

HARWIN

**Markets &
Applications**

NEW SPACE



New Space



Thrust & Propulsion

- Battery monitoring & control
- Photovoltaics
- Thrusters

Payloads & Sensors

- Camera
- Scientific experiments
- Transponders

Guidance & Navigation

- On-board computer
- Global positioning
- Transceiver
- Attitude sensors

Launch Systems

- CubeSat deployment
- Crew capsules
- Re-usable rocket
- De-orbiters

New Space - Selection Guide

Datamate J-Tek, Datamate L-Tek

High-Reliability, 2mm pitch connectors for PCB and cable.

Double or single row fitted with either stainless steel jackscrews for durable strain relief against vibration, or locking latches for minimal board footprint. Ready-made cable assemblies.

CURRENT: 3A



VIBRATION: 10G



SHOCK: 100G



TEMPERATURE: -55°C TO +125°C

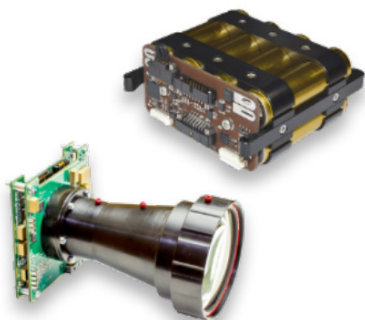


OPERATIONS: 500



Applications

- Electric Propulsion Thruster Module
- Multispectral Imaging Camera
- Integrated Attitude Control System
- Satellite Telemetry/Tracking/Command Radio
- S-Band, C-Band, CCSDS Transceivers
- Battery Pack Controller
- On-Board Computer



Gecko-SL, Gecko Latch

High-Reliability 1.25mm pitch double row, compact & lightweight.

Stainless steel mate-before-lock screw fixings or miniature latching for full vibration resistance. Board and cable variations, ideal for PCB stacks.

CURRENT: 2A



VIBRATION: 20G



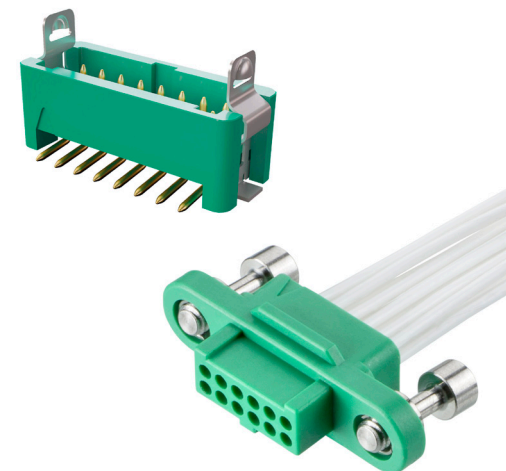
SHOCK: 100G



TEMPERATURE: -65°C TO +150°C

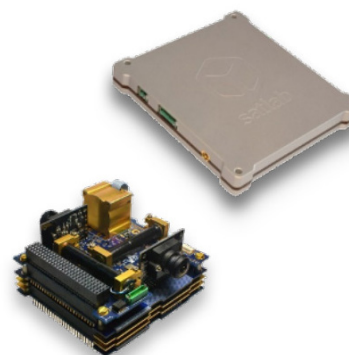


OPERATIONS: 1000



Applications

- Electro-Thermal Propulsion Module
- ADCS Module
- On-Board Computer
- Automatic Identification System (AIS) Receiver
- S-Band Transmitter
- Multi-Channel GNSS Receiver



New Space - Selection Guide

Datamate Mix-Tek

Hi-Rel 4mm pitch, power or coax, with additional signal options.

20A & 40A power contacts, 50Ω coax contacts. Ultimate flexibility, proven track record.

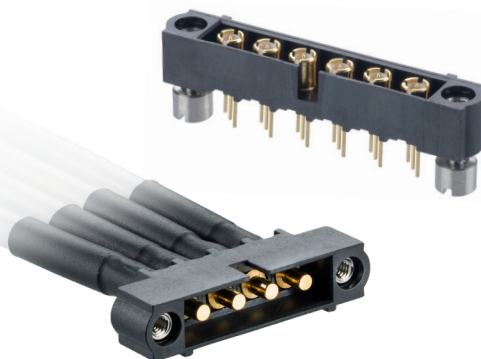
CURRENT: 40A

VIBRATION: 10G

SHOCK: 100G

TEMPERATURE: -55°C TO +125°C

OPERATIONS: 500



Kona

High-Reliability at 8.5mm pitch power with 3,000V voltage rating.

Ultimate power in a compact, individually shrouded housing with thumbscrews.

CURRENT: 60A

VIBRATION: 20G

SHOCK: 100G

TEMPERATURE: -65°C TO +150°C

OPERATIONS: 250



Gecko-MT

Hi-Rel 1.25mm pitch signal + 3mm pitch mixed technology.

The smallest, lightest, power and signal connector with robust screw-locks. Board and cable options.

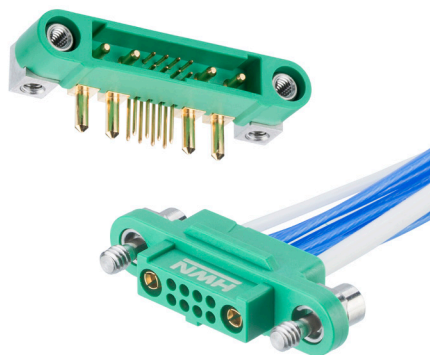
CURRENT: 10A

VIBRATION: 20G

SHOCK: 100G

TEMPERATURE: -65°C TO +150°C

OPERATIONS: 1000



M300

Hi-Rel 3mm pitch system capable of 10A per contact.

Compact power, durability and maximum resilience. Increased temperature resistance.

