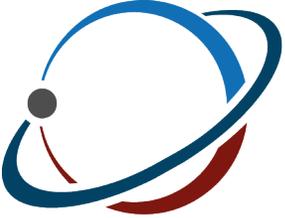




# High-Reliability Solutions for EUROPE



# HI-REL SOLUTIONS

by STELIAU TECHNOLOGY ●●●●

STELIAU  
TECHNOLOGY ●●●●  
Space & Hi-Rel Business Unit

+



**MSA**  
*components*  
Reliable. When It Matters.  
A STELIAU TECHNOLOGY COMPANY ●●●●

# STELIAU Space & Hi-Rel B.U. Team



**Ferdinando Mariani**  
HRS B.U. Director



**Fabio Pagliani**  
Account Manager  
Italy



**Alejandro Solano**  
Account Manager  
Spain & Portugal



**Jens Hagelund**  
Account Manager  
UK, Nordics  
& Eastern Europe



**Fabio Asti**  
BDM Microelectronics  
& Power Semiconductors  
Europe



**Michele Di Stefano**  
Account Manager  
Italy



**Benoit Hareng**  
Account Manager  
France, Benelux, Greece



**Komal Vilkar**  
Account Manager  
Germany, Austria  
& Switzerland



**Giuseppe Rossi**  
BDM RF, MW  
& Subsystems Europe



**Giovanna Morlacchi**  
Account Manager  
Italy North



**Stefania Papagni**  
Customer & Supplier  
Service Europe



**Linda Mariani**  
Customer Service  
Europe



# MSA Components Team



**Ferdinando Mariani**  
Managing Director  
MSA Components GmbH



**Jürgen Rust**  
Account Manager



**Christoph Middel**  
Account Manager



**Markus Schulte**  
BDM Interconnect &  
Passive Components



**Fabio Asti**  
BDM Microelectronics  
& Power Semiconductors  
Europe



**Katharina Schulte**  
Operations Manager



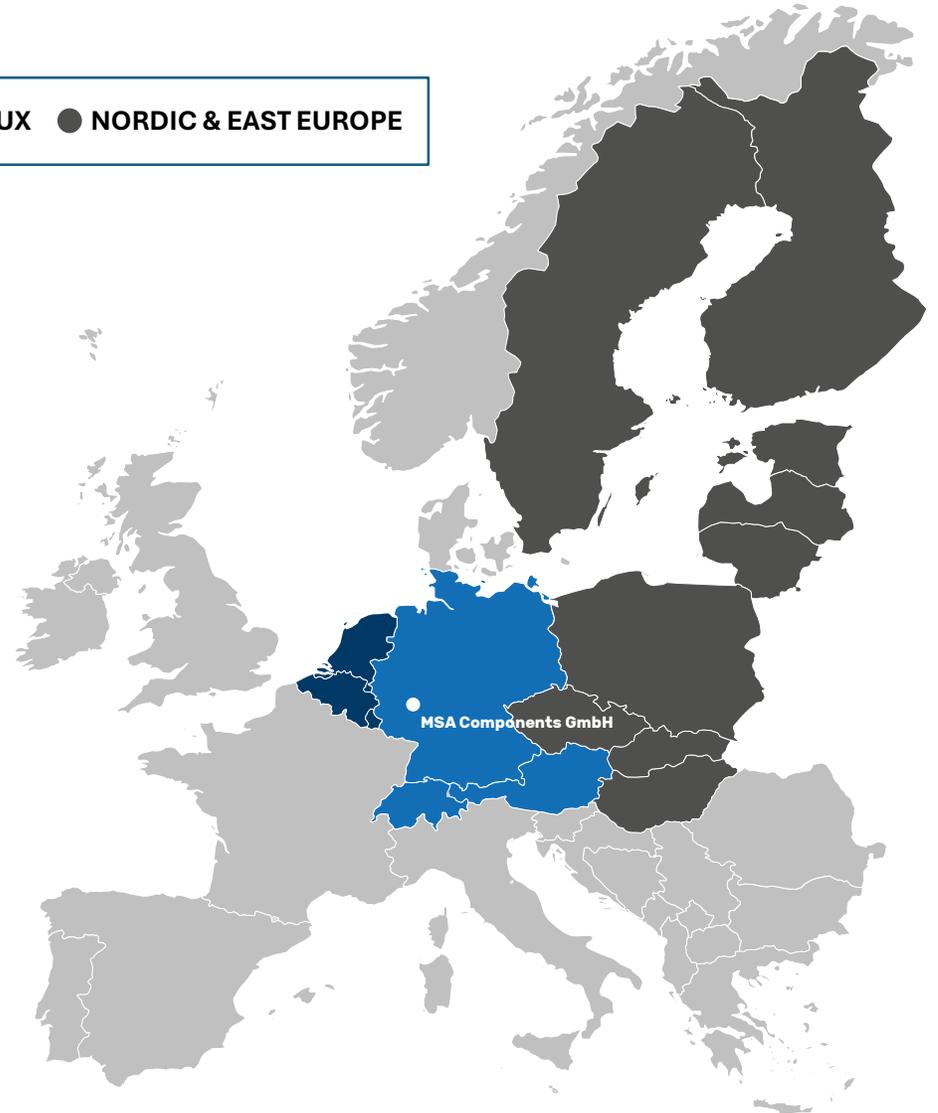
**Michael Schulte**  
Strategic Advisor



**Uta Richard-Schulte**  
Office Manager



**Matthias Weber**  
Customer & Supplier  
Service



# Highly Specialized Hi-Rel-Team along Entire Supply Chain



**Ferdinando Mariani**  
 B.U. Director Hi-Rel Solutions by Steliau Technology  
 Managing Director MSA Components GmbH

## Account Manager



**Benoit Hareng**  
 France, Benelux  
 Greece



**Fabio Pagliani**  
 Italy



**Michele Di Stefano**  
 Italy



**Giovanna Morlacchi**  
 Italy



**Alejandro Solano**  
 Spain & Portugal



**Jens Hagelund**  
 UK, Nordic &  
 Eastern Europe



**Komal Vilkar**  
 DACH (STI Portfolio)



**Jürgen Rust**  
 DACH (MSA Portfolio)



**Christoph Middel**  
 DACH (MSA Portfolio)

## BDM STELIAU Hi-Rel Solutions and MSA/Strategic Advisor



**Michael Schulte**  
 Strategic Advisor



**Markus Schulte**  
 Interconnect &  
 Passive Components



**Giuseppe Rossi**  
 RF, MW,  
 Subsystems



**Fabio Asti**  
 Microelectronics &  
 Pw. Semiconductors



**Stefania Papagni**  
 Customer & Supplier  
 Service Europe



**Linda Mariani**  
 Customer Service  
 Europe



**Katharina Schulte**  
 Operations Manager

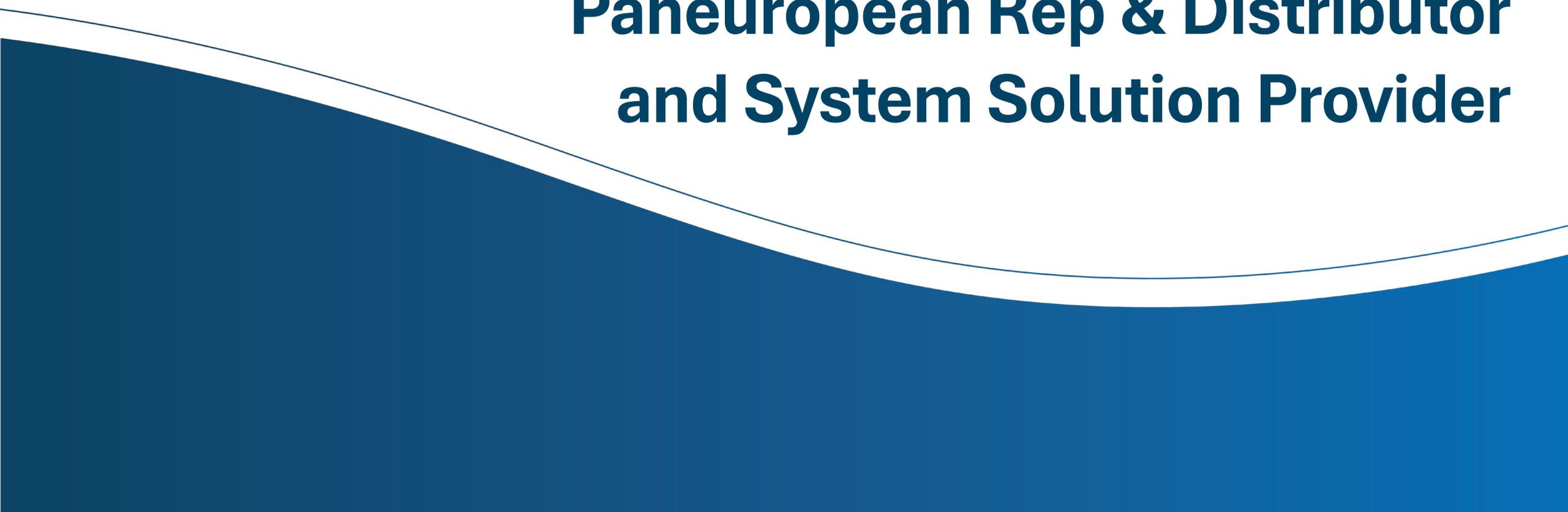


**Uta Richard-Schulte**  
 Office Manager



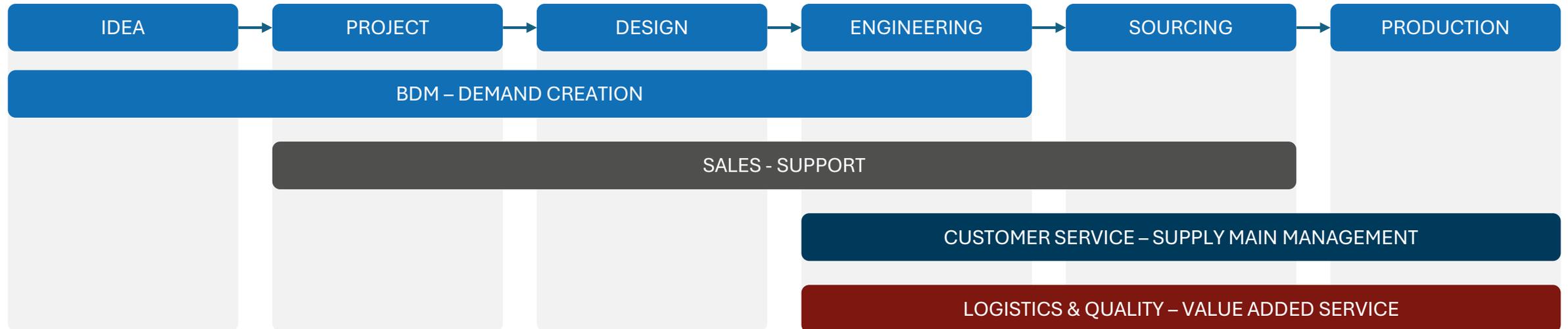
**Matthias Weber**  
 Customer & Supplier  
 Service MSA

## Backoffice



**Pan-European Rep & Distributor  
and System Solution Provider**

## Design – Supply Chain Process



- **Deep Involvement at the Earliest Point in Projects, Leads to More Efficient and Cost Effective Solutions Later On**
- **New Technology Introduction Combines with Logistical Expertise**
- **HRS Can Support Customers from the Far Left to the Far Right**

## Covered Markets and Customers



Space



Defense



Avionic



Military

**DIEHL**  
Defence

**LEONARDO**

**TESAT**

**ThalesAlenia**  
Space  
a Thales / Leonardo company

**DIEHL**  
Aviation

**KNDS**

**HENSOLDT**  
Detect and Protect.

**ALTER**

**LIEBHERR**

**indra**

**mynaric**

**TERMA<sup>®</sup>**

**ROHDE & SCHWARZ**  
Make ideas real



**beyond gravity**

**OHB**

**jenaoptronik**

**AIRBUS**



**DLR**  
Deutsches Zentrum  
für Luft- und Raumfahrt  
German Aerospace Center

**RHEINMETALL**  
DEFENCE

**SITAEI**

**MBDA**  
MISSILE SYSTEMS

# FRONTGRADE

## MARKETS



Space

## REPRESENTED AREA

- Europe

## PRODUCT LINES

- Microelectronics and Rad-Hard Components
- Embedded Boards
- Power Management
- RF & Microwave
- Motion Control Solutions
- Data Interface Solutions

## STANDARDS/CERTIFICATES



Accordance with AS9104A standards

## Payload and Bus

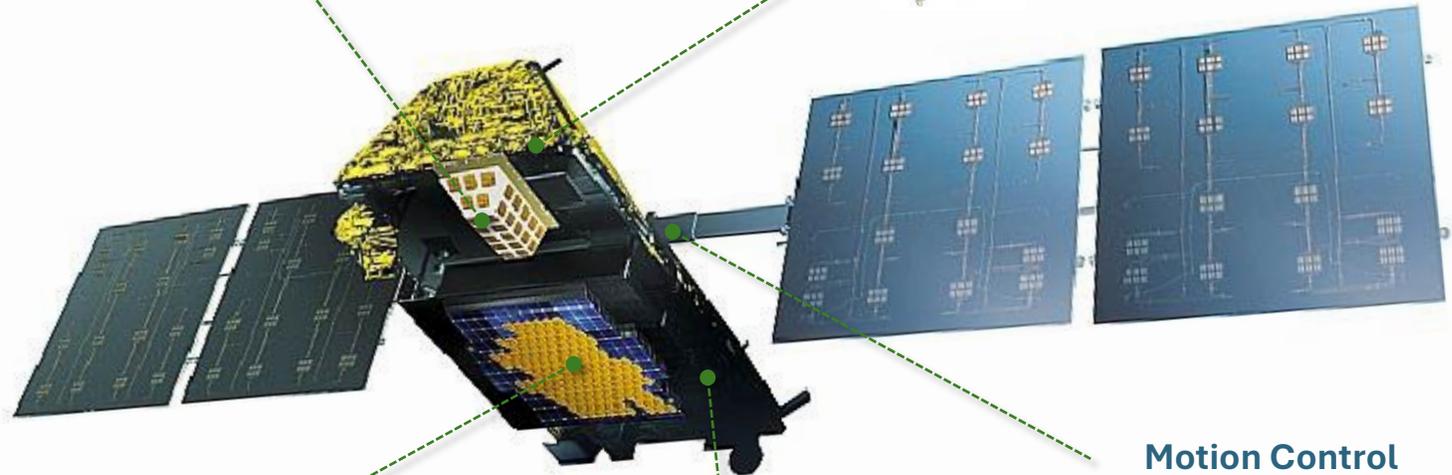
### Avionics & Mission Processing

Subsystems, Processors, ASICs, IP cores, Rad-Hard ICs, memory, interconnects



### Antenna Products

AESAs, pointing mechanism controllers, position sensors, gimbals



### RF

Waveguide, filters, rotary joints, SSPA, LNA, Switches



### Power

Power management & conversion, battery electronics



### Motion Control

Actuators, DC motors, electronic controls



# FRONTGRADE

## MARKETS



## REPRESENTED AREA

- Europe

## PRODUCT LINES

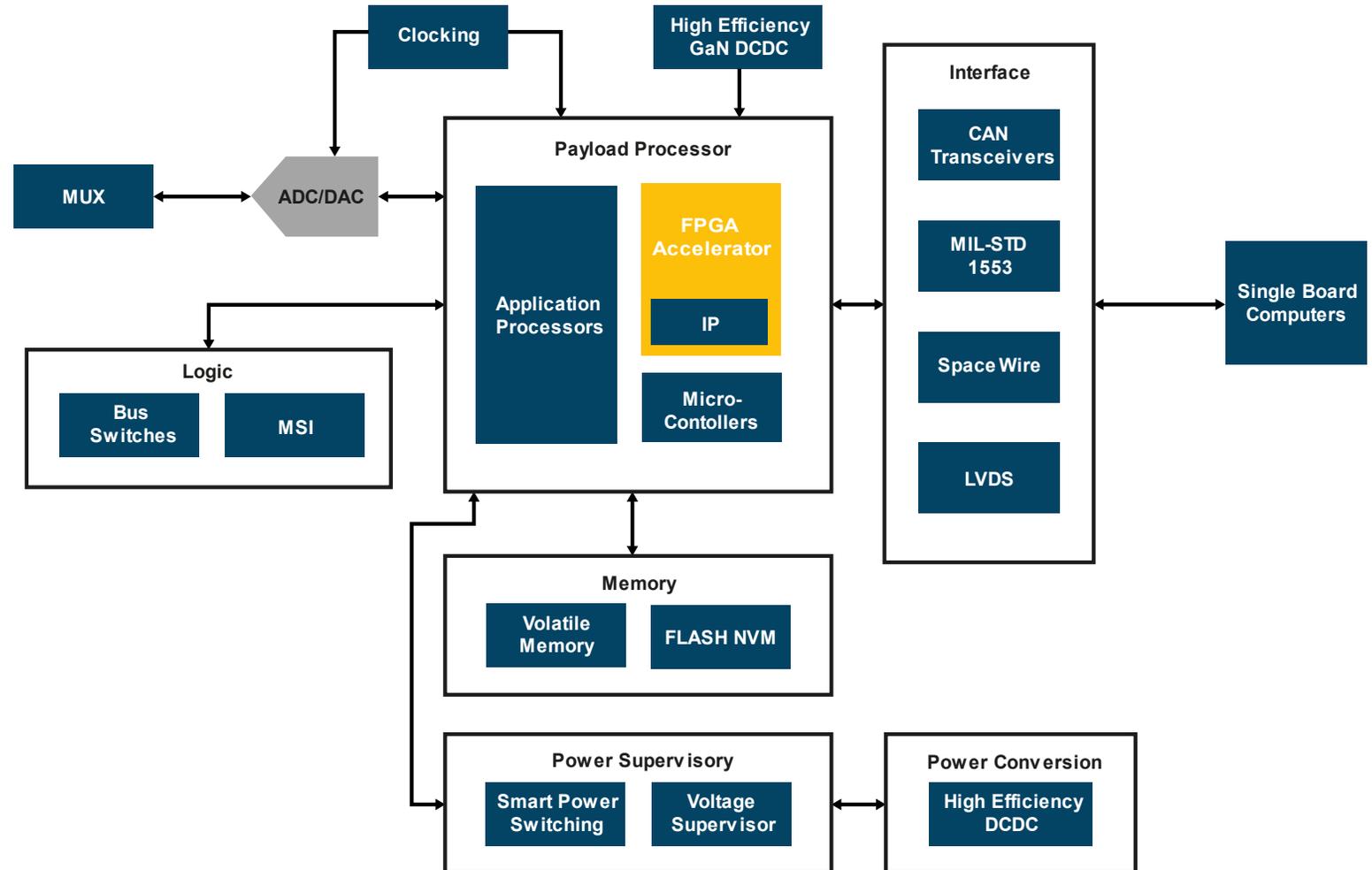
- Microelectronics and Rad-Hard Components
- Embedded Boards
- Power Management
- RF & Microwave
- Motion Control Solutions
- Data Interface Solutions

## STANDARDS/CERTIFICATES



Accordance with AS9104A standards

## Combined Capabilities Enabling Mission Solutions



# FRONTGRADE

## MARKETS



Space

## REPRESENTED AREA

- Europe

## PRODUCT LINES

- Microelectronics and Rad-Hard Components
- Embedded Boards
- Power Management
- RF & Microwave
- Motion Control Solutions
- Data Interface Solutions

## STANDARDS/CERTIFICATES

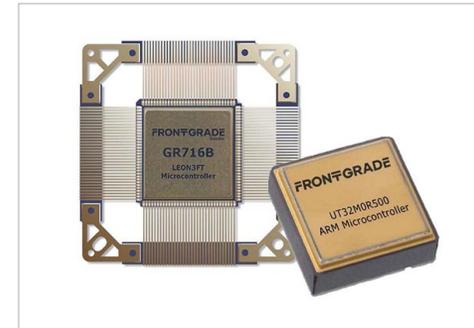


Accordance with AS9104A standards

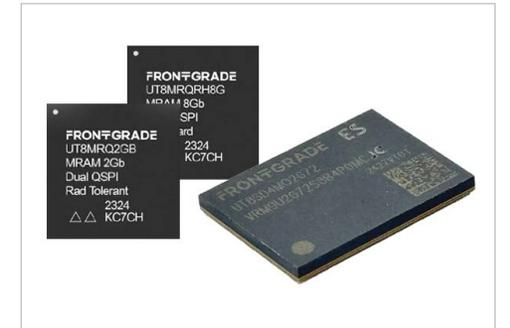
## Microelectronics and Mission Processing



Microprocessors



Microcontrollers



Memories



FPGAs



Custom ASICs and Single Board Computers



Software and IP Cores

# FRONTGRADE

## MARKETS



Space

## REPRESENTED AREA

- Europe

## PRODUCT LINES

- Microelectronics and Rad-Hard Components
- Embedded Boards
- Power Management
- RF & Microwave
- Motion Control Solutions
- Data Interface Solutions

## STANDARDS/CERTIFICATES



Accordance with AS9104A standards

## Power Solutions



Multi-Output Point-of-Load converters



GaN DC-DC Converters



EMI Filters



Battery Managements



Smart Power Switch Controller

# FRONTGRADE

## MARKETS

Space Defense

## REPRESENTED AREA

• Europe

## PRODUCT LINES

- Microelectronics and Rad-Hard Components
- Embedded Boards
- Power Management
- RF & Microwave
- Motion Control Solutions
- Data Interface Solutions

## STANDARDS/CERTIFICATES



Accordance with AS9104A standards

## RF Solutions



Waveguides



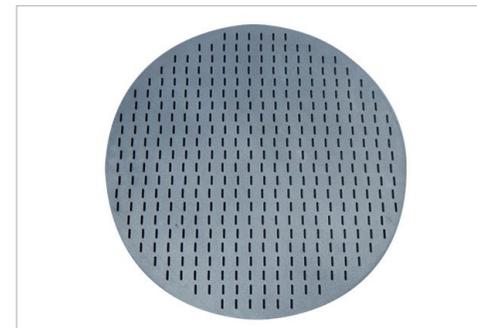
Rotary Joints



Steerable Antennas



Non-Steerable Antennas



Slotted Flat Panel



RF Power

# FRONTGRADE

## MARKETS



Space

## REPRESENTED AREA

- Europe

## PRODUCT LINES

- Microelectronics and Rad-Hard Components
- Embedded Boards
- Power Management
- RF & Microwave
- Motion Control Solutions
- Data Interface Solutions

## STANDARDS/CERTIFICATES



Accordance with AS9104A standards

## Electromechanical Motion Control



Motion Control Products



Satellite Solar Panel Actuation



Stepper Motors



Brushless DC Motors



Zero Cogging Motors



Voice Coil Motors & Limited Angle Torque Motors

## MARKETS

Defense

## REPRESENTED AREA

• Europe

## PRODUCT LINES

- AC/DC and DC/DC Power Supplies
- DC/AC Inverters
- Power Cabinets
- Power Subsystem Integration
- Battery Charges
- Power Distribution Units
- Advanced UPS Technology

## STANDARDS/CERTIFICATES



# Power Supply & UPS



AC/DC and DC/DC Power Supplies



DC/AC Inverters



Battery Chargers



Power Distribution Units



Online UPS with Double Conversion



Modular Backplane Solutions

# CAES

by Honeywell

## MARKETS

 Space  Defense

## REPRESENTED AREA

- Europe

## PRODUCT LINES

- RF & MW Solutions
- Switch Matrices
- Detectors
- Limiters
- Switches
- Integrated Assemblies
- Attenuators

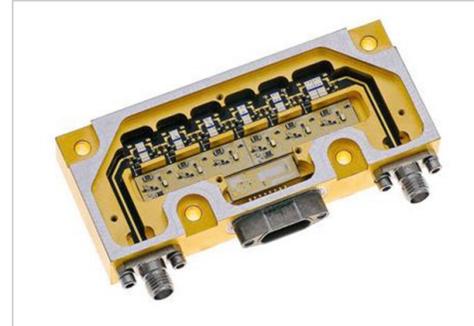
## STANDARDS/CERTIFICATES



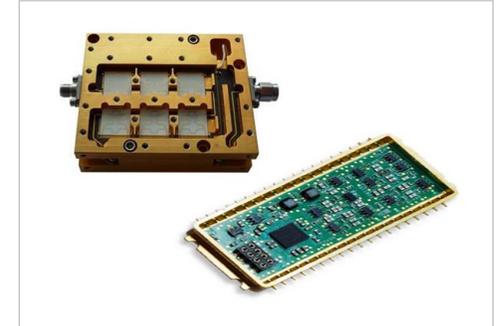
## Signal Products



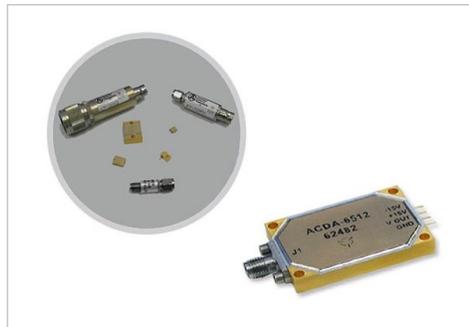
**Switches**



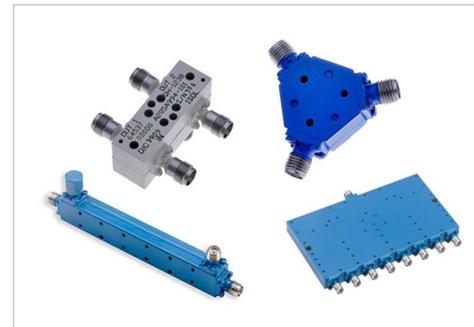
**Attenuators**



**Phase Shifters**



**Detectors**



**Passive Components  
(Power Dividers &  
Combiners / Directional &  
Hybrid Couplers)**

**MARKETS**

- Defense

**REPRESENTED AREA**

- Europe

**PRODUCT LINES**

- Motor & Alternator Design
- Fin Actuation System Design
- Servo Actuator Design
- Gearbox Design
- Test Bench Developments
- Power Electronics
- System Modelling and Simulation
- Embedded System Development
- FPGA Based Controller Design

**STANDARDS/CERTIFICATES**



- Facility Security Clearance Certificate
- Production Permit Certificate
- FSCC-NATO
- Ministry of National Defence
- Certificate Qualified Supplier
- Strategic Partnership Document
- EYDEP

**Electric Motor Solutions**



**Frameless Motors with & without Integrated Ball Screw**



**Rotary Actuators**



**Planetary Gearboxes**



**Brush and Brushless DC Motors**



**Fin and Canard**



**Linear Actuators**



## MARKETS

Defense

## REPRESENTED AREA

• Europe

## PRODUCT LINES

- Power Supplies
- DC/DC Converters
- AC/DC Switching Power Supply - External
- LED Products
- Magnetics & Transformers

## STANDARDS/CERTIFICATES



# DC/DC converters & EMI filters (MIL-COTS)



Power Supplies



DC/DC Converters



Defense Grade DC/DC  
Converters & Filters

# SEALEVEL®

## MARKETS

- Defense

## REPRESENTED AREA

- Europe

## PRODUCT LINES

- Industrial I/O Modules
- Embedded & Rugged Computing
- Serial Communication Interfaces
- Ethernet & Network I/O Servers
- Software & Support Tools
- Custom Embedded Solutions

## STANDARDS/CERTIFICATES



# Reliable Industrial Connectivity and I/O for Critical Applications



**Embedded Computer**



**Data Acquisition (DAQ) Devices**



**Ethernet Servers and Adapters**



**USB**



**PCI**



**Tactical Communications**

# SP Industrial

## MARKETS

Defense

## REPRESENTED AREA

• Europe

## PRODUCT LINES

- Embedded Solutions
- NAND Flash storage
- Solid State Drives (SSD)
- DRAM Modules
- Rugged Laptop/Tablet/Display
- Rugged Server/NAS/External SSD

## STANDARDS/CERTIFICATES



## High-Performance Storage and Memory Solutions



Solid State Drives (SSD)



DRAM Modules



PCIe



Custom Modules



## MARKETS



## REPRESENTED AREA

- Europe

## PRODUCT LINES

- Crystals & Oscillators

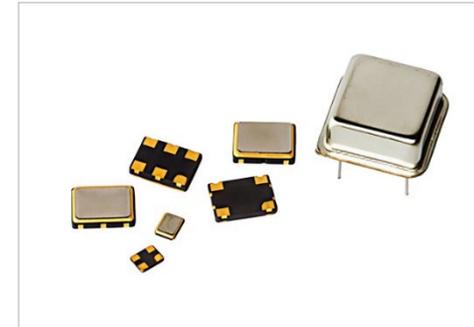
## STANDARDS/CERTIFICATES

- Completed Quality System (Esterline R&D)
- In process Quality System (MV-Electronics).

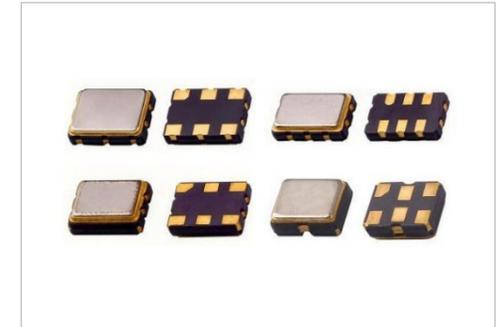
# Crystals & Oscillators



**(XTAL) – Crystals and  
(32.768 kHz) - Real Time  
Clock References**



**(XO) - Clock - Crystal  
Oscillators**



**(VCXO) - Voltage  
Controlled Crystal  
Oscillators**



**(TCXO) - Temperature  
Compensate Crystal  
Oscillators**



**(OCXO) - Oven Controlled  
Crystal Oscillators**



## MARKETS

- Space
- Defense

## REPRESENTED AREA

- Europe

## PRODUCT LINES

- Components & Modules
- Test Systems Instruments
- Frequency Acquisition Systems

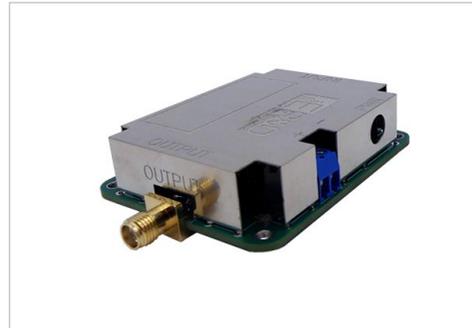
### Services & Technologies

- Oscillator Testing
- Engineering Consulting
- Secondary Compensation (MSAC)

## STANDARDS/CERTIFICATES

- Completed Quality System (Esterline R&D)
- In process Quality System (MV-Electronics).

# Frequency Systems



Freq Dividers & Multiplier



Embeddable Signal Source



Mixers/Down Converters



Distribution Amplifier



Timing Module



Test Instruments

## MARKETS



## REPRESENTED AREA

- Europe

## PRODUCT LINES

- Thermal Pad
- Gaskets
- Tapes
- Adhesive
- Bumpers/Shielding protection

## STANDARDS/CERTIFICATES



# Thermal Interface Materials Liquids / Greases



Thermal Greases



Gap Fillers



Thermal liquid adhesives

## MARKETS



## REPRESENTED AREA

- Europe

## PRODUCT LINES

- Thermal Pad
- Gaskets
- Tapes
- Adhesive
- Bumpers/Shielding protection

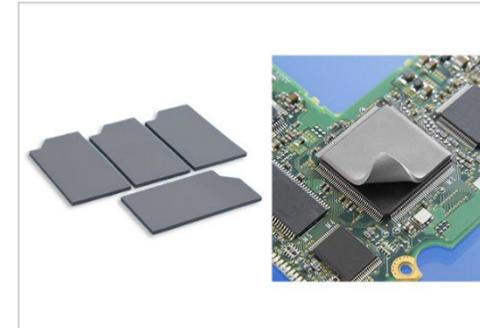
## STANDARDS/CERTIFICATES



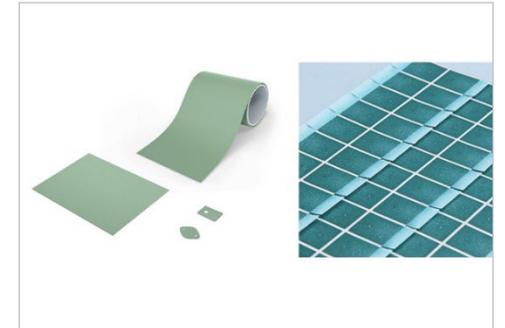
# Thermal Interface Materials Die-cuttable / Thermal Pads



Thin films with/without silicone (SilPad)



Thermal Pad (Gap Pad)



Phase Change Materials (PCM)



Double sided adhesive tapes



Graphite-Carbon fiber



## MARKETS

- Space
- Defense

## REPRESENTED AREA

- Europe

## PRODUCT LINES

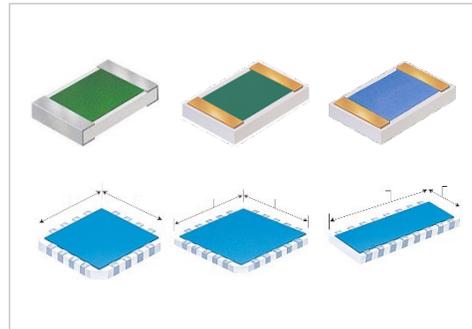
- RF & MW Solutions
- Thin & Thick Film Chip Resistor
- Thin & Thick Film Resistor Networks
- SMT Thick Film Resistor Networks
- Resistors and Potentiometers
- Precision Chip Resistors
- Resistor Networks
- RF & MW Components

## STANDARDS/CERTIFICATES

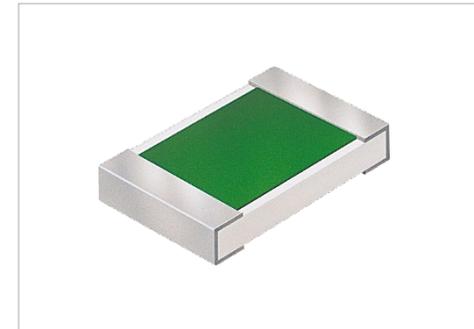


- EIA-554 & EIA-557

# Military Chip Resistors and Networks



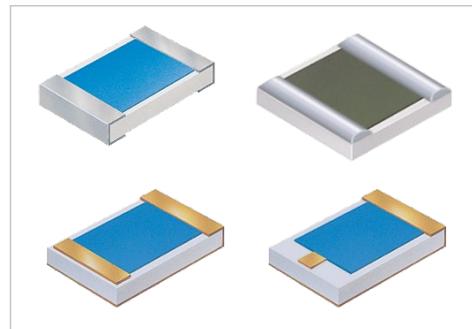
**Military Chip Resistors and Networks**



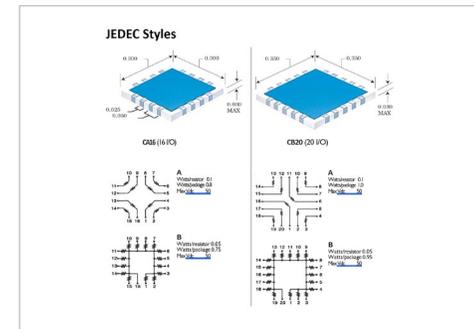
**Surface Mount Chip Resistors**



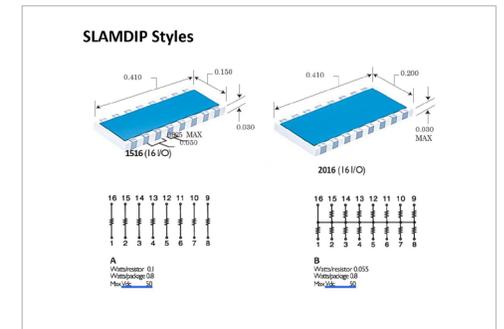
**High Reliability Products**



**High Frequency and Silicon**



**Surface Mount Resistor Networks (JEDEC Styles)**



**Surface Mount Resistor Networks (SLAMDIP Styles)**



## MARKETS

- Space
- Defense

## REPRESENTED AREA

- Europe (Italy)

## PRODUCT LINES

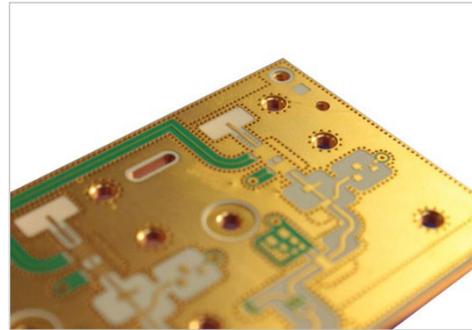
- PCB
- Microvias, stacked microvias, blind & buried vias
- Flex rigid PCB with HDI technology
- Multilayers PCB
- Single/double-sides PCB

## STANDARDS/CERTIFICATES

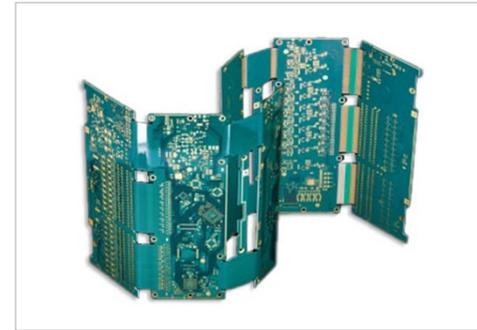


- EN 45 545 (HL3 for R25 – ITCnpl for R22)

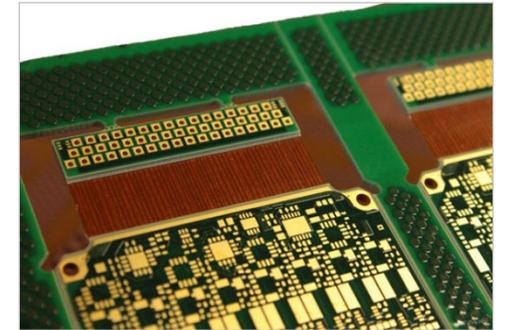
# Printed Circuit Boards



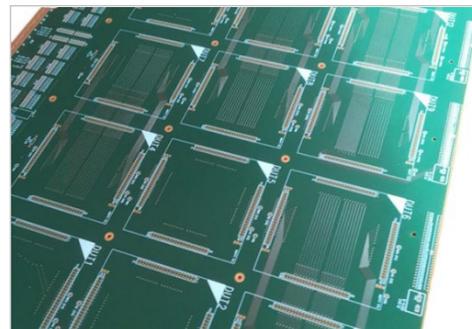
RF / Microwave



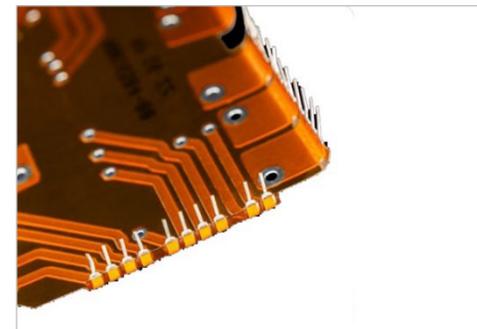
Semi-Flex



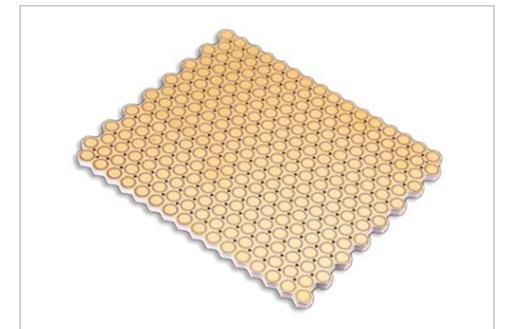
Flex-Rigid & HDI



Large Format



Sculptured Flex



Foam RF Solutions

ADR  
ALCEN

## MARKETS

Space Defense

## REPRESENTED AREA

• Europe (Italy, Spain, Portugal)

## PRODUCT LINES

- High precision ball bearings
- Integrated ball bearings
- Subsystems
- Servomotors and Motorized Bearings

## STANDARDS/CERTIFICATES



# High Precision Ball Bearings & Rotating Systems



High Precision Ball Bearings



Integrated Ball Bearings



Sub-Systems



Servomotors and Motorised Bearings



## MARKETS

- Space
- Defense

## REPRESENTED AREA

- Europe (Italy)

## PRODUCT LINES

- RF & MW Solutions
- Switch Matrices
- Detectors
- Limiters
- Switches
- Integrated Assemblies
- Attenuators

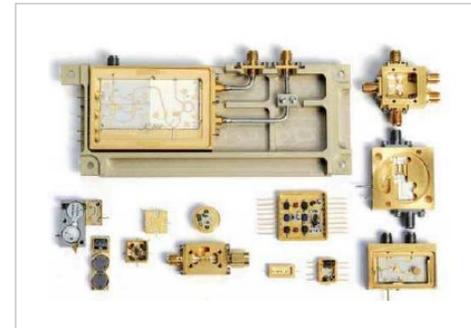
## STANDARDS/CERTIFICATES



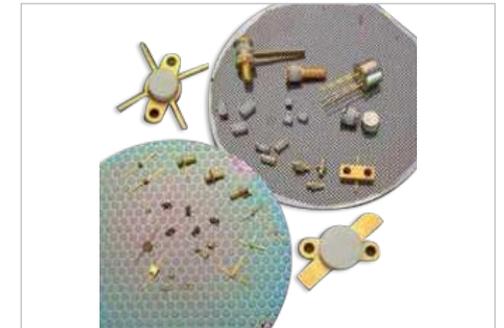
# RF/MW Components & modules



**Isolators & Circulators**



**Modules**



**Diodes, Varactors, Mos Capacitors**



**Filters & Duplexers**

- Air cavity
- Ceramic
- Lumped element
- Waveguide



**Waveguide to Coaxial Adapters, Couplers, Combiners, Loads**

# EVERAXIS™

## MARKETS

 Defense

## REPRESENTED AREA

• Europe (Italy)

## PRODUCT LINES

- Slip rings
- Twist Capsules
- Fiber Optic Rotary Joints
- RF Rotary Joints
- Waveguide Switches

## STANDARDS/CERTIFICATES



## Signal Products



RF Rotary Joint



Rotary Joint Assembly with Slip Ring



Rotary Joint Assembly for Liquid Cooling System



## MARKETS

Space Defense

## REPRESENTED AREA

• Europe (Italy)

## PRODUCT LINES

- Chokes
- Transformers
- Inductors

## STANDARDS/CERTIFICATES



MIL-STD-981  
MIL-PRF-27  
MIL-STD-202



- EN/AS 9100
- FT08690020 Generic Specification
- FT08690019 Process Identification Document

- FT08690028 Declared Process List
- FT08690027 Declared Material List

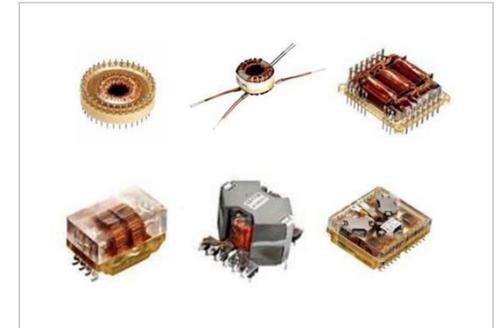
# Magnetic Components



Customized Components



Assembled Solutions and Plug & Play



Space Magnetics

## MARKETS



## REPRESENTED AREA

- Europe (Italy)

## PRODUCT LINES

- Solar Cell Coverglasses
- Optical solar reflectors (OSR)

## STANDARDS/CERTIFICATES



# Solar cell coverglasses Optical solar reflectors (OSR)



**Space Qualified  
Radiation Shielding Glass**



**Radiation-stable Optical  
Solar Reflectors (OSR's)  
and Coverglasses**



## MARKETS

Space Defense

## REPRESENTED AREA

• Europe (Italy)

## PRODUCT LINES

• Silicone Compounds:  
Adhesive/Sealants, Coatings, Electrically  
Conductive/Static Dissipative, Fluids, Foams, Gels,  
High Consistency & Liquid Silicon Rubbers, Low  
Consistency Elastomers, Pressure Sensitive  
Adhesive, Primers, Thermally Conductive

## STANDARDS/CERTIFICATES



# Silicon Compounds



Primers



Adhesives



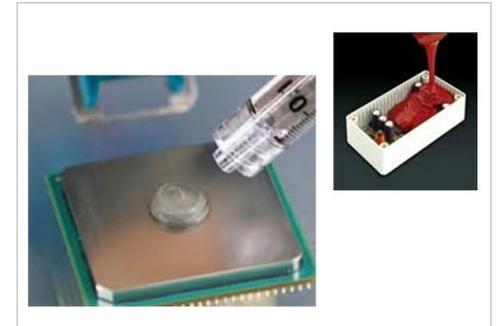
Foams, Coatings & Inks



Elastomers & Resins



Film Adhesives, Tapes & PSA



Gels, Fluids & Grease



## MARKETS



## REPRESENTED AREA

- Europe (Italy)

## PRODUCT LINES

- Space Grade Thermostats
- Hermetically sealed Thermostats
- Automatic reset Thermostats
- Thermostats Assemblies

## STANDARDS/CERTIFICATES



- EN 45545-2

# Hermetically Sealed Thermostats



**Space Grade  
Thermostats**



**Hermetically sealed  
Thermostats**



**Automatic Reset  
Thermostats**



**Thermostats Assemblies**



## MARKETS

Space Defense

## REPRESENTED AREA

• Europe (Italy)

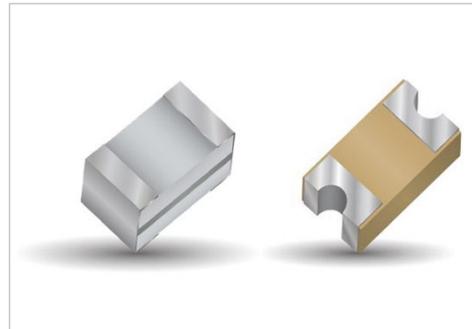
## PRODUCT LINES

- Capacitors
- Inductors
- Resistive products
- Design Kits
- Thin Film Technologies

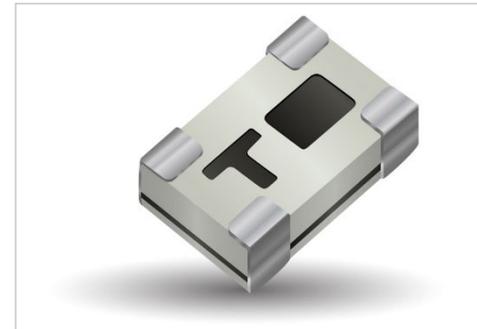
## STANDARDS/CERTIFICATES



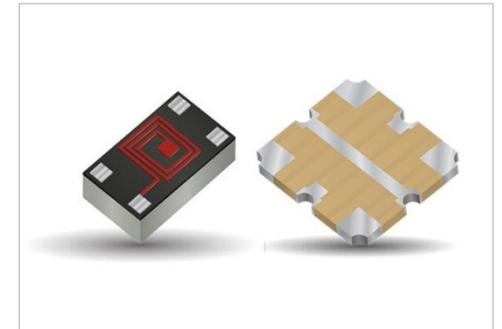
# RF/MW Capacitors Thin Film Substrates



Capacitors & Inductors



Filters



Couplers & Crossovers



Resistors, Terminations & Attenuators



Connectors



## MARKETS

- Space
- Defense

## REPRESENTED AREA

- Central Europe (Austria, Germany, Switzerland)
- West Europe (Belgium, Netherlands, Luxembourg)

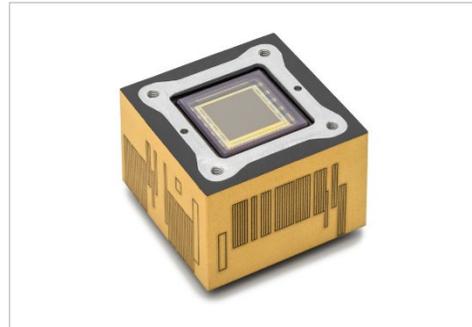
## PRODUCT LINES

- Camera Heads
- Micro Systems
- Memories
- POL Converters
- Peripherals & Protection ICS
- Interfaces

## STANDARDS/CERTIFICATES



# 3D Stacked Electronics



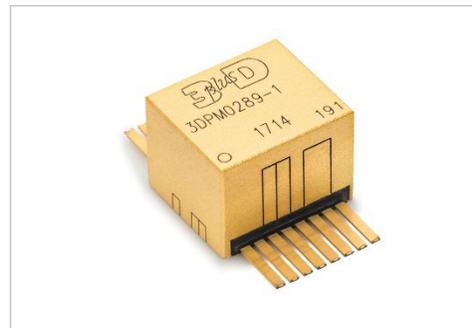
Camera Heads



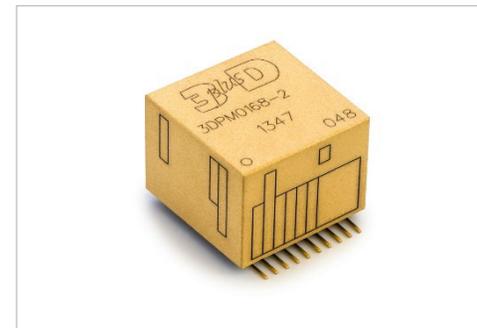
FPGA Based Computer Cores



Memories



Point-of-Load Converters



Interfaces / Peripherals & Protection ICS



Camera Systems



## MARKETS



## REPRESENTED AREA

- Central Europe (Germany)

## PRODUCT LINES

- Power Supplies
- DC/DC Converters
- Custom Solutions
- Power Factor Corrections
- EMI Filter and Transient Suppression Modules
- Inverters

## STANDARDS/CERTIFICATES



# Military Grade Power Solutions High-efficiency COTS and Custom Power Conversion



**Power Supplies**



**DC/DC Converters**



**Custom Solutions**



**Power Factor Corrections**



**EMI Filter and Transient  
Suppression Modules**



**Inverters**



## MARKETS

Space Defense Avionic Military

## REPRESENTED AREA

• Central Europe (Austria, Germany, Switzerland)

## PRODUCT LINES

- Capacitors
- Resistors
- Magnetics
- Filters
- Position Sensors
- Slip Rings

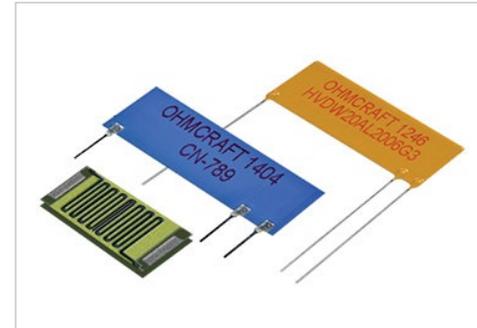
## STANDARDS/CERTIFICATES



# High Reliability Passive Components



Capacitors



Resistors



Magnetics



Filters



Position Sensors



Slip Rings

## MARKETS



## REPRESENTED AREA

- Central Europe (Austria, Germany, Switzerland)
- West Europe (Belgium, Netherlands, Luxembourg)

## PRODUCT LINES

- Space Micro-D Connectors
- Space Nano-D Connector
- Micro-D Hybrid Connectors
- Nano-D Hybrid Connectors
- Space Cable Harness
- Complete Manufacturing Solutions

## STANDARDS/CERTIFICATES



# Nano- & Micro-Miniature Hi-Rel Electronic Connectors & Interconnection Systems



Space Micro-D Connectors



Space Nano-D Connector



Micro-D Hybrid Connectors



Nano-D Hybrid Connectors



Space Cable Harness



Complete Manufacturing Solutions

# HARWIN

## MARKETS



## REPRESENTED AREA

- Central Europe (Austria, Germany, Switzerland)
- West Europe (Belgium, Netherlands, Luxembourg)

## PRODUCT LINES

- Gecko
- Datamate
- M300
- Power Connectors
- Hybrid Connectors

## STANDARDS/CERTIFICATES



## Nano- & Micro-Miniature High Reliable Connectors & Cable Harnesses



Gecko



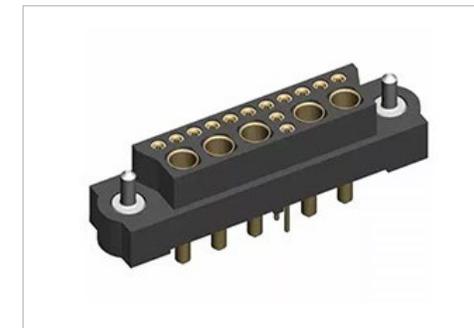
Datamate



M300



Power Connectors



Hybrid Connectors



Cable Harnesses



## MARKETS



## REPRESENTED AREA

- Europe
- **Except:** Andorra, Armenia, Azerbaijan, Belarus, Cyprus, Georgia, Hungary, Iceland, Liechtenstein, Monaco & San Marino

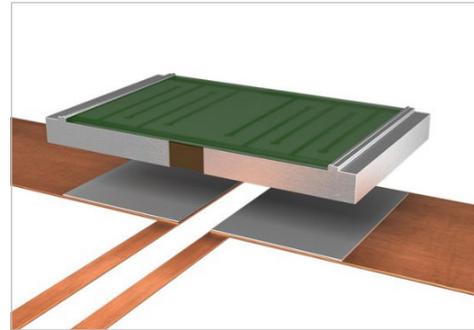
## PRODUCT LINES

- Shunts

## STANDARDS/CERTIFICATES



# Precision Resistor



Shunts

# KOLT

## MARKETS

Defense Avionic Military

## REPRESENTED AREA

- Central Europe (Austria, Germany, Switzerland)
- West Europe (Luxembourg)

## PRODUCT LINES

- EMI Filter
- Power Modules
- Power Supplies
- Battery Charger
- DC-DC Converter

## STANDARDS/CERTIFICATES



# Military Grade Power Solutions High-Efficiency COTS and Custom Power Conversion



EMI Filter



Power Modules



Power Supplies



Battery Charger



DC-DC Converter

## MIL-KABEL-SYSTEMS

### MARKETS

Space Defense Avionic Military

### REPRESENTED AREA

• Europe (for detailed countries, please see clustered country matrix at the beginning of the presentation)

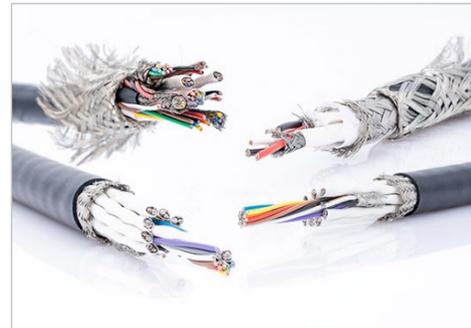
### PRODUCT LINES

• Wire Harness

### STANDARDS/CERTIFICATES



## Special Cables, Special Lines and Cable Systems



Wire Harness



## MARKETS



## REPRESENTED AREA

- Central Europe (Austria, Germany, Switzerland, Liechtenstein)
- West Europe (Belgium, Netherlands, Luxembourg, France)

## PRODUCT LINES

- Electric Wire Feedthrough

## STANDARDS/CERTIFICATES



# Hermetic Electrical and Fibre Optic Seals



Hermetic Electrical Feedthroughs + Solder Cup Pin Seals



Hermetic connectors (PAVE-Mate® I, PAVE-Mate® II, DB Connectors, Coax)



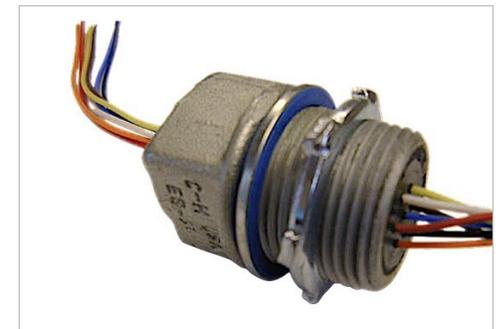
Hermetic Flat Cable Feedthrough (PAVE-Flex®)



Hermetic Fiber-Optic, Thermocouple, Terminal Seals



Hermetic High Voltage Seals



Explosion Proof Feedthrough



## MARKETS



## REPRESENTED AREA

- Central Europe (Austria, Germany, Switzerland)
- West Europe (Belgium, Netherlands, Luxembourg)

## PRODUCT LINES

- D-Subminiature Spaceflight Series
- D-Subminiature Series
- Optik-D Series Connectors
- SP MAX Series Connectors
- Hermetic Series Connectors
- Scorpion Modular Series Connectors

## STANDARDS/CERTIFICATES



# D-Subminiature and Rectangular Connectors



**D-Subminiature Spaceflight Series**



**D-Subminiature Series**



**Optik-D Series Connectors**



**SP MAX Series Connectors**



**Hermetic Series Connectors**



**Scorpion Modular Series Connectors**



## MARKETS

Defense
 Avionic
 Military

## REPRESENTED AREA

- Europe (for detailed countries, please see clustered country matrix at the beginning of the presentation)

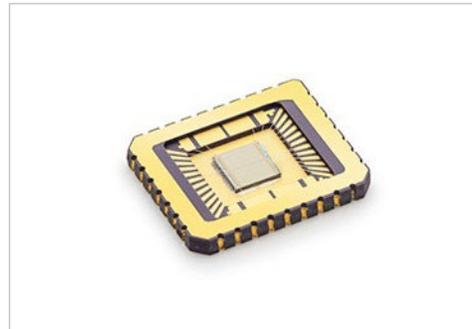
## PRODUCT LINES

- SRAM
- EEPROM
- Logic

## STANDARDS/CERTIFICATES



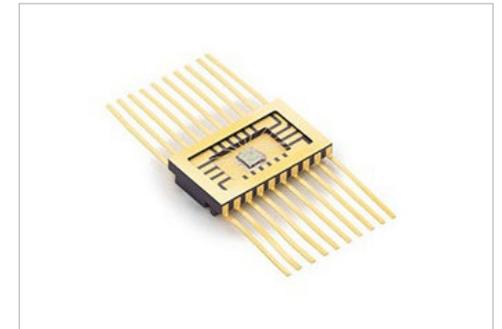
# Semiconductors and Integrated Circuits



SRAM



EEPROM



Logic

**RF Immunity**  
EMI/RFI Connectors, Filter & Power Units

**MARKETS**

- Defense
- Avionic
- Military

**REPRESENTED AