

Table of Contents

Z-PACK Slim UHD Connector	47-54
Product Line Overview	48
Connector Concept	49
Flexibility	49
Upgradeability	50
Connector Footprint	50
Typical Electrical Properties	51
Female and Male Connectors	52
Right-Angle Male (RAM) Connector	53
Power Connector	53
Guide Pins and Guide Module	54

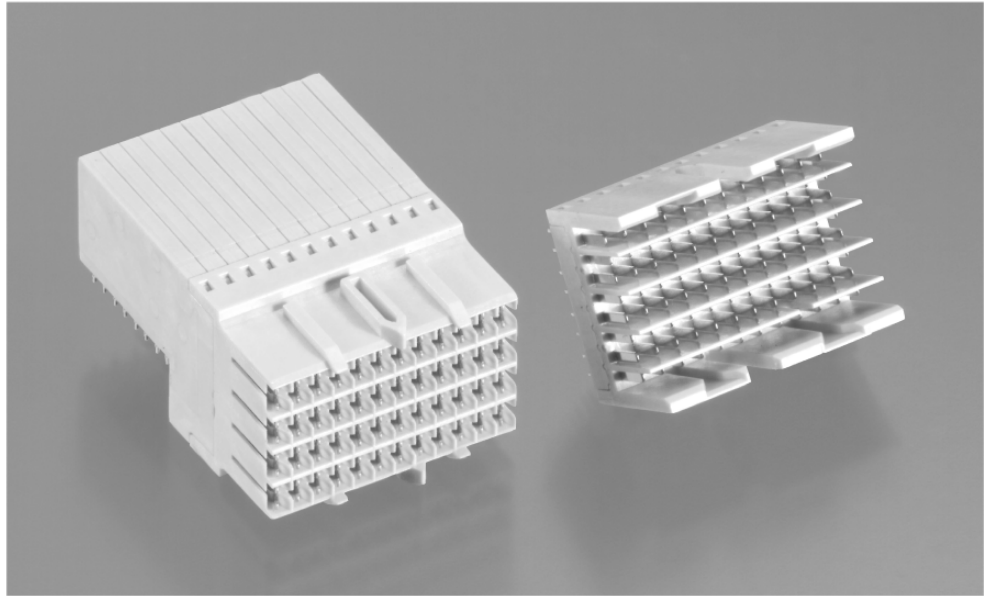
2

Z-PACK Slim UHD Connector

Z-PACK Slim UHD Connectors

Product Facts

- Density of 55 pins/cm²
- Fits +13 mm slot pitches
- 20+ Gbps scalable signal speed
- Complete end-to-end stackable
- Press-fit termination technology
- Different pin assignments possible
- Post/Premating possible
- Integrated polarization & guiding



Z-PACK Slim (low profile) UHD (Ultra High Density) is a flexible and upgradeable connector system designed to fit 15 mm (0.6 inch) slot pitch applications.

The Z-PACK Slim UHD connector has an extremely high contact density combined with excellent high speed signal performance.

For more Information:
<http://www.zpackuhd.com>

Applications

- Telecom Equipment
- Switches
- Routers
- Servers, etc.

Z-PACK Slim UHD Connectors (Continued)

Connector Concept

Flexibility

Multiple types of high speed pin assignments are permissible. See Application Specifications or contact Tyco Electronics.

Some Examples:

- 1.5 differential pairs per column
- 2.0 differential pairs per column
- Extremely high density in fully single ended arrangement up to 55 signal lines/cm²

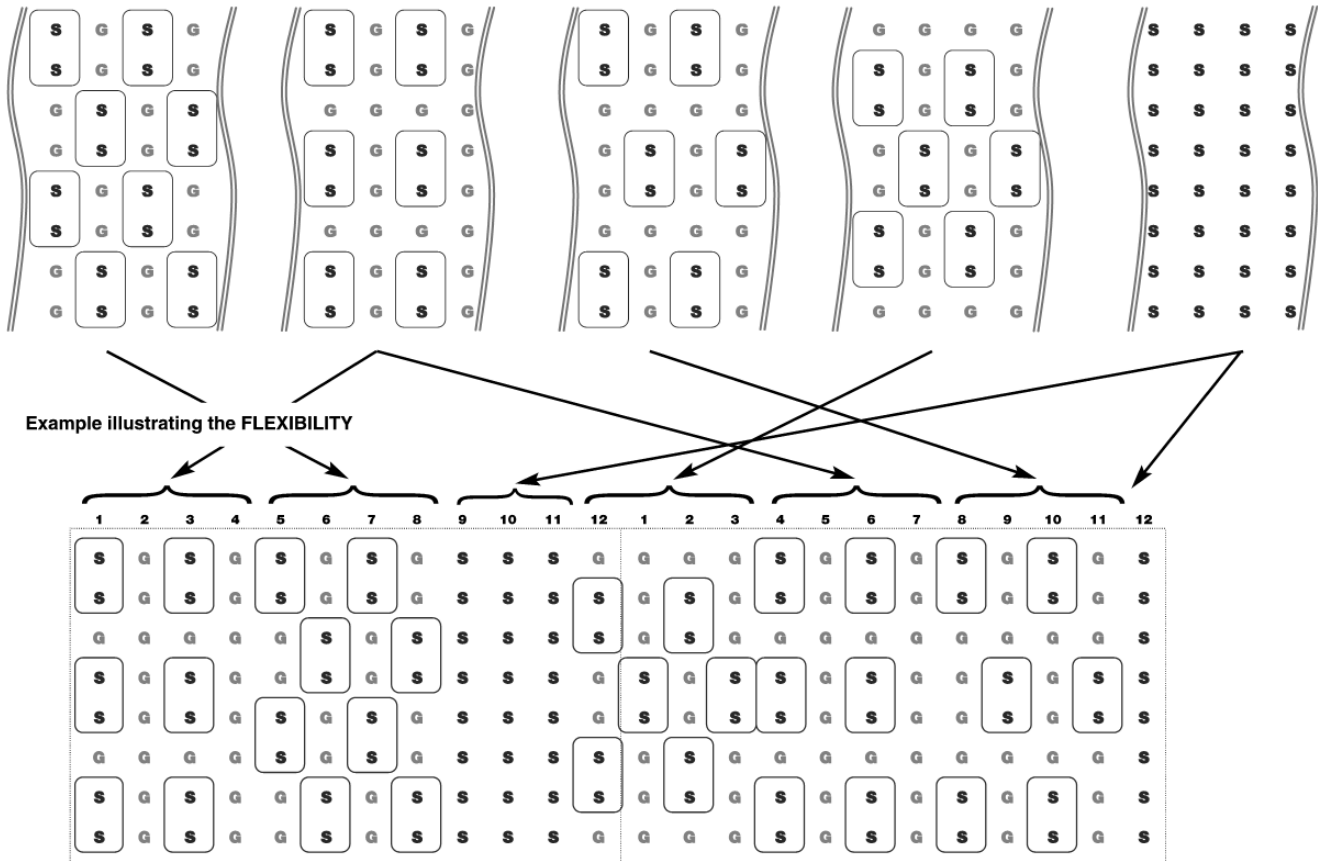
Upgradeability

- Z-PACK Slim UHD CS (Common Speed) ≤3.5 Gbps
- Z-PACK Slim UHD HS (High Speed) 12.5+ Gbps (2.0 DP/Column) 20+ Gbps (1.5 DP/Column)

