</td>
<td>Female to Female, 51 position, A1 orientation, 6&quot; in length</td>
</tr>
<tr>
<td>9803FFA1T5-12.0</td>
<td>Female to Female, 51 position, A1 orientation, 12&quot; in length</td>
</tr>
</tbody>
</table>

**Features & Benefits**
- Meets FPDI-1 standards
- .5 mm laminated cable (FFC)
- 31, 41 or 51 position male and female Hirose DF-9 or equivalent connectors
- Molded strain relief
- Reliable termination
- Low profile
- Applicable in notebook hinge areas
- Extraction tools available

**Specifications | Electrical & Contacts**
Consult Specifications of Hirose DF-9 Connector

**Meritec’s FPDI-1 cable assemblies are UL listed under file #E147226 & RoHS compliant**

**FPDI-1 Compatible Hardware**

**ChassisLoc™**
P/N: 989910-31, 41 & 51

**SnapLoc™**
P/N: 989911-31, 41 & 51
Low-Voltage Differential Signaling

LVDS

Features & Benefits

- 1.0 mm laminated cable (FFC)
- 20 or 30 position female Hirose DF-19, JAE FI-X or equivalent connectors
- Reliable termination
- Low profile
- Applicable in notebook hinge areas

Specifications | Electrical & Contacts

Consult specifications of Hirose DF-19 Connector & JAE FI-X Connector

LVDS Compatible Hardware

Meritec’s LVDS components are UL listed and RoHS compliant

Cable Conductor
Flat solid 30 AWG equivalent (FFC)

DF-19 Compatible

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>Number of Positions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.04</td>
<td>0.865</td>
<td>20</td>
</tr>
<tr>
<td>1.44</td>
<td>1.259</td>
<td>30</td>
</tr>
</tbody>
</table>

* JAE FI-X or equivalent

FI-X Compatible

20 and 30 LVDS Compatible DF-19*

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>Number of Positions</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.94</td>
<td>0.865</td>
<td>20</td>
</tr>
<tr>
<td>1.34</td>
<td>1.209</td>
<td>30</td>
</tr>
</tbody>
</table>

*HIROSE® DF-19 or equivalent
Zero ZIF Force Insertion

Features & Benefits

- .5 mm, 1.0 mm and 1.25 mm pitch laminated cable (FFC)
- ZIF connectors – either traditional tape back ZIF or ZIFLOC overmold ZIF for greater reliability
- Reliable termination
- Low profile
- Applicable in notebook hinge areas

Specifications | Electrical & Contacts

Consult specifications of mating ZIF receptacle

Meritec’s ZIF components are UL listed and RoHS compliant

Cable Conductor
Flat solid 30 AWG (1.0 mm & 1.25 mm pitch) and 34 AWG (0.5 mm pitch) equivalent (FFC)
EMI Suppression Options

High performance Flat Panel Display (FPD) with operating frequencies at 400MHz are common place. To minimize the bandwidth EMI noise sources at this frequency, Meritec offers both ferrite and shielding solutions for cost effective EMI suppression.

Ferrite Options

<table>
<thead>
<tr>
<th>Ferrite Part Number</th>
<th>Impedance at 25 MHz/100MHz</th>
<th>Can be used on X” wide cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>07</td>
<td>35/85 ohms</td>
<td>0.70”</td>
</tr>
<tr>
<td>03</td>
<td>50/103 ohms</td>
<td>0.79”</td>
</tr>
<tr>
<td>04</td>
<td>20/40 ohms</td>
<td>0.79”</td>
</tr>
<tr>
<td>05</td>
<td>133 ohms (at 100 MHz)</td>
<td>0.90”</td>
</tr>
<tr>
<td>06</td>
<td>208 ohms (at 100 MHz)</td>
<td>0.93”</td>
</tr>
<tr>
<td>08</td>
<td>14/42 ohms</td>
<td>1.040”</td>
</tr>
</tbody>
</table>

Shielding Options

**Aluminum Foil Shielding** laminated to Mylar® insulation of the flat flex cable. The foil is .001” thick with .005” of clear Mylar insulation. Select conductors within the FFC can be grounded directly to the shield. Drain wires are also an option.

**Conductive Silver Ink Shielding** applied to the Mylar surface of the FFC can provide effective EMI suppression while allowing for maximum flexibility of the cable for more dynamic applications. Select conductors within the FFC can be grounded directly to the shield.

**Patterned Conductive Silver Ink Shielding** applied to the Mylar surface of the FFC in a cross-hatch pattern can provide effective EMI suppression while maintaining cable flexibility and higher impedance values favorable to LVDS applications. Select conductors within the FFC can be grounded directly to the shield.

