

## SPACE-GRADE INTERCONNECT SOLUTIONS

# DELIVERING RELIABILITY TO DEEP SPACE APPLICATIONS

## A WORLD LEADING PROVIDER

Hypertac is a world-leading provider of high performance electrical connector and interconnect solutions for the Space applications, with manufacturing sites in Europe, America and Asia. The company provides complete standard and custom design solutions including cabling, mechanical, instrumentation housing and electrical modelling and testing.

Hypertac offers the benefits of a large global business while maintaining its geographic presence. This structure ensures that customers are able to interact with engineers and sales colleagues who speak their own language, have comprehensive knowledge of the range of products available throughout the group and can draw on experience from working in particular application environments.

## OUR VALUES

### COOPERATION

The relationship with our customers and suppliers is based on partnership, teamwork and individual creativity.

### INNOVATION

Innovation is the result of new ideas implemented by state-of-the-art design and development tools.

### RELIABILITY

All our products are based on a high level of quality, reliability and precision.

Hypertac connectors are fitted with our hyperboloid and RFF contact technologies, advanced designs that satisfy the most demanding performance requirements.

### SERVICE

Value added electrical and electronic interconnect solutions and a worldwide distribution network are the essential components of our performance.

### EXPERIENCE

Customer satisfaction is our utmost goal. Our experience in Space applications ensures proven benefit to customers. Our products meet customer special requirements by an optimised cost performance ratio.

### QUALITY AND ENVIRONMENT

Active quality and commitment to continuous improvement, including the prevention of pollution, ranks first and foremost in all respects. Hypertac certification to DIN EN ISO 9100, DIN EN ISO 14001 and AS EN 9100 is the result.



## OUR INTERCONNECT SOLUTIONS

Rocket launchers, satellites and navigational systems not only require the highest performance components, they require ultra-high reliability since operating conditions are extreme. Hypertac offers standard, off-the-shelf products as well as customised solutions specifically designed and optimised to mitigate the effects of heat, vibration and corrosion.

Hypertac high density design reduces overall system size and weight which is essential in Space applications.



## SPACE QUALITY CERTIFICATIONS

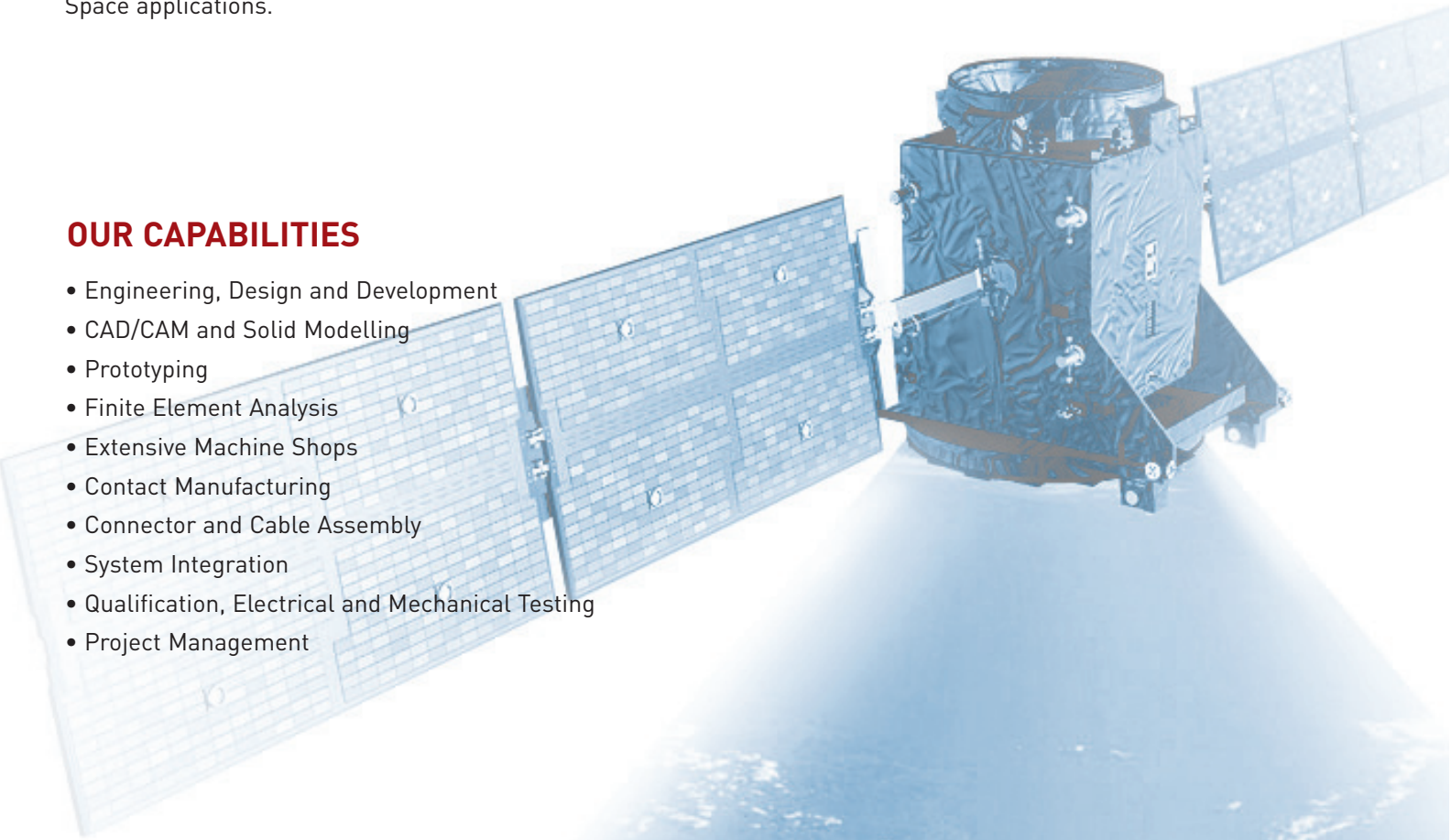
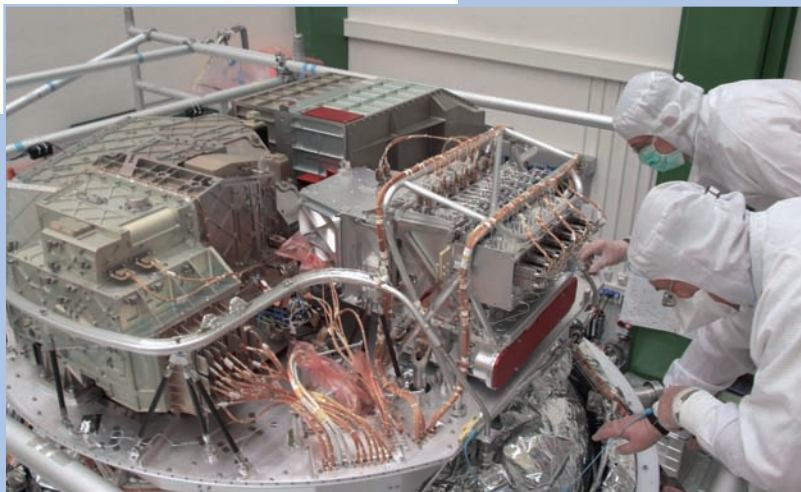
- ESA 3401/016 & 017
- ESA 3401/039
- ESA 3401/065
- ESA 3401/076

## OUR CAPABILITIES

- Engineering, Design and Development
- CAD/CAM and Solid Modelling
- Prototyping
- Finite Element Analysis
- Extensive Machine Shops
- Contact Manufacturing
- Connector and Cable Assembly
- System Integration
- Qualification, Electrical and Mechanical Testing
- Project Management

## OUR STRENGTHS

- Leading Edge Technologies
- Standard and Custom Interconnects
- Global Presence, Local Support and Design-in
- Flexible Manufacturing
- Strong Parent Company



# PROVEN PERFORMANCE IN HARSH ENVIRONMENTS

## HYPERTAC® HYPERBOLOID CONTACT TECHNOLOGY

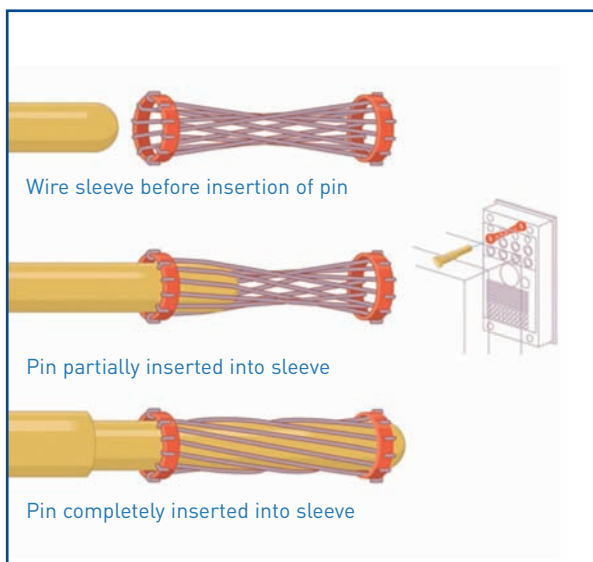
HYPERTAC® IS AN ADVANCED CONTACT DESIGN THAT SATISFIES PERFORMANCE REQUIREMENTS PREVIOUSLY CONSIDERED IMPOSSIBLE.

The shape of the contact sleeve is formed by wires strung at an angle to the socket's axis.

When the pin is inserted into this sleeve, the wires stretch around it, providing a high number of linear contact paths.

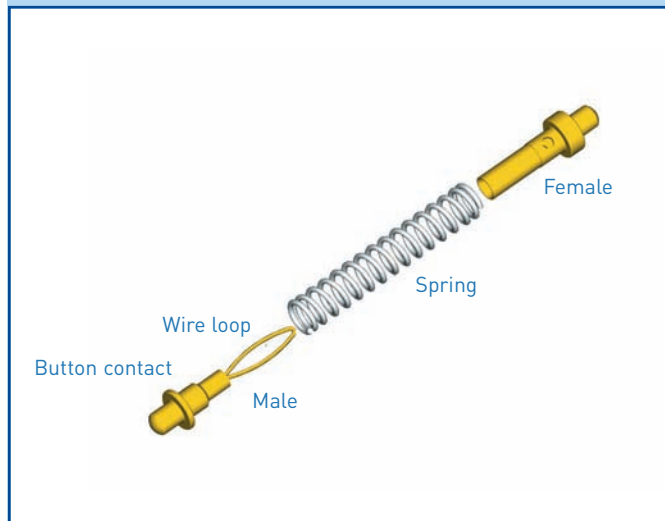
### Performance features are:

- Low insertion/extraction forces
- Shock and vibration proof
- High current and voltage ratings
- Low electrical contact resistance
- Long life and low rate of wear



## CUSTOM DESIGN

Hypertac's next innovative connector solution depends on your needs. With the Hypertac contact technology ensuring ultra-high reliability we can customise designs and solutions to fit the specific envelope that the application demands. Extended contact life, lower power consumption and unrivalled electrical performance are just a few of the benefits that we can offer for you.



## RFF CONTACT TECHNOLOGY

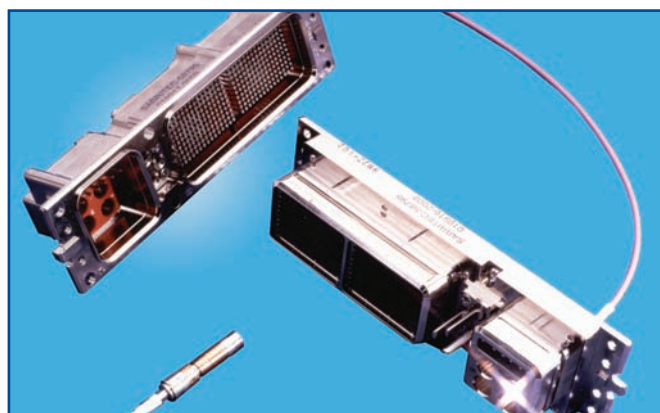
COMPACT PACKAGING SOLUTION FOR HIGH DENSITY APPLICATIONS

The original multipoint connection design, is based upon a sliding 2 loop wire pin, held within a passive socket to allow for a solderless compression contact, applicable to multi chip modules. The compression spring enables a mechanical deflection of 1mm.

This compensates for dimensional tolerances between the stacking pads located on the PCBs surface without performance loss and can handle signal frequencies of up to 5GHz.

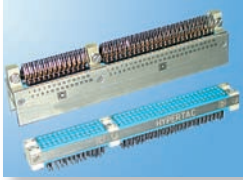
### Performance features are:

- Low sliding force
- Low contact resistance
- Buttons: no soldering
- Ideally suited to micro-currents
- High vibration capabilities



# OUR PRODUCT RANGE

## BACKPLANE CONNECTORS



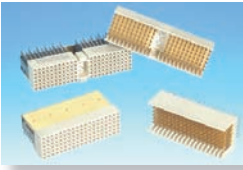
**MHD**

- 4 rows, high density PCB, mixed signal, power and coaxial contacts
- 1.905 x 1.65mm square grid, up to 400 signal contacts
- Ruggedised metal shell with shrouded plug or pin protection
- Space approved to ESCC3401/065



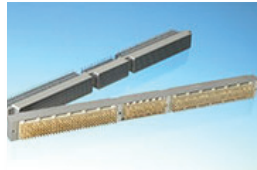
**CSD**

- 4 rows, high density PCB, signal contacts
- 1.905mm offset grid, 42 to 316 contacts
- Dip solder and SMT soldering contact termination types
- Space approved to TPR 02013



**2mm**

- Ruggedised connector meets standard cPCI footprint
- High-temp LCP insulator meets NASA outgassing requirements
- Interchangeable with board layout on COTS systems specified in PICMG 2.0
- NASA Qualified



**VME64x**

- Developed for ruggedised high-speed signal applications tested up to 3.125 Gb/s
- Compatible with VME64x form factor (IEEE-1101.2-1992) and complies with ANSI/VITA 1.7 high current standard for VME64x
- Backplane connector available in compliant termination and straight solder dip



## PCB CONNECTORS

**PC104+**



- Ruggedised connector complies with PC104 Embedded Consortium specifications
- Press-fit and solder terminations
- Stackthrough and non-stackthrough versions
- 2mm centerline, 4 x 30 contact grid (120 total positions)



**KMC**

- 3 rows, high density PCB, mixed signal, power and coaxial contacts
- 1.905mm between rows, 1.27mm between contacts, up to 162 contacts
- Non-outgassing glass filled thermoset insulator
- Space approved to ESCC3401/039



**KN**

- 2 and 3 rows, medium density PCB, signal
- 2.54mm between rows, 1.27mm between contacts, up to 120 contacts
- Straight dip, right angle solder, crimp, solder cup and wire wrap termination types
- Space approved to ESCC3401/016-017



**HyperStac - RX**

- Z-axis high density interconnect module
- 1.905x1.524mm pitch, 9 to 250 contacts, solderless
- 1mm mechanical deflection
- Space approved to ESCC3401/076



**D-Subminiature**

- Standard size with 20 contacts and high density size with 22 contacts
- Filtered and non-filtered
- Meets MIL-C-24308 requirements
- Meets requirements for outgassing, toxicity, flammability and environmental concerns



**Micro D**

- High density ultra-miniature, 1.27mm pitch
- 9 to 100 signal contacts, 0.3 mm pin DIA
- Interchangeable with other Micro-D contacts
- Space grade metal shell
- Conforms to ESCC3401-029/041/032 (EPPL-2 listed)

**RBA**



- Single row PCB, signal
- 2.54mm pitch, up to 27 ways
- Straight PCB and cable mounting terminations, gold or tin plated



**RD**

- High density, micro-miniature PCB, 1 to 4 rows
- 1.27mm pitch, up to 60 contacts, 0.3mm pin DIA
- SMT and THT termination types

**HPH**



- High density PCB, signal
- 3 to 6 rows, up to 303 contacts
- 1.905mm offset grid
- Different terminations and guides available

## GLOBAL SALES OFFICES

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