**8 Contacts per Column —
12 Columns per Module**

Flexibility

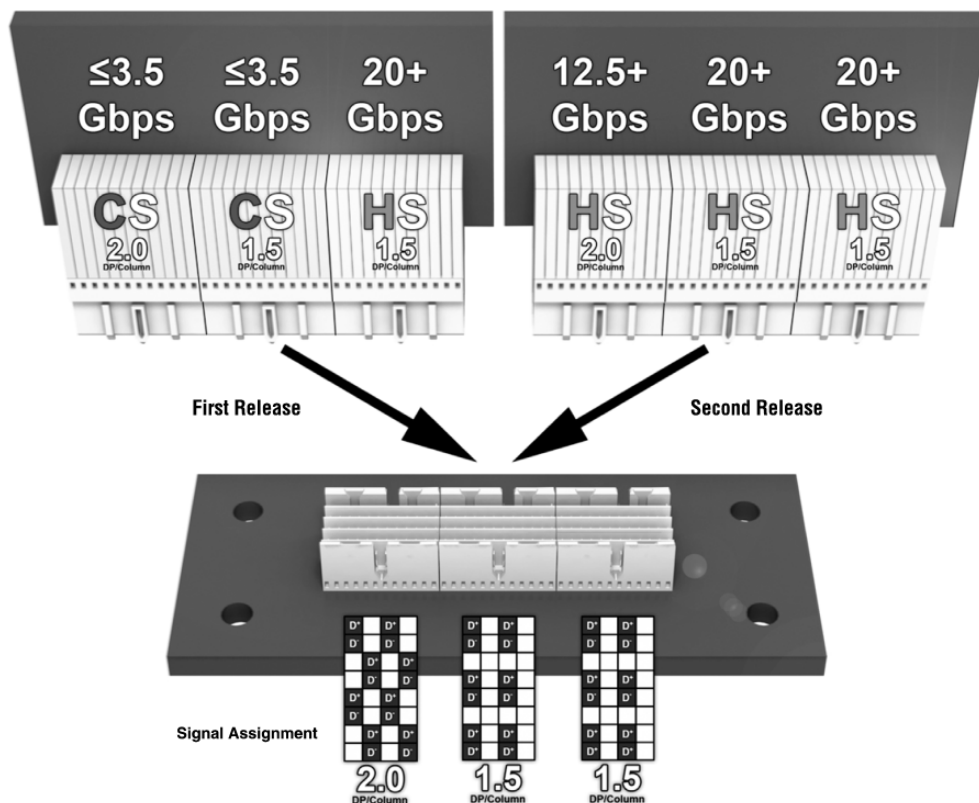
Pin Assignments



For other assignments, please see Application Specification or contact Tyco Electronics.

Z-PACK Slim UHD Connectors (Continued)

Upgradeability



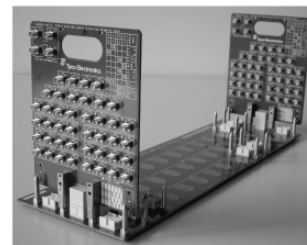
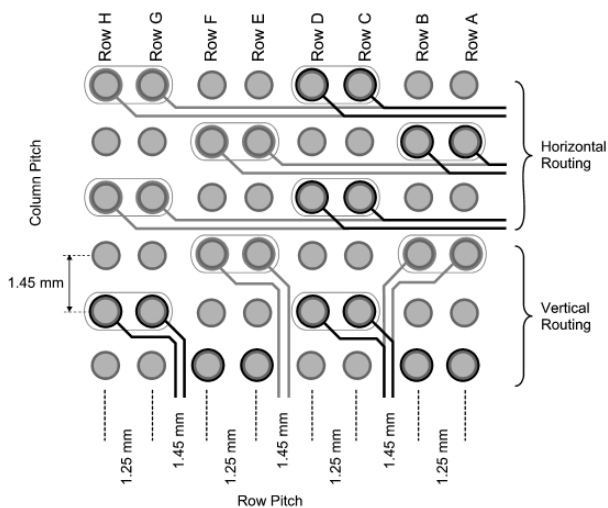
Note:

A combination of CS and HS chiclets in one female connector housing is available upon customer request. Please contact Tyco Electronics.

Connector Footprint

Drill Size — 0.5 mm
Finished Hole Size — 0.4 mm
Pad Size — 0.8 mm
Anti-Pad Size — 0.95 mm

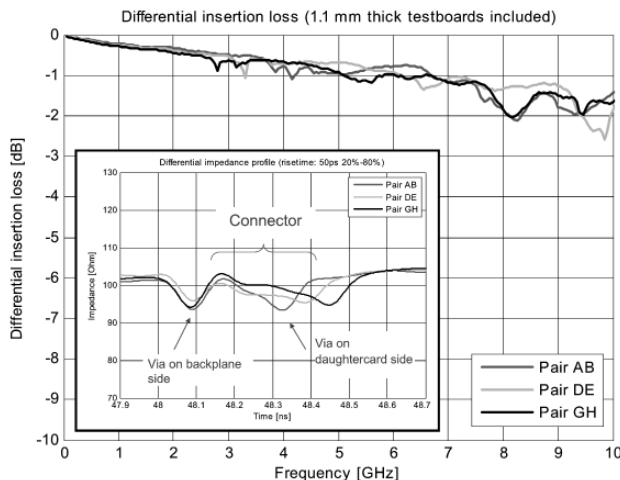
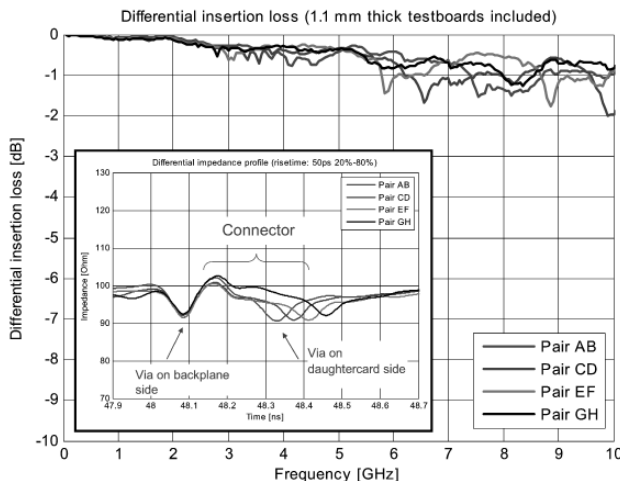
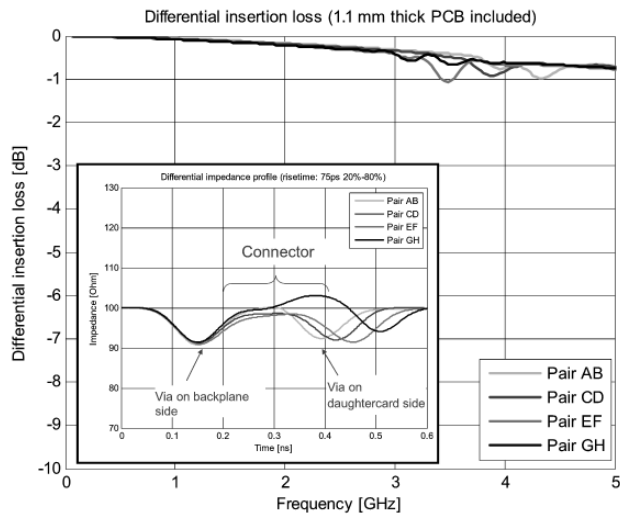
- Identical board footprints on Backplane and Daughtercard
- 1.45 mm routing channels available in Horizontal and Vertical Direction
- Footprint allows 4-6-4 MIL or 5-7-5 MIL differential routing



System and connector evaluation boards are available upon request.

Z-PACK Slim UHD Connectors (Continued)

Typical Electrical Properties



2.0 DP/Column Common Speed*

Worst Case Noise with recommended TX/RX pinout:
2.1 % @ 75 ps (20% to 80%)

Noise Summary	Total Asynchronous Noise @ 75 ps Risetime (20% to 80%)	
	2.0 different pairs/column	
Victim Pair	Total Async. NEXT	Total Async. FEXT
Pair AB	1.4 %	0.7 %
Pair CD	2.9 %	1.1 %
Pair EF	2.9 %	1.2 %
Pair GH	1.4 %	0.7 %

2.0 DP/Column High Speed**

Worst Case Noise with recommended TX/RX pinout:
1.9 % @ 50 ps (20% to 80%)

Noise Summary	Total Asynchronous Noise @ 50 ps Risetime (20% to 80%)	
	2.0 different pairs/column	
Victim Pair	Total Async. NEXT	Total Async. FEXT
Pair AB	1.5 %	0.6 %
Pair CD	3.1 %	1.3 %
Pair EF	3.1 %	1.5 %
Pair GH	1.5 %	0.8 %

