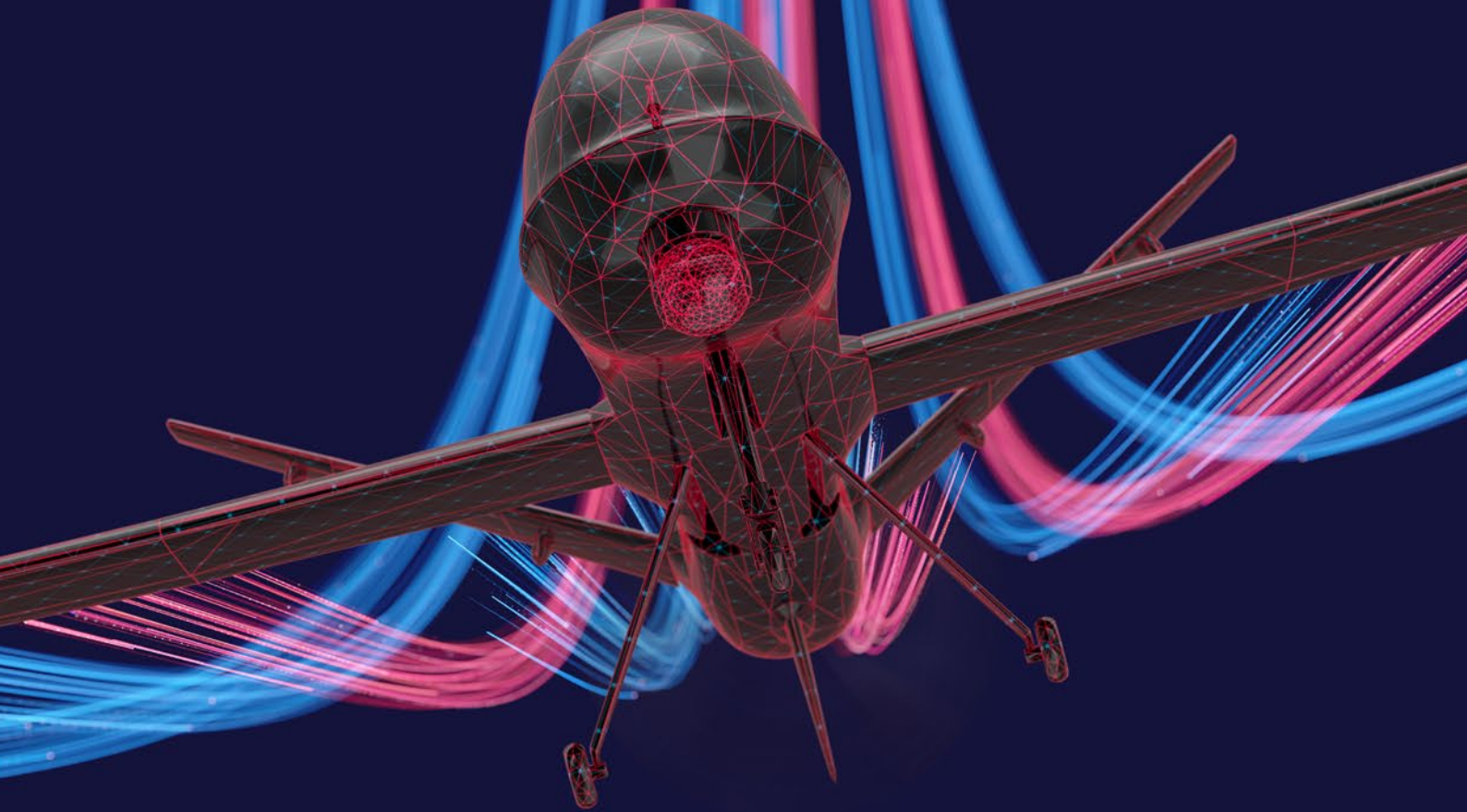


**HARWIN**

CONNECT TECHNOLOGY  
WITH CONFIDENCE



UNCREWED VEHICLES

FROM GROUND TO AIR  
**DEPENDABLE INTERCONNECT  
TECHNOLOGY**

[WWW.HARWIN.COM](http://WWW.HARWIN.COM)

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## UNCREWED VEHICLES

# RELIABILITY WITHOUT COMPROMISE

### UNCOMPROMISING CONNECTIVITY FOR UNCREWED SYSTEMS.

Uncrewed systems operate where failure is not an option. Harwin Connectors are built to withstand high-G manoeuvres in flight, sustained vibration in ground vehicles, and pressure-intensive subsea deployment. That is why leading global UAV specify Harwin for their Safety Critical Systems. Our high-reliability interconnects are engineered to meet the rigorous SWaP-C requirements — where size, weight, power and cost efficiencies must be achieved without sacrificing performance.

From the Gecko series, offering up to 75% weight savings over traditional Micro-D connectors, to the high-power Kona range designed for demanding power architectures. All products are backed by EN9100D / AS9100D certification and a relentless focus on quality.

### BUILT FOR THE MISSION. PROVEN IN THE FIELD.

Harwin components deliver outstanding performance across the full Uncrewed ecosystem — from flight control systems and high-current battery management, to ruggedised ground vehicle electronics, subsea sensor payloads, and remote control stations. We continually invest in automation and precision engineering to ensure the reliable, fast delivery of innovative connector technologies that you can count on.

# HRI RANGE



The Harwin HRI range comprises high-reliability (Hi-Rel) interconnect solutions optimised for the UAV sector, where uncompromising performance and absolute dependability are essential. Designed

for autonomous systems, tactical defense, and mission-critical avionics, the HRI range delivers proven durability and innovation in every connection.

Whether operating at high altitudes, in autonomous flight, or on the front line, Harwin HRI connectors keep vital systems connected when it matters most.

## WHY ENGINEERS TRUST HARWIN

- Proven supplier to the global UAV industries
- Lightweight, high-reliability interconnects with ultra-compact footprints
- Certified to EN9100D / AS9100D
- Resilient under extreme temperatures, high-G shock and vibration
- Backed by exceptional global support and expert guidance

### TOOLS TO GET YOU THERE

We support engineers at every stage, from concept to deployment, with a full suite of technical resources: Expert advice / Training videos / Test reports and certifications / Assembly instructions / Datasheets and 3D CAD models.

**Explore them all at: [harwin.com/resources/product-datasheets](https://www.harwin.com/resources/product-datasheets)**

Whether you're designing for high-altitude endurance or the toughest tactical environments on Earth, Harwin delivers dependable, high-performance connectivity solutions that you can count on.

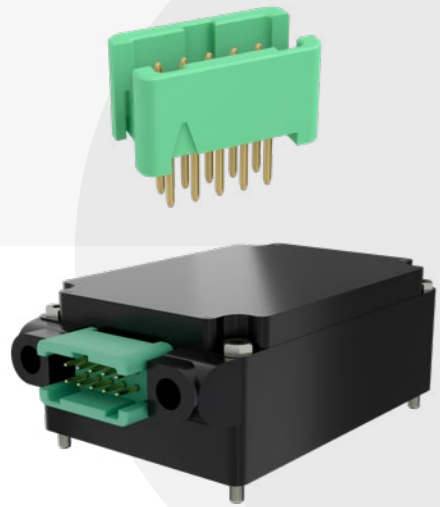
01

**IMU'S (INERTIAL MEASUREMENT UNIT)**

**PRODUCTS: GECKO LATCH**

Accurate motion and orientation data depends on stable, noise-free connections. Harwin's Gecko Latch connectors provide secure signal integrity for inertial measurement units operating under constant vibration, acceleration, and rapid directional change in drone and UAS platforms.

- Gecko Latch delivers positive retention in high-vibration environments
- Compact footprint suits dense sensor and control assemblies
- Reliable signal performance for precision navigation data



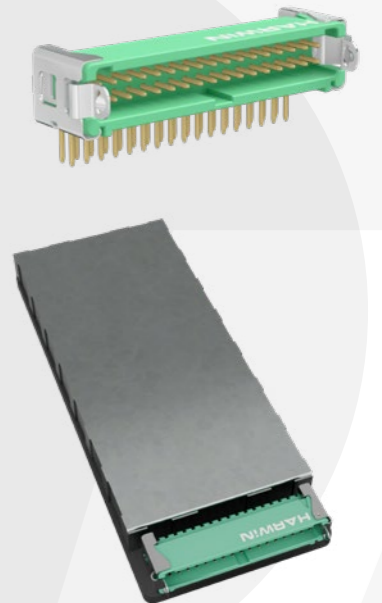
02

**FLIGHT CONTROLLERS**

**PRODUCTS: GECKO LATCH**

Flight control systems demand compact, secure connections that withstand vibration, shock, and rapid manoeuvres. Harwin's Gecko Latch connectors deliver reliable signal integrity and positive retention for autopilot electronics in small drones and UAS platforms.

- Gecko Latch ensures secure mating under continuous vibration
- Compact, lightweight design supports space-constrained avionics
- Proven electrical stability for critical flight control functions



03

**POWER AND BATTERY MANAGEMENT**

**PRODUCTS: DATAMATE POWER**

Efficient power distribution is critical to endurance and system reliability. Harwin's Datamate Power connectors deliver high-current performance in compact form factors, supporting battery management and power control systems in demanding uncrewed aerial applications.

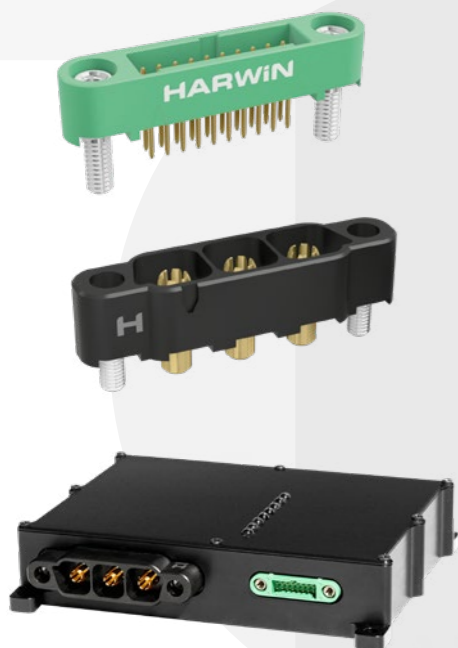
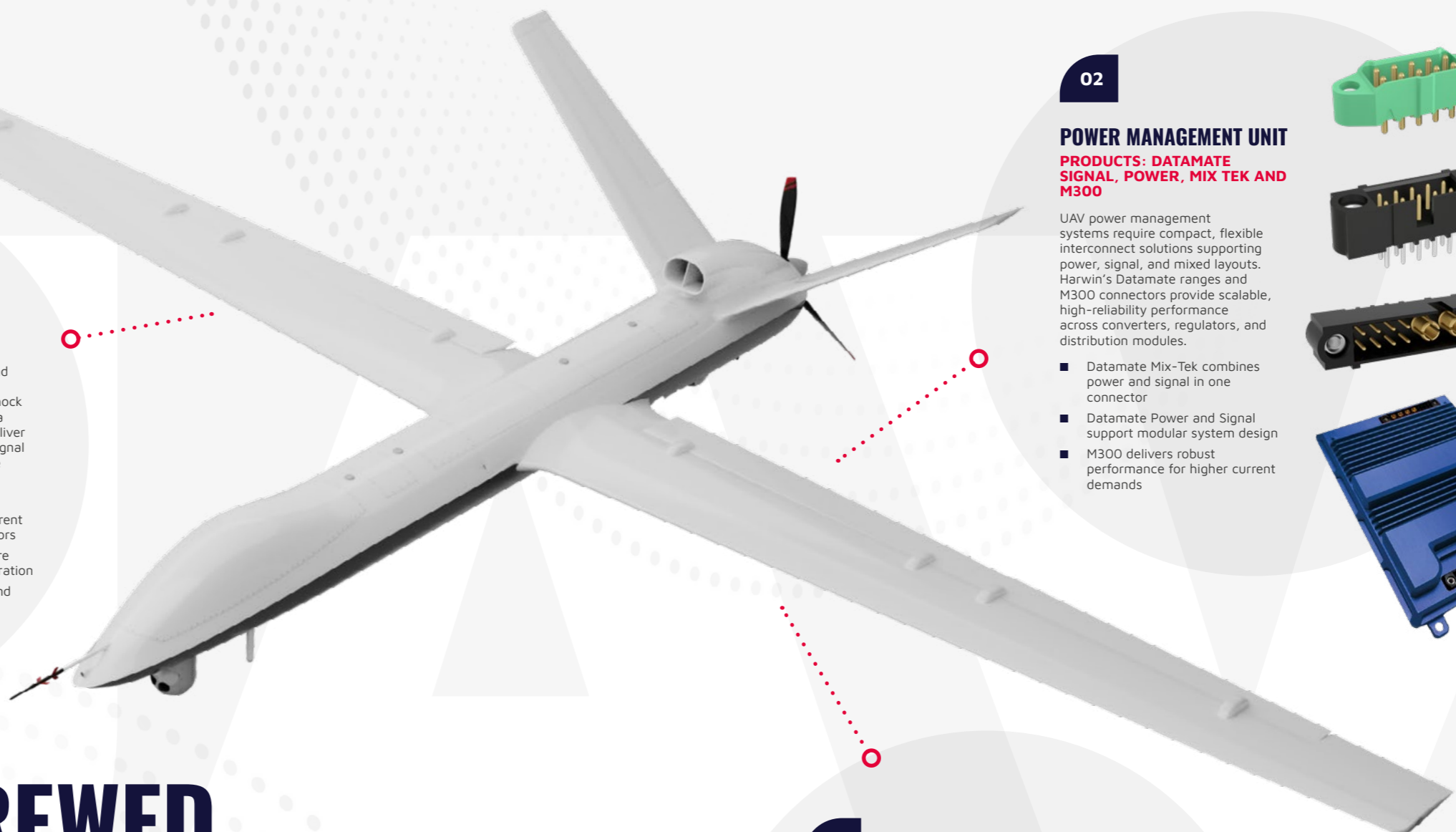
- Up to 40A per contact for high-power drone systems
- Compact design reduces weight and maximises usable space
- Proven reliability under thermal and mechanical stress



APPLICATION

# SMALL DRONES & UAS

Compact Uncrewed aerial systems demand high performance from every gram and every connection. From commercial drones to tactical ISR platforms, designers need interconnect solutions that maximise space without compromising strength. Harwin delivers lightweight, high-reliability connectors engineered to withstand vibration, shock and repeated mating — supporting flight control, sensors, power distribution and onboard data systems.



01

**ENGINE STARTER**

**PRODUCTS: KONA AND GECKO-SL**

Engine start systems demand high-current capability and secure connections under shock and vibration. Harwin's Kona and Gecko SL connectors deliver reliable power and control signal performance for UAV engine starting in harsh operational environments.

- Kona supports high-current delivery for starter motors
- Gecko SL provides secure signal control under vibration
- Robust designs withstand repeated start cycles

02

**POWER MANAGEMENT UNIT**

**PRODUCTS: DATAMATE SIGNAL, POWER, MIX TEK AND M300**

UAV power management systems require compact, flexible interconnect solutions supporting power, signal, and mixed layouts. Harwin's Datamate ranges and M300 connectors provide scalable, high-reliability performance across converters, regulators, and distribution modules.

- Datamate Mix-Tek combines power and signal in one connector
- Datamate Power and Signal support modular system design
- M300 delivers robust performance for higher current demands



03

**MAGNETOMETER**

**PRODUCTS: GECKO-SL**

Accurate magnetic field sensing depends on stable, low-noise electrical connections. Harwin's Gecko SL connectors provide secure, lightweight interconnect solutions for magnetometers operating in vibration-prone UAV environments.

- Gecko SL ensures reliable mating under dynamic motion
- Compact format minimises sensor mass and footprint
- Stable signal performance for precise navigation inputs



APPLICATION

# UAVs (UNCREWED AERIAL VEHICLES)

High-altitude, long-endurance UAVs rely on absolute system integrity. These complex platforms integrate advanced avionics, surveillance payloads and secure communications that must perform in demanding environments. Harwin connectors are proven in aerospace and defense applications, delivering dependable power and signal transmission across flight-critical and mission-critical architectures.

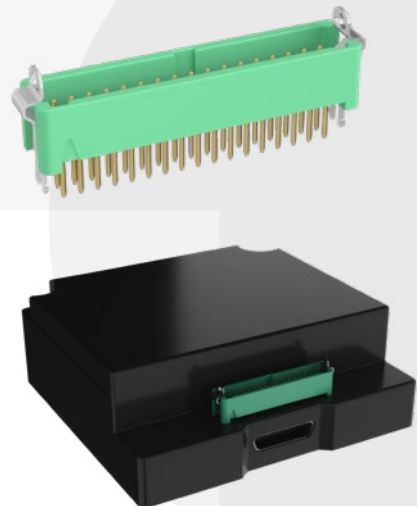
01

**SOFTWARE DEFINED RADIO**

**PRODUCTS: GECKO LATCH**

Reliable communications in dynamic ground environments depend on stable, vibration-resistant connections. Harwin's Gecko Latch connectors provide secure signal integrity for software defined radios operating in UGVs exposed to shock, dust, and continuous movement.

- Gecko Latch ensures positive retention under vibration
- Compact, lightweight design suits dense radio modules
- Stable signal performance for mission-critical communications



02

**TRANSCEIVERS**

**PRODUCTS: DATAMATE J-TEK**

UGV transceivers require dependable signal pathways to maintain communication and data links in harsh operating conditions. Harwin's Datamate J-Tek connectors deliver robust electrical performance and secure mating for high-reliability transceiver systems.

- Datamate J-Tek offers high-density signal routing
- Proven resistance to vibration and mechanical stress
- Reliable connectivity for continuous data transmission



03

**POWER AMPLIFIER**

**PRODUCTS: DATAMATE J-TEK**

Power amplifier modules demand connectors that maintain electrical stability under load and thermal stress. Harwin's Datamate J-Tek connectors provide reliable performance for high-speed, high-power amplification systems used in UGV communication architectures.

- Datamate J-Tek supports stable performance under current load
- Compact form factor enables dense electronic packaging
- Proven durability in rugged ground vehicle environments



APPLICATION

# UGVs (UNCREWED GROUND VEHICLES)

Uncrewed ground vehicles operate where conditions are unpredictable and unforgiving. Continuous vibration, impact and environmental exposure place extreme demands on onboard electronics. Harwin interconnect solutions are designed for rugged deployment, maintaining electrical integrity across drive systems, sensor arrays, communications and control units in the harshest terrains.

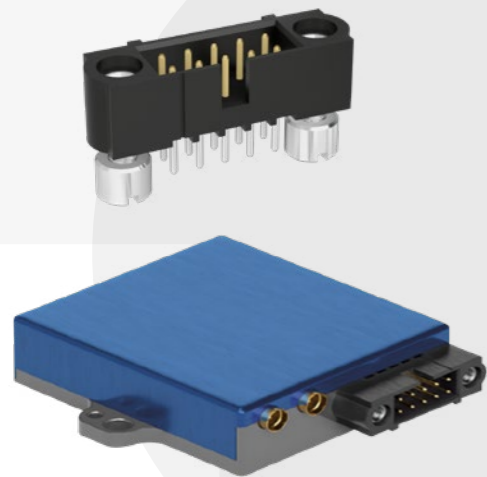
01

**INERTIAL MEASUREMENT UNIT**

**PRODUCTS: DATAMATE J-TEK**

Accurate positioning and motion sensing are critical for autonomous underwater navigation. Harwin's Datamate J-Tek connectors deliver reliable signal integrity for GNSS-enabled IMUs operating in compact, vibration-prone AUV electronic systems.

- Datamate J-Tek supports high-density, high-speed signal routing
- Proven resistance to vibration and mechanical stress
- Reliable performance for precision navigation data processing



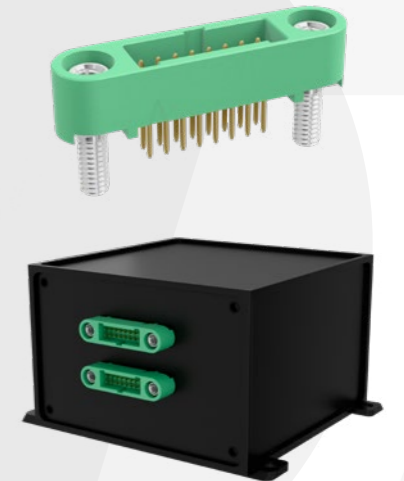
02

**NAVIGATION CONTROLS**

**PRODUCTS: GECKO**

Navigation control systems require secure, dependable interconnects to maintain stability and responsiveness. Harwin's Gecko connectors provide compact, rugged solutions for control electronics operating in dynamic AUV environments.

- Gecko ensures secure mating under vibration and movement
- Compact design supports space-constrained control modules
- Reliable contact integrity for continuous autonomous operation



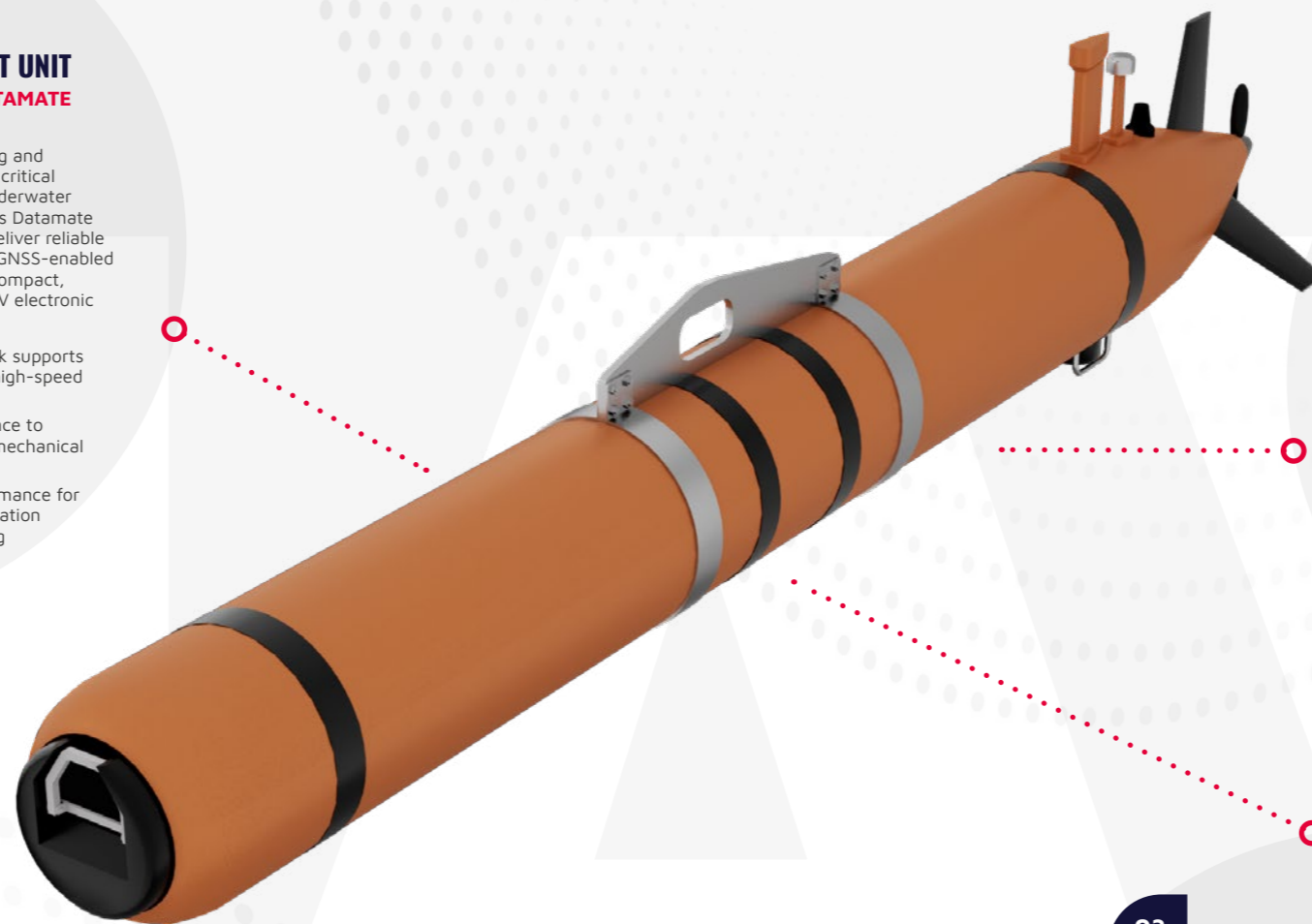
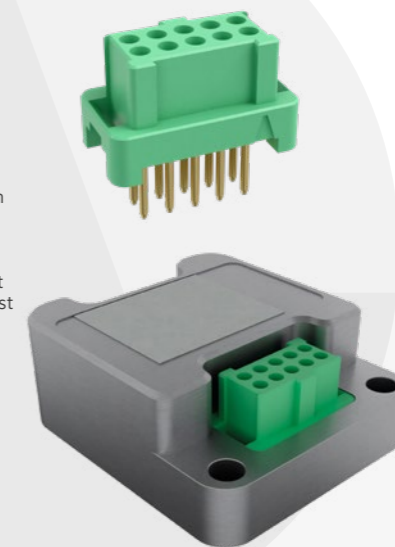
03

**AHRS (ATTITUDE AND HEADING REFERENCE SYSTEM)**

**PRODUCTS: GECKO-LATCH**

Remote Operating Vehicles and Instrumented Buoys benefit from robust performance, delivering underwater orientation and data collection. Application uses 10 Way Gecko-Latch for the highest accuracy in the smallest and most economical package.

- Gecko-Latch ensures most compact layout connector
- Weight saving connector design
- Gecko latch ensures quick, positive engagement and retention



APPLICATION

# AUVs (AUTONOMOUS UNDERWATER VEHICLES)

Autonomous underwater vehicles undertake extended missions in sealed, high-pressure environments where reliability cannot be recovered once deployed. Internal electronic systems must perform flawlessly. Harwin connectors provide compact, secure interconnect solutions that maintain stable power and signal pathways for navigation, sensing, propulsion and onboard processing.

01

**VEHICLE-MOUNTED CONTROL STATION**

**PRODUCTS: DATAMATE J-TEK**

Vehicle mounted control stations provide mobile mission command in dynamic environments, integrating communications, computing and power systems that demand secure, high-reliability interconnect performance.

- Datamate J-Tek - double row for secure Jackscrew connection
- Crimp contacts covering both signal and low power requirements
- Off The Shelf Connector Kits with Housings and Contacts Included



APPLICATION

**CONTROLS**

From portable ground stations to handheld operator units, control systems are the critical link between human and platform. These systems demand robust, compact connectivity capable of handling power and high-speed data in field conditions. Harwin supports dependable performance in mobile, deployable and mission-ready control electronics.

02

**HANDHELD GROUND CONTROL UNIT**

**PRODUCTS: DATAMATE**

Handheld ground control units deliver real-time platform command in compact, rugged formats, requiring lightweight, durable connectors that support power, signal integrity and repeated field use.

- Using Datamate Mix-Tek 4mm Co-Ax Connectors
- Secure signal integrity under vibration, shock and temperature
- Off-the-Shelf Connectors



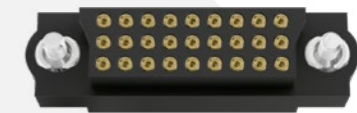
03

**PORTABLE GROUND CONTROL STATION**

**PRODUCTS: DATAMATE**

Portable ground control stations enable rapid deployment and flexible mission management, combining high-speed data, power distribution and operator interfaces within transportable, field-ready systems.

- Datamate J-Tek M83-Triple Row connector kits used for dense cable signal applications
- Rugged connector for military grade applications
- Wide operating temperature range

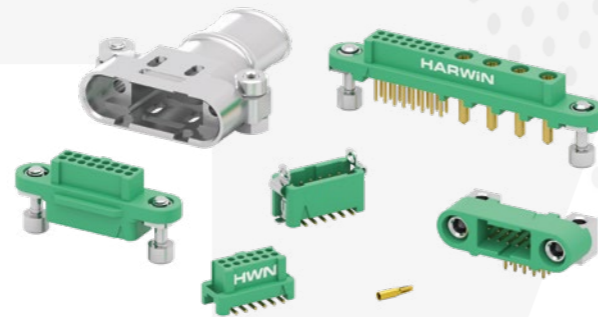


## TECHNICAL SPECIFICATIONS



### MICRO-MINIATURE CONNECTORS FOR SWAP-C OPTIMISATION

The Gecko series comprises micro-miniature, low-profile interconnects specifically designed for Space, Weight, and Power (SWaP) optimisation. These dual-row connectors are the ideal solution where PCB real estate is at a premium and every gram of weight affects flight endurance. The range includes standard latching for rapid assembly, Screw-Lok (Gecko-SL) for maximum security against high-G vibration, and Gecko-MT mixed-technology variants, integrating high-power contacts into a compact housing to streamline UAV payload and propulsion systems.



Scan to view the full range and for further information:

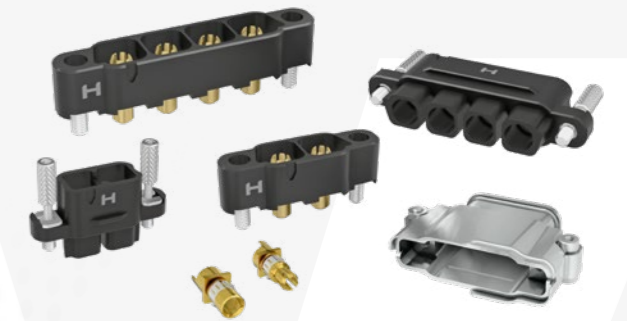


SPECIFICATIONS	
Pitch	<b>1.25mm</b>
Current Rating	<b>2A (signal contacts)</b>
Maximum Current (MT)	<b>10A (power contacts)</b>
Temperature Range	<b>-65°C to +150°C</b>
Vibration/Shock	<b>Tested to 20G vibration and 100G shock</b>
Durability	<b>1,000 mating cycles</b>
Contact Design	<b>Six-finger Beryllium Copper</b>
Housing Material	<b>PA4T</b>
Fixing Options	<b>Jackscrews, latches, quick-mating bayonet</b>
Outgassing	<b>TML = 0.68%, CVCM = 0.01%</b>



### HIGH RELIABILITY & HIGH CURRENT MAXIMUM POWER CONNECTORS

Kona is Harwin's maximum power, high-reliability connector range, built on an 8.50mm pitch. Available in 2, 3, and 4-contact options for vertical cable-to-board or cable-to-cable configurations, the series is engineered specifically for high-density power transmission. The Kona range is the ideal choice for Safety Critical Systems within heavy-lift UAVs, providing robust, high-current connectivity for battery management, motor drive systems, and power distribution units. Designed to handle up to 60A per contact, it ensures maximum power delivery and mission endurance in the most demanding flight environments.



Scan to view the full range and for further information:



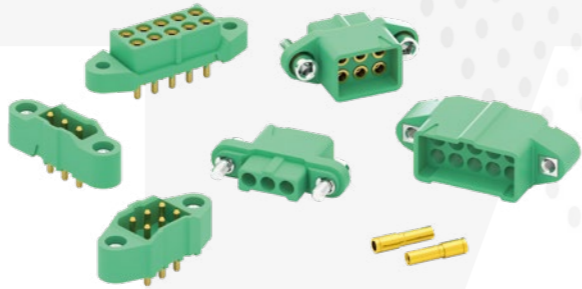
SPECIFICATIONS	
Pitch	<b>8.50mm</b>
Current Rating	<b>Up to 60A per contact</b>
Working Voltage	<b>1,500V DC or AC peak</b>
Temperature Range	<b>-65°C to +150°C</b>
Vibration/Shock	<b>Tested to 20G vibration and 100G shock</b>
Power Density	<b>Up to 121A/inch</b>
Contact Design	<b>Six-finger Beryllium Copper</b>
Housing Material	<b>PPS</b>
Outgassing	<b>TML = 0.05%, CVCM = 0.00%</b>

# TECHNICAL SPECIFICATIONS

## M300

### COMPACT POWER SOLUTION, RESISTANT TO VIBRATION & SHOCK

The M300 series is a range of compact, durable power connectors designed for harsh environments and features a 3.00mm pitch. The series has been engineered to provide high-power connectivity within a smaller footprint, with connectors available in single and double-row configurations for up to 10 contacts. Suited for both wire-to-wire and wire-to-board applications, the M300 range is the definitive choice for demanding UAV defense settings. It provides the rugged reliability needed for internal power distribution and actuation systems where space is restricted but performance is non-negotiable.



Scan to view the full range and for further information:

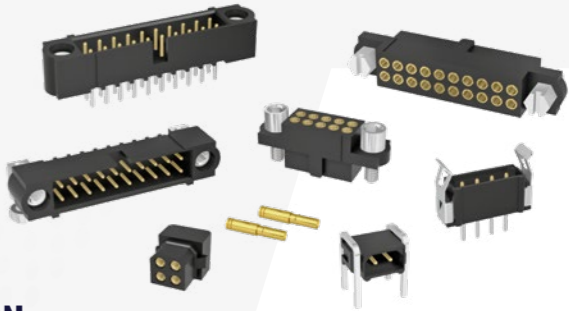


SPECIFICATIONS	
Pitch	<b>3.00mm</b>
Current Rating	<b>Up to 10A per contact</b>
Temperature Range	<b>-65°C to +175°C</b>
Vibration/Shock	<b>Tested to 10G vibration and 100G shock</b>
Durability	<b>1,000 mating cycles</b>
Housing Material	<b>PA4T</b>
Outgassing	<b>TML = 0.68%, CVCM = 0.01%</b>
Fixing Options	<b>Fitted stainless steel jackscrews</b>

## DATAMATE®

### HIGH RELIABILITY, MINIATURE CONNECTORS FOR SWAP-C OPTIMISATION

Datamate is a field-proven, highly reliable, and flexible miniature connector system built on a 2.00mm pitch. It is available in single, double, and triple-row configurations to meet diverse interconnect needs, offering maximum security with fixing options including stainless steel jackscrews (J-Tek), latches (L-Tek), and 101Lok fast-mating hardware for rapid field maintenance. The series includes Mix-Tek options for combined signal, power, and coax-optimising UAV cable management by consolidating data and video feeds into a single interface. Datamate is compliant with British and European defense sector standards BS 9525-F0033 / CECC 75101-008, while significantly exceeding the performance requirements of US MIL-DTL-55302.

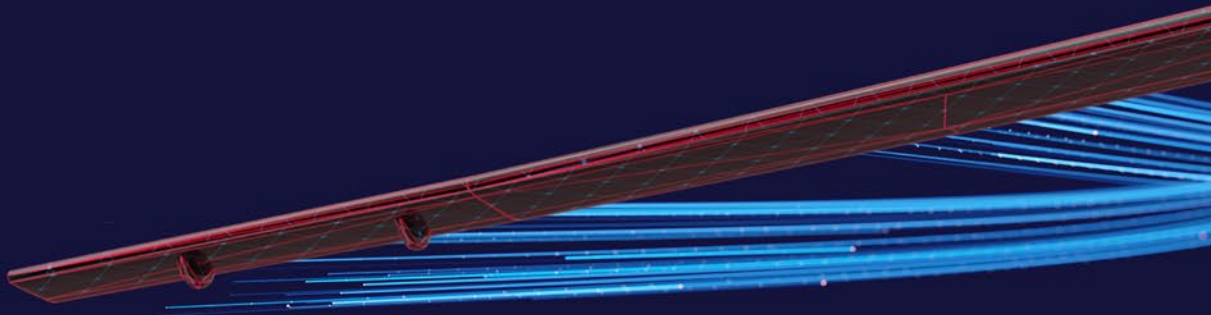


Scan to view the full range and for further information:



SPECIFICATIONS	
Pitch	<b>2.00mm (signal), 4.00mm (power/coax)</b>
Current Rating	<b>3A (standard signal)</b>
Maximum Current (Mix-Tek)	<b>20A or 40A (power contacts)</b>
Temperature Range	<b>-55°C to +125°C</b>
Vibration/Shock	<b>Tested to 20G vibration and 100G shock</b>
Durability	<b>500 mating cycles (1,000 for T-contact variant)</b>
Contact Design	<b>Four-finger Beryllium Copper</b>
Housing Material	<b>PPS or PBT</b>
Outgassing	<b>PPS: TML = 0.05%, CVCM = 0.00% PA6T: TML = 0.33%, CVCM = 0.07%</b>

# HARWIN



**HARWIN**

FOR FURTHER INFORMATION PLEASE CONTACT:  
[support@harwin.com](mailto:support@harwin.com)

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