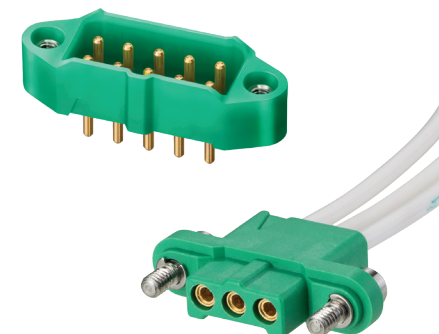
CURRENT: 10A

VIBRATION: 20G

SHOCK: 100G

TEMPERATURE: -65°C TO +175°C

OPERATIONS: 1000

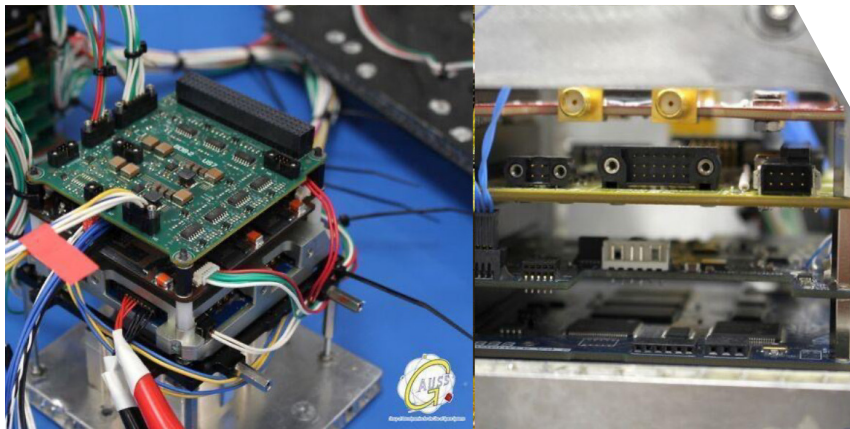


Space - Case Study

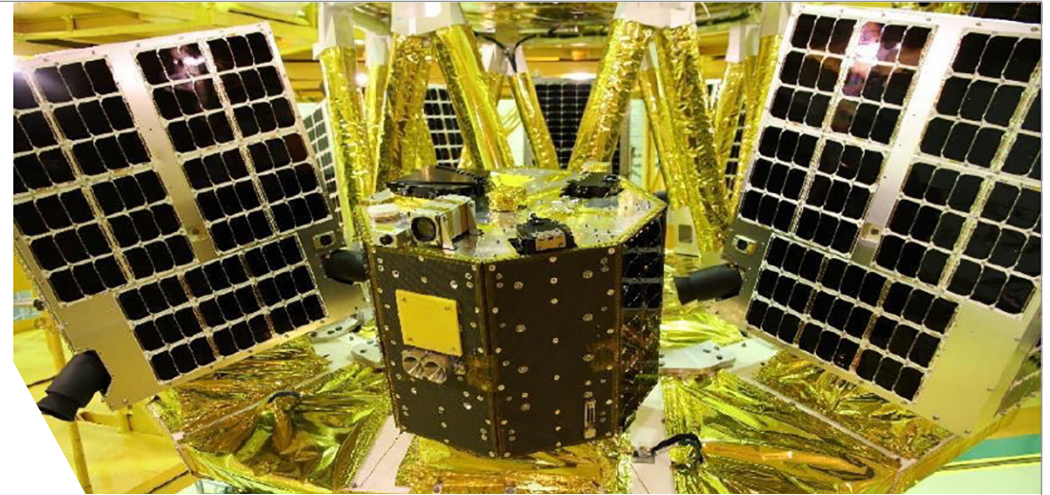
GAUSS Srl offers orbit launch services, and a leaner platform construction would provide space for greater payloads and more onboard experiments.

The company's UNISAT range of deployment platforms provide "ridesharing" for academia and small businesses to release their pico/nano-satellites into orbit. Every ounce costs to launch, so high-grade lightweight materials and hardware are selected.

To accelerate development time, their engineers use COTS (Commercial Off-The-Shelf) components when possible. With a 3 to 5 year operating window, ongoing reliability and resilience to vibration/shock at launch are also vital.



UNISAT-7 engineering model & flight electronics using Datamate connectors



THE PROBLEM...

- Compact cable-to-board connections, resilient under vibration and shock, operational at space temperatures and reliable long-term
- Lightweight with low outgassing and options for signal & power transmission, availability with short or no lead-times

THE SOLUTION... Datamate J-Tek & Datamate Mix-Tek

- Signal: 2mm pitch / 3A. Power: 4mm pitch / up to 40A
- 20G vibration, 100G shock resistant, -55°C to +125°C temperatures
- Low outgassing at levels acceptable to NASA & ESA
- Many connection options available from stock

"After considering many different possibilities, it was apparent to us that specifying Harwin Datamate connectors solved a lot of our problems. These components provided us with assured connectivity, & would be able to cope with the uncompromising conditions involved. As a result, they feature in nearly all of the UNISAT-7 subsystems."

Riccardo Di Roberto, Engineering Lead, GAUSS

Connect with Confidence

Harwin makes superior products of the highest quality for demanding applications.

This is no idle boast. Our UK headquarters carries EN 9100 / AS9100D certification. We focus on quality, safety and technology. We continually improve our quality systems and invest in advanced manufacturing & automation.

Helping you solve your connection challenges is our passion. We back this up with amazing global support and agile response to your needs.

We bring you innovative, dependable connector technologies; and we deliver them reliably, quickly and cost-effectively.

- World-leading specialist in reliable and high-performance interconnects, EMC shielding and PCB hardware.
- Helping you to realize competitive advantage by solving demanding connectivity challenges.
- Proven supplier of mission-critical and long-term dependable connectivity solutions.

Resources

Expert advice, training videos, test reports, instructions, datasheets, 3D CAD models...

Our website holds a wide array of design and training resources to guide you to the connector or PCB hardware product you need.

- Check our extensive online resources harwin.com/resources/

We're happy to help you find the right solution or data for your project - our team of Experts are ready via email, telephone or video call.



Meet one of our High-Reliability Experts

Giorgio is an expert in finding the right high-reliability solutions for businesses in Avionics, Defense and Space applications. He now heads the EMEA team working directly with customers.

His wide knowledge of Harwin's products and cabling capabilities enables him to answer your connection questions.

Giorgio Potenza

Head of Business Development - EMEA

Book a Technical Consultation



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