1.5 DP/Column High Speed**

Worst Case Noise with recommended TX/RX pinout:
0.9 % @ 50 ps (20% to 80%)

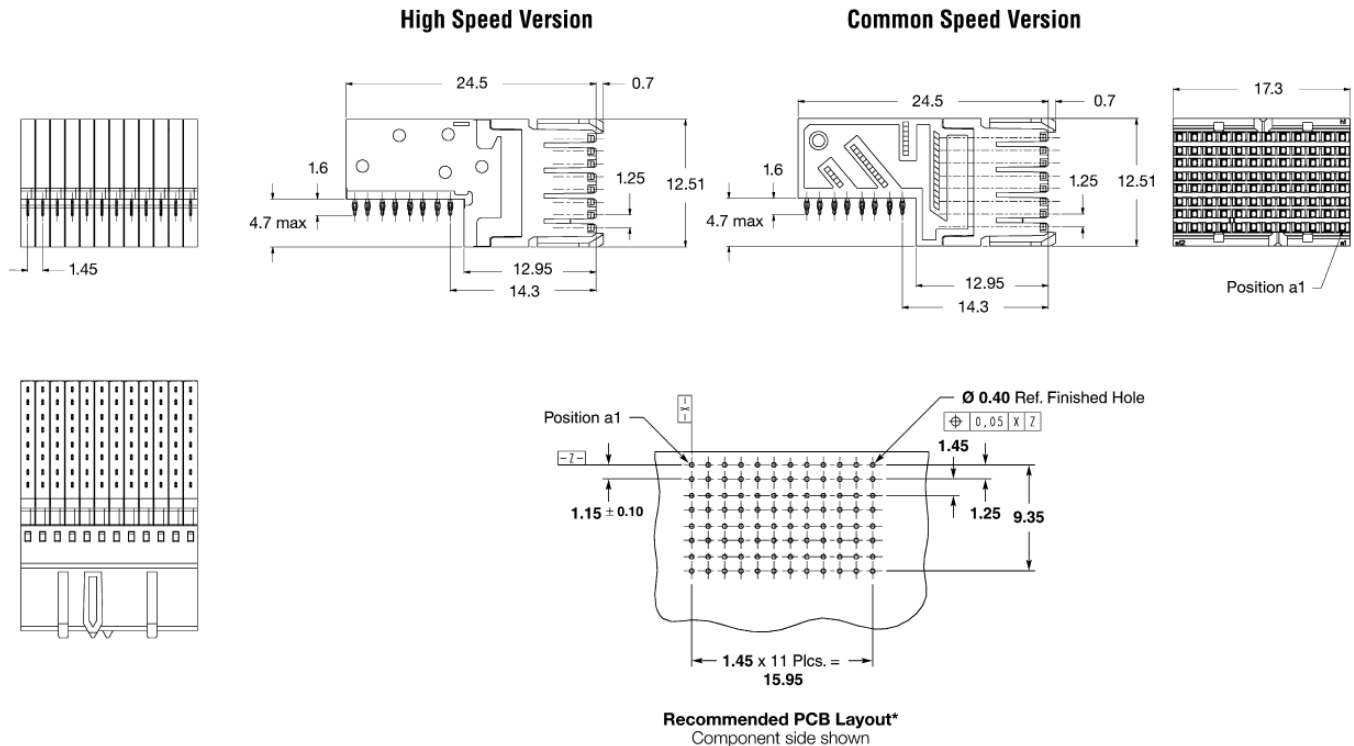
Noise Summary	Total Asynchronous Noise @ 50 ps Risetime (20% to 80%)	
	2.0 different pairs/column	
Victim Pair	Total Async. NEXT	Total Async. FEXT
Pair AB	1.0 %	0.6 %
Pair DE	0.4 %	0.6 %
Pair GH	1.2 %	0.8 %

* All simulation data include the footprint performance of a 1.1 mm thick PCB test-board.

** All measurement data include the footprint performance of a 1.1 mm thick PCB test-board.

Z-PACK Slim UHD Connectors (Continued)

Female Connector

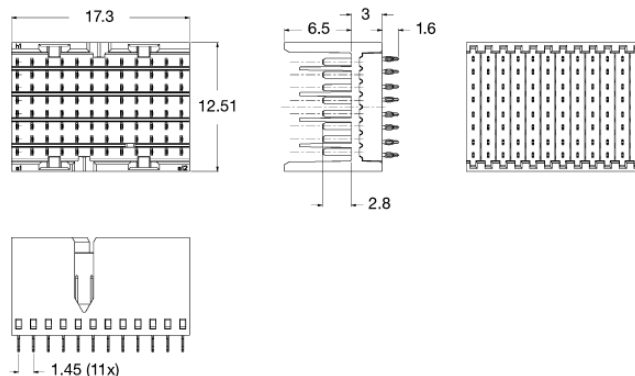


Male Connector

Uniform Male Connector for High/Common Speed

*Footprint of male connector is identical to footprint of female connector.

Post/pre-mating pins at pre-defined positions can be obtained upon request. For further information, please contact Tyco Electronics.



	Design Objectives/ Product Specification	Application Specification	Reference Part Numbers	
			Female	Male
High Speed	108-19353 / 108-19320	114-19106	1857657-1/-2	2042088-1/-2
Common Speed	108-19354 / 108-19352	114-19112	1982738-1/-2	
Power (see page 53)	108-19367	114-19122	1982257-5	1982260-5

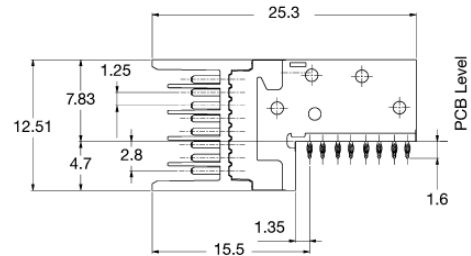
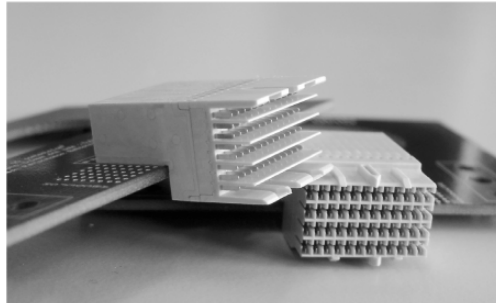
Note: All part numbers are RoHS compliant.

Z-PACK Slim UHD Connectors (Continued)

Z-PACK Slim UHD Complimentary Products

Right Angle Male (RAM) Connector

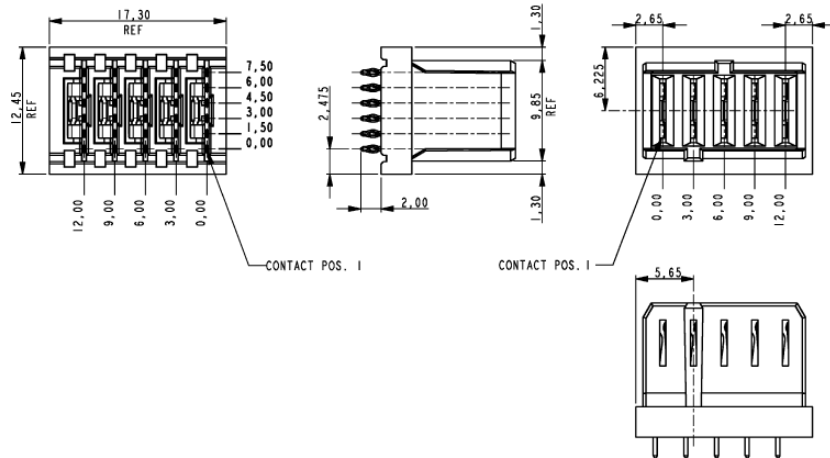
- Co-planar application based on right angle female and right angle male.
- Performance up to 20+ Gbps (in combination with Female HS)
- Part No. 2042162-1