Mylar® is a registered trademark of the DuPont Company

Additional Options

- Length and fold specifications
- Transition boards for various pitch applications
- ChassiLoc for panel mounting
- SnapLoc for positive retention to the PCB
- Solder prep for direct attachment to the PCB

Environmental Specs

- Material – U.L. Flame rating 94V – 1
- Temperature rating – -40 °C to +105 °C

Cable Specifications

- Insulator – Polyester (FFC)
- Plating – Tin Bismuth
- Minimum bend radius – 0.020” (FFC)
- Length tolerances – < 12” ± .10” ≥ 12” ± .25”

Consult factory for custom solder prep requirements.
FDPI-1 Pinout “A”  
Connector Pin 1-Pin 1

FDPI-1 Pinout “B”  
Connector Pin 1 to Pin 31, 41, 51

FDPI-1 Pinout “Z”  
Connector Pin 31, 41, 51 to ZIF Connectors

**Dimensions to be used as reference only. Specifications subject to change.**
# FFC Product Order Form

## 11 Easy Steps

### 1 – 1st End Conn.
- **F=Socket** (FPDI-1 31,41,51)
- **M=Plug** (FPDI-1 31,41,51)
- **A=LVDS/DF19** (20,30)
- **B=LVDS/FI-X** (20,30)
- **Z=Tape ZIF**
- **R=ZIFLOC Overmold**
- **N=No Connector**
- **H=Solder Prep**
- **X=Custom**
- **L=FC Flying Lead**

### 2 – 2nd End Conn.
- **F=Socket** (FPDI-1 31,41,51)
- **M=Plug** (FPDI-1 31,41,51)
- **A=LVDS/DF19** (20,30)
- **B=LVDS/FI-X** (20,30)
- **Z=Tape ZIF**
- **R=ZIFLOC Overmold**
- **N=No Connector**
- **H=Solder Prep**
- **X=Custom**

### 3 – Orientation
- See pinout chart for connector to connector, connector to ZIF & ZIF to ZIF orientation.

### 4 – Cable Style
- **T=Unshielded Mylar**
- **S=Foil Shielded Mylar**
- **K=Silver Conductive Ink Shielded**
- **X=Custom**
- **L=Patterned Silver Ink**

#### Note:
If S, K, or L are chosen, state conductor no’s to be grounded to shield, both ends or one end.

### 5 – Trace Count
- 1 to XX

### 6 – Cable Pitch
- **A=0.3mm**
- **K=0.4mm**
- **B=0.5mm**
- **C=0.6mm**
- **E=0.8mm**
- **G=1.0mm**
- **H=1.25mm**
- **J=1.27mm**
- **V=2.54mm**
- **X=Custom**

### 7 – Length in Inches"
- **0 - 999"**

### 8 – Folds
- **N=No**
- **Y=Yes**

### 9 – Labels
- **N=No**
- **Y=Yes**

### 10 – Ferrite
- **00=None**
- **03=600016-03**
- **04=600016-04**
- **05=600016-05**
- **06=600016-06**
- **07=600016-07**
- **08=600016-08**
- **XX=Custom**

### 11 – Drain Wire
- **N=None**
- **D=One End**
- **B=Both Ends**
- **DC or BC=**
  - Drain w/Connector(s)

### Example:
**FF A-1 T 31 B 9.50 N N 03 NN**

These are descriptions for quoting purposes only. A six digit customer specific part number will be assigned to you upon ordering. If folds, ferrites or labels are required a drawing or specification will be required prior to production.

Dimensions to be used as reference only – specifications subject to change.
Power Cable Extender

Features and Benefits
- Mates with JST BH receptacle, P/N SMO2 (8.0) B-BHS-1-TB, 8-mm pitch
- 2, 3 & 4 wire assemblies available
- Compatible with most LCD’s
- Internal power cable assembly
- Extends LCD power cord
- Consult factory for circuit size options
- Terminations can be Customer specific
- Custom cable lengths available
- Over molded strain relief
- Reliable solder termination
- Low profile design fits in tight locations
- Suitable in notebook hinges, point-of-sale (POS) machines & projector systems

Electrical Specs
- Contact resistance – 20 milliohm (maximum)
- Dielectric withstanding voltage – 1000V RMS (minimum) at 60Hz
- Current rating – 1 AMP AC/DC
- Insulation resistance – 500 megohms (minimum) at 500V DC
- Voltage rating – 600V AC/DC

Contact Specs
- Material – Copper Alloy
- Finish – Tin Plated
- Insertion force – 600 grams (nominal)
- Withdrawal force – 700 grams (nominal)

Cable Specs
- Insulator – Extruded PVC
- Conductor – Copper
- Plating – Tin
- Applicable wire – 22AWG – 28AWG solid or stranded

Environmental Specs
- Overmold material - LCP (black) – U.L. 94V – 0
- Connector material - Polymide resin (natural) – U.L. 94V – 0
- Cable material – MV-MIL-W-76-PVC, MW-C22
- Temperature rating –25 °C to + 85 °C

Ordering Information
Cable assembly description – Complete the blocks from the information listed above.

Visit us online!