



# PREMO-FLEX SLIMSTACK FFC/FPC JUMPERS

ADDING: Premo-Flex Flat Flexible Cable (FFC)/Flexible Printed Circuit (FPC) jumpers designed to mate with SlimStack 0.35mm microminiature flex-to-board connectors. These off-the-shelf flexible circuits support data rates up to 30Gbps; provide superior signal integrity; and enhance design flexibility for applications needing compact, high-speed data transmission capability.

## NPI Enhancement

JUNE 2025



# Premo-Flex SlimStack FFC/FPC Jumpers

Ideal for a wide range of microminiature data transmission applications, Premo-Flex SlimStack Flat Flexible Cable (FFC)/Flexible Printed Circuit (FPC) Jumpers support up to 30Gbps data rates using a compact, flexible form factor. The jumpers utilize 0.35mm-pitch SlimStack flex-to-board connectors and offer impedance matching for HDMI (100 Ohm) or USB (90 Ohm) protocols.

## Key Product Information

Category: Printed electronics

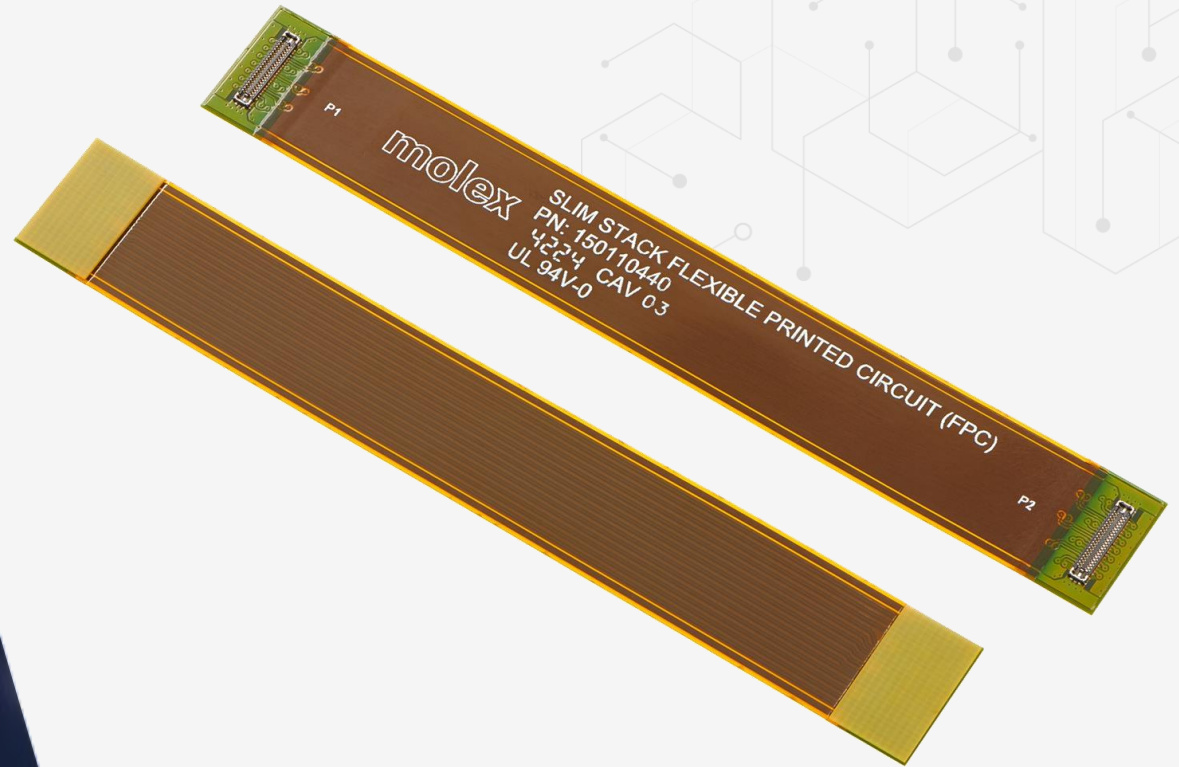
Terminations: 0.35mm-pitch SlimStack Connectors, series 216700

Circuit Counts: 20, 40, 50

Jumper Lengths: 102, 152, 305mm

Data Rates: Up to 30Gbps

Impedance: 50 Ohms (single ended) or 95 Ohms (differential)  $\pm 10\%$



[View Product Landing Page](#)

[Solution Guide](#)

Series  
15011

Premo-Flex SlimStack FFC/FPC Jumpers

# Vital Product Information

## Premo-Flex SlimStack FFC/FPC Jumpers

### What makes this product different from the competition?

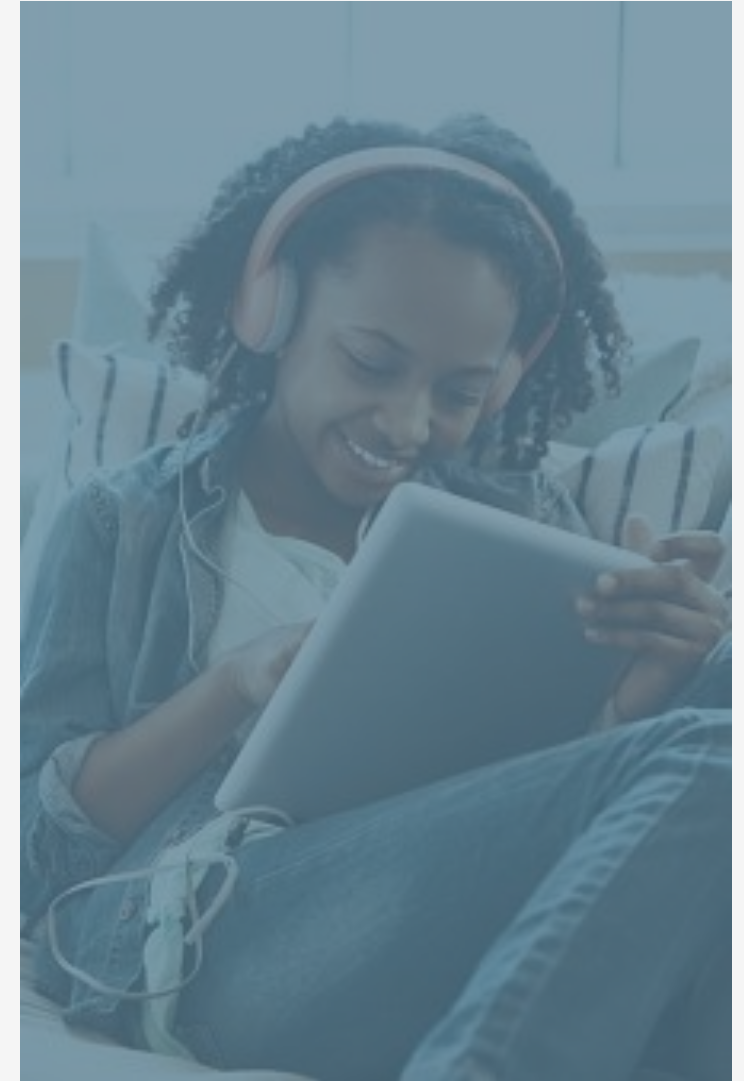
These jumpers deliver a standard, off-the-shelf Premo-Flex FFC/FPC assembly that fully integrates the cable with the SlimStack Connector. This offers a unique ability to utilize the proven SlimStack form factor while simplifying supply chain challenges and accelerating timelines by using off-the-shelf solutions.

### How does this product create value for our customers?

Facilitating miniaturized applications by leveraging a flexible, high-speed data connectivity solution, these jumpers ease design constraints and support various data protocols and power requirements with a single off-the-shelf solution. Dedicated power, ground and signal pins enable two operating voltages within the same cable, saving space and design work. Superior signal quality and reliability improve product performance and end-user satisfaction.

### What is the Molex advantage?

Global manufacturing capability, robust engineering support, exceptional quality, and a versatile selection of standard off-the-shelf products or customized solutions make Molex a unique resource in solving connectivity challenges.



# Markets and Applications

## Premo-Flex SlimStack FFC/FPC Jumpers



*Refrigerators*

### SERVER AND STORAGE

- Servers



*Monitoring Devices*

### AUTOMOTIVE

- Infotainment devices



*Smartphones*

### APPLIANCES

- Washing machines
- Refrigerators

### MEDTECH

- Monitoring devices
- Therapeutic devices
- Surgical devices

### MOBILE DEVICES

- Smartphones
- Tablet computers
- Wearables
- Portable audio devices



# Product Advantages and Features

## Premo-Flex SlimStack FFC/FPC Jumpers

**Enables flexible high-speed data and power connectivity**  
Dedicated power, ground and signal pins enable flexible operation with two different voltages in the same cable or a single voltage using both rails for higher current handling.

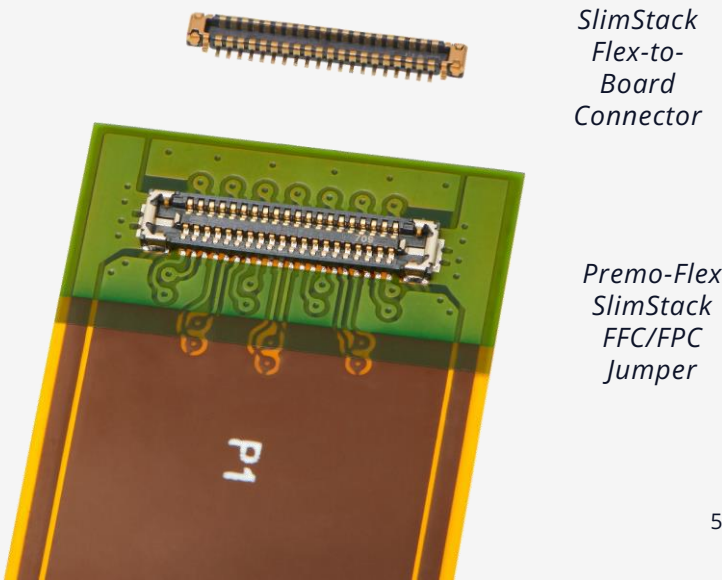
**Provides high-speed data transmission**  
High-performance SlimStack Connectors and FFC jumpers deliver data rates up to 30Gbps.

**Delivers superior signal quality for miniaturized applications**  
The jumper operates at 5 GHz, with an insertion loss of 10 dB per foot (30.5cm).

**Minimizes space requirements**  
Miniaturized 0.35mm-pitch connectors and a low-profile mated height of 1.27mm (including cable) simplify design work for space-constrained applications.

**Supports multiple data protocols**  
Controlled impedance of 50 Ohms (single ended) and 95 Ohms (differential) with  $\pm 10\%$  matching enables use with HDMI and USB protocols.

Key Specifications	
Terminations	0.35mm-pitch SlimStack Connectors, series 216700
Circuit Counts	20, 40, 50
Jumper Lengths	102, 152, 305mm
Data Rate	Up to 30Gbps
Impedance	50 Ohms (single ended) or 95 Ohms (differential) $\pm 10\%$
Operating Temperatures	-40 to +85°C



# Product Specifications

## Premo-Flex SlimStack FFC/FPC Jumpers

### Reference Information

Designed in: Millimeters  
RoHS: Yes  
Halogen Free: Yes  
Glow Wire Capable: Yes  
UL Certification: 94V-0  
Testing: S-parameter, 4-port (S4P)

### Mechanical

Terminations: SlimStack Connectors, series 216700  
Pitch: 0.35mm  
Mated Height: 1.27mm (including cable)  
Cable Lengths: 102, 152, 305mm  
Stiffener Length: 8.50mm  
Bend Radius (min.):  
    One-time bend—2.00mm  
    20 cycles—2.50mm  
Connector Withdrawal Force: 0.25N/pin  
Circuit Counts: 20, 40, 50

### Electrical

Voltage (max.): 60V (DC/AC RMS)  
Signal Current (max.): 0.3A per pin  
Data Rates: Up to 30Gbps  
Single-Rail Current (Two Operating Voltages):  
    20 pins—1.2A per rail  
    40 pins—1.5A per rail  
    50 pins—2.5A per rail  
Combined-Rail Current (One Operating Voltage):  
    20 pins—2.4A per rail  
    40 pins—3.0A per rail  
    50 pins—5.0A per rail  
Resistance: 7.75 Ohms/m  
Insertion Loss: 10 dB/ft (10 dB/30.5cm)  
Controlled Impedance: 95 Ohms ± 10%  
Dielectric Withstanding Voltage: 200V AC  
Frequency (max.): 5 GHz

### Physical

Insulation Tape: Polyimide and thermal adhesive  
Operating Temperatures: -40 to +85°C

### Additional Resources

Web Overview Page	<a href="https://www.molex.com/en-us/products/cable-assemblies/flat-flexible-cables-ffc">https://www.molex.com/en-us/products/cable-assemblies/flat-flexible-cables-ffc</a>
Solution Guide	<a href="#">987652-8671.pdf (molex.com)</a>
Global Product Manager	David Falla, PCSBU, DSS



THANK YOU

*creating connections for life*

**molex**