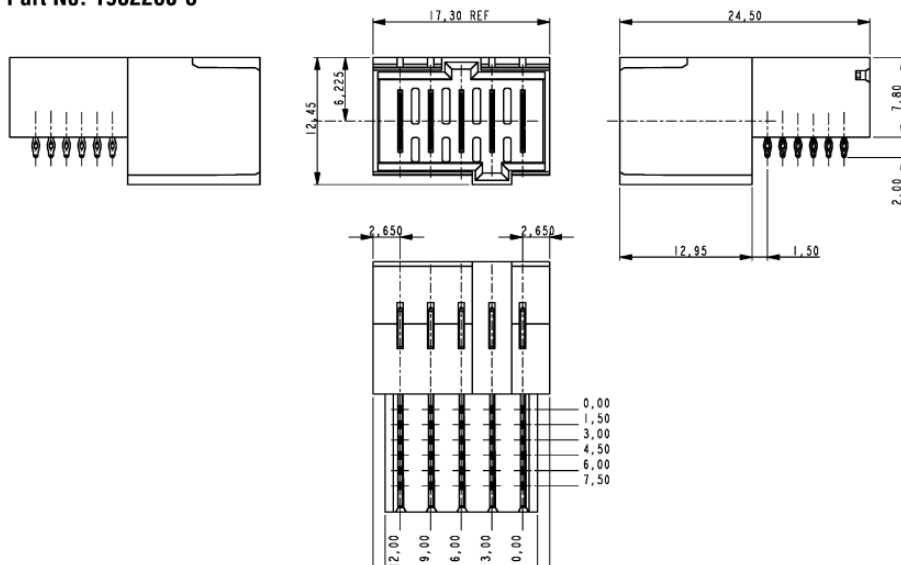
Power Connector

- Envelope dimensions identical to Z-PACK Slim UHD modules
- High durability (250 cycles)
- 2 Sequencing levels
- Current carrying capacity >18 Amp/Contact

Female Connector Part No. 1982257-5



Male Connector Part No. 1982260-5

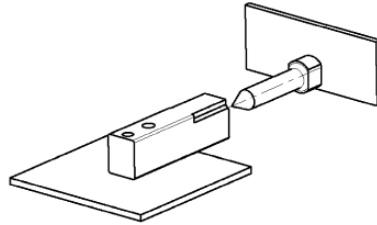


Note: All part numbers are RoHS compliant.

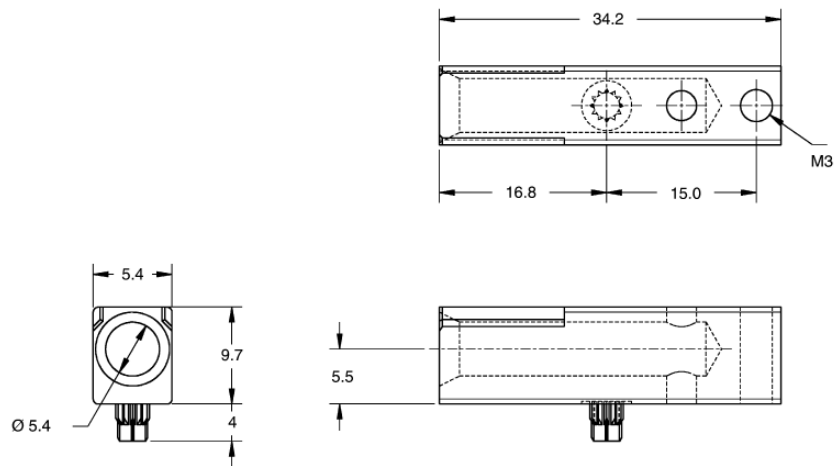
Z-PACK Slim UHD Connectors (Continued)

Z-PACK Slim UHD Complimentary Products (Continued)

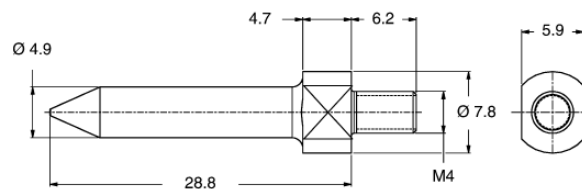
Guiding Pins



Female Guide Module Part No. 223957-3



Male Guide Pin Part No. 1857988-1



Note: All part numbers are RoHS compliant.