



## **MDMA/MDMB 51 Ways Connectors**

Micro-D Connector with  
Removable Crimp Contacts

# Key Market Focus – Mission Critical Applications

## INDUSTRIAL



LIGHTING



FACTORY  
AUTOMATION



HVAC



PROCESS  
AUTOMATION



SAFETY &  
SECURITY



METERING &  
UTILITY

## AUTOMOTIVE



BY WIRE  
FUNCTION



INTERIOR  
CONTROLS



ACCESS  
CONTROL



INTERIOR  
DETECTION

## MEDICAL



MINIMALLY  
INVASIVE SURGERY



DIABETES CARE



HEARING AIDS



DRUG DELIVERY



MEDICAL  
MONITORING



SMART HOME  
HEALTHCARE

## CONSUMER



WEARABLES



HEADPHONES



DRONES



GAMING



HIGH END  
APPLIANCES



POWER TOOLS

## AEROSPACE



SATELLITE & SPACE CRAFTS

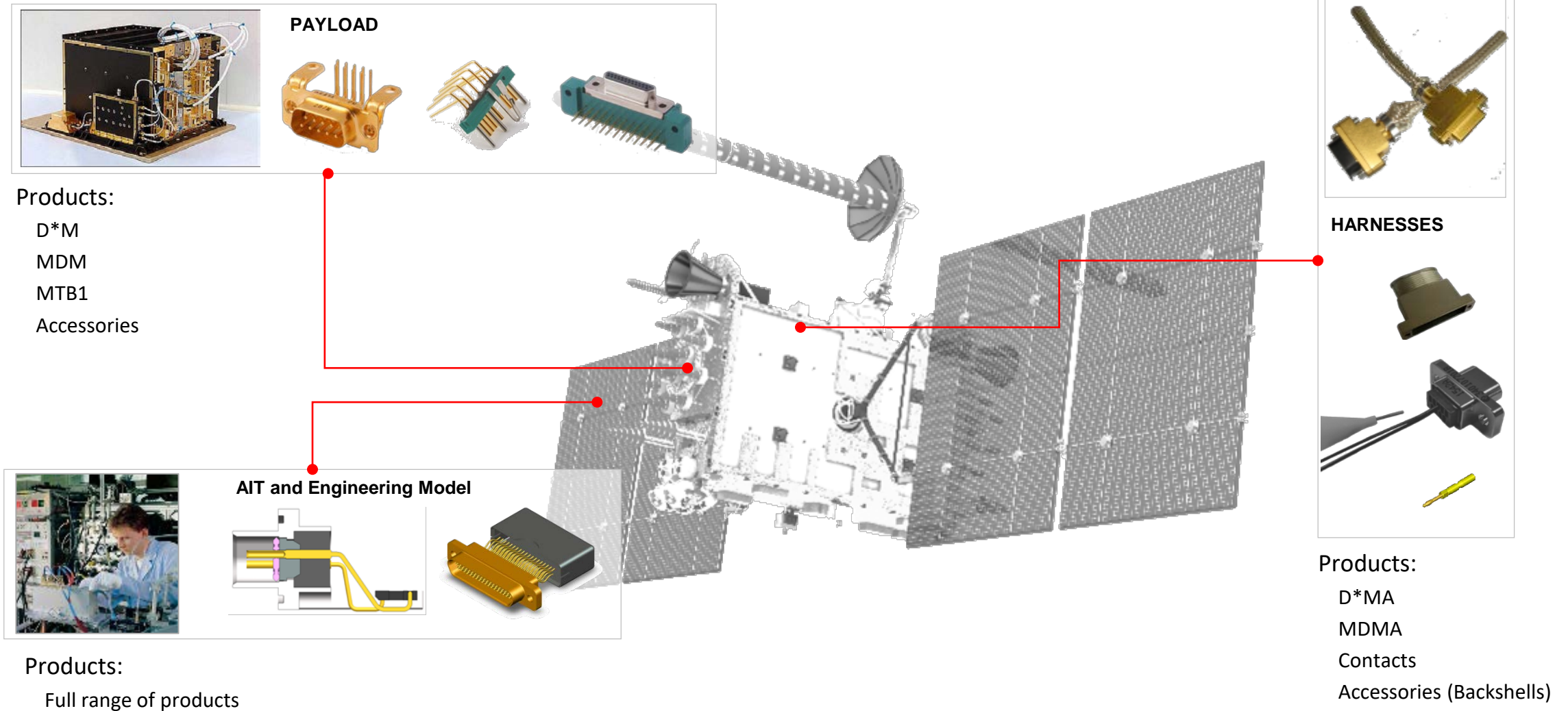


LAUNCH VEHICLES



AVIONICS

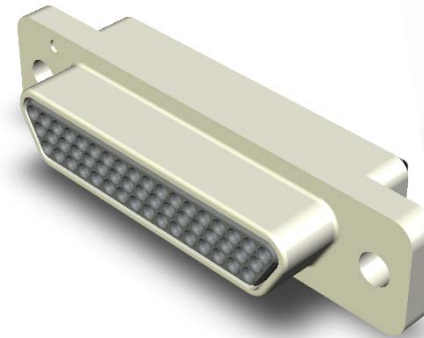
# Market: Satellites, Spacecrafts and Launchers



# MDMA / MDMB

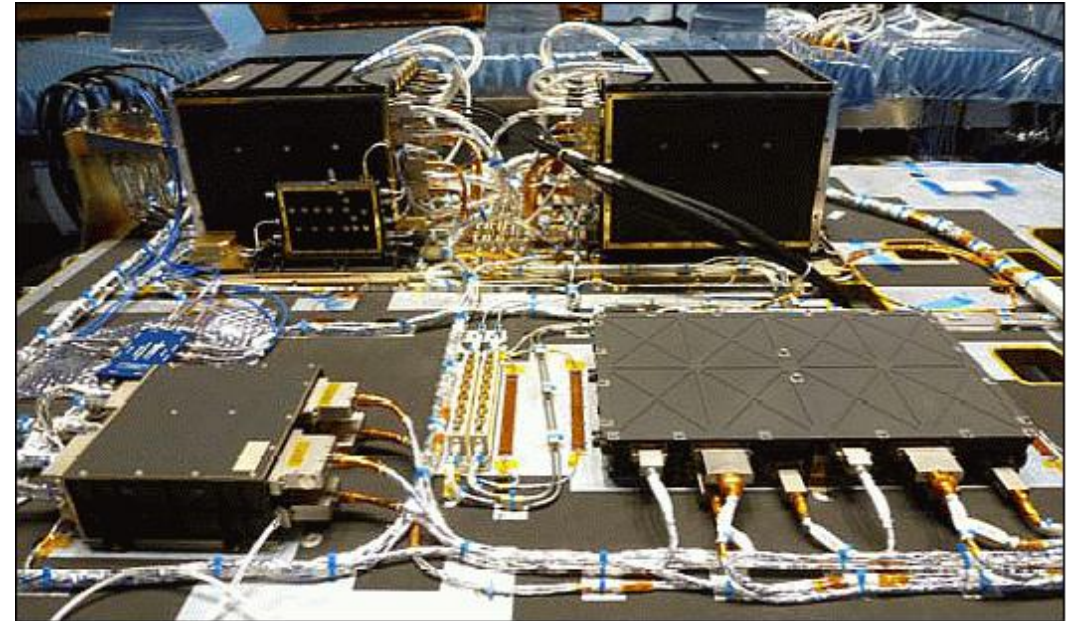
- **Product**

- Micro-D connector with removable crimp contact
- Replace Micro-D connectors with “Solder Bucket” or “Wire” terminations
- Designed to accept cables gauges AWG24 to AWG28
- MDMA → ESA/ESCC certified (Flight Model)
- MDMB → FR048 specification (Engineering Model)



# Where to use MDMA / MDMB connectors ?

- **Market**
  - Space activity for satellites purpose
- **Applications**
  - Harnesses



# Past Supply

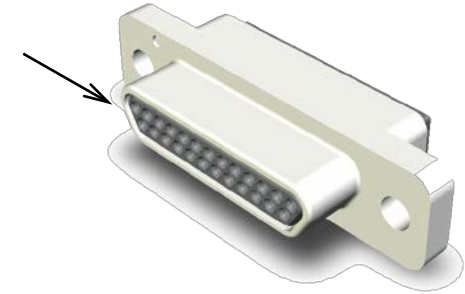
- **Micro-D Connectors availability**

Size	MDM	MDMA / MDMB	Contacts Row #
9	x	x	2
15	x	x	2
21	x	x	2
25	x	x	2
31	x	x	2
37	x	x	2
51	x	Not Available	3

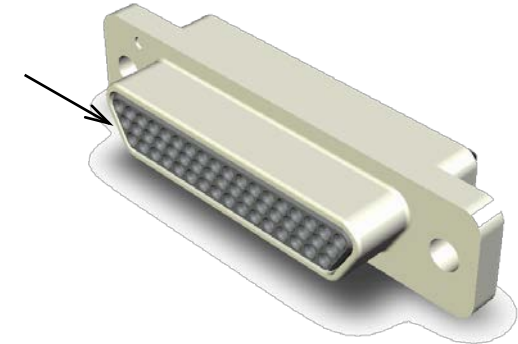
- **MDMA / MDMB Connectors**

- Each contact cavity has retention clip
- Current retention clip can't be used with sizes 51. Not compatible with 3 rows design
- **MDMA / MDMB Size 51 was not available**

*MDM Connectors  
Sizes 9, 15, 21, 31 and 37  
2 rows of contacts*

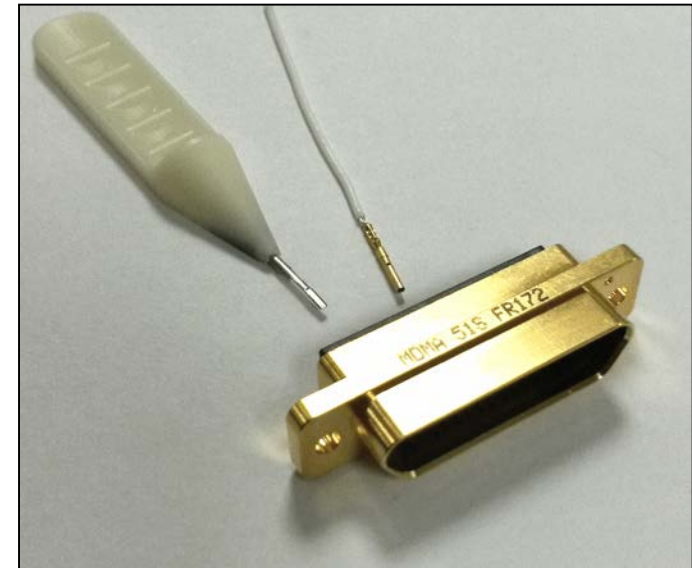
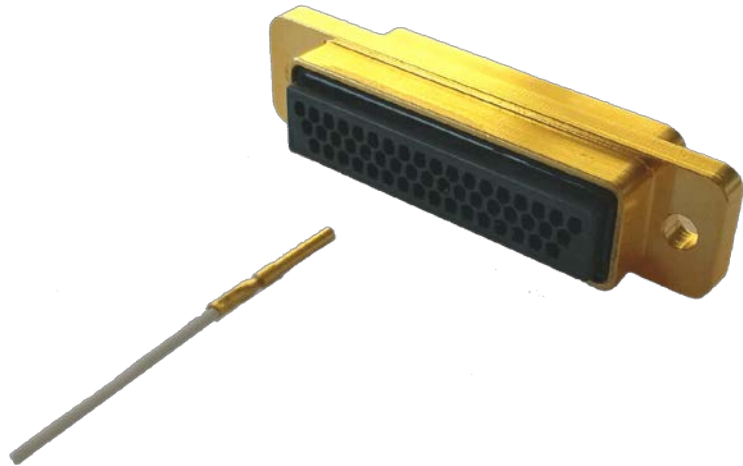


*MDM Connectors  
Size 51  
3 rows of contacts*



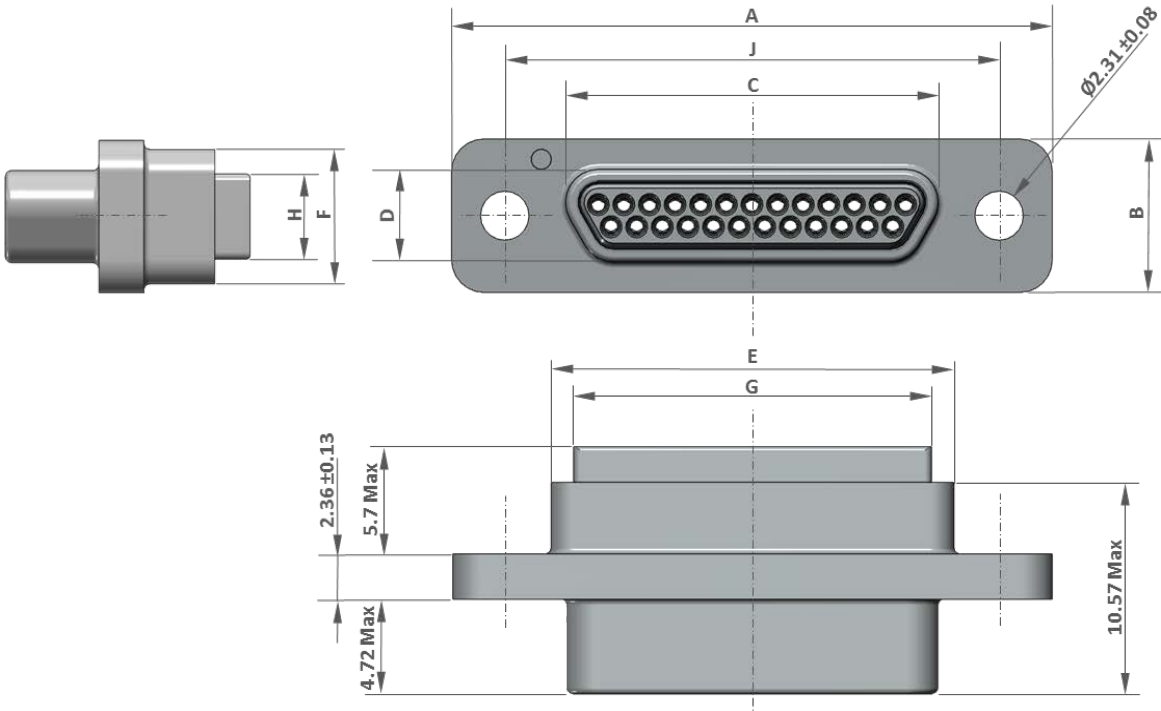
# New Proposal

- Dedicated solution has been found to integrate new retention clip within insulator for each cavity and compatible with 3 rows design.
- New Extraction tool to remove contacts.
- **MDMA / MDMB Connectors 51 ways compatible with standard Micro-D connectors.**



# Features

- Connector Dimensions

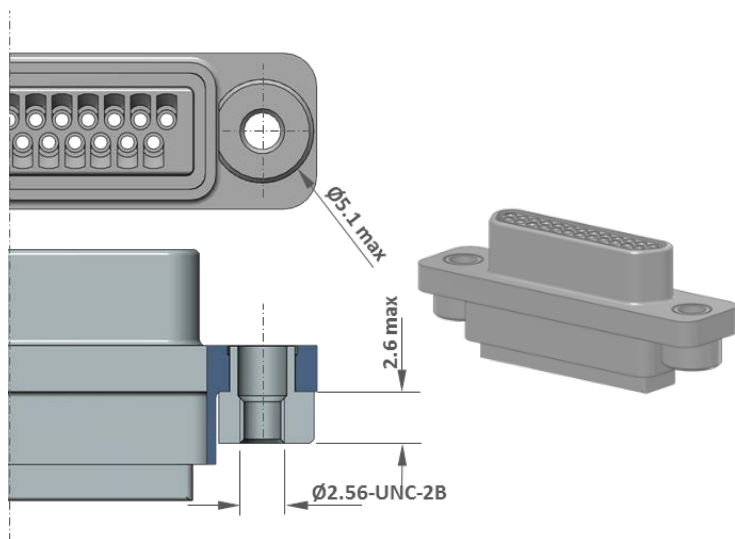


Shell Size	A $\pm 0.25$	B $\pm 0.22$	C $\pm 0.14$	D $\pm 0.15$	E $\pm 0.25$	F $\pm 0.13$	G $\pm 0.13$	J $\pm 0.13$
51P	36.20	8.70	24.83	5.68	26.42	7.65	24.14	30.86
51S	36.20	8.70	25.15	6.01	26.42	7.65	24.14	30.86

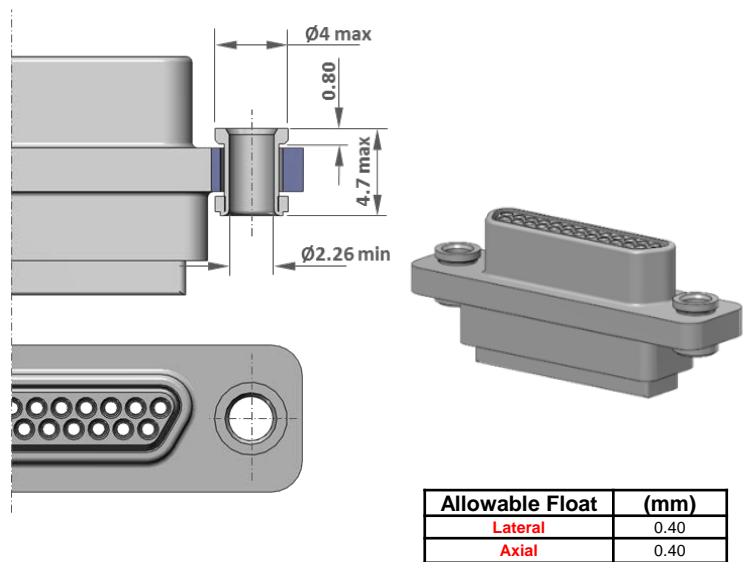
# Features

- Attachment Options

Captive Nut (Option E)



Floating Mount (Option Y)



# Features

- **Electrical and Mechanical Characteristics**

CHARACTERISTIC	VALUE
Operating Temperature	-55 / +125 °C
Storage Temperature	-65 / +125 °C
Working Voltage (sea level)	150 Vrms
Voltage Proof leakage current	600 Vrms / 2mA
Insulator Resistance	5000 MΩ min.
Maximum Rated Current AWG24	3.5 A
Maximum Rated Current AWG25	2.5 A
Maximum Rated Current AWG26	2.5 A
Maximum Rated Current AWG28	1.5 A
Contact Resistance	5 mΩ
Contact Retention Force	22.25 N max.

# Benefits

- **Main benefits**

- Harness length flexibility
- Not necessary to use shrinkable tube
- Easy to use
- **ESA qualified** – Detail Specification 3401/077
- MIL-83513 compatible
- Compatible with:
  - 3401/029 MDM Connectors
  - 3401/041 Savers
  - 3401/032 Accessories
  - 3401/087 Backshells
- Compact format and designed to accept gauges AWG 24 to AWG28
- **Unique design**

# Thank You

- Thanks for your attention
- Thanks ESA/ESTEC and CNES for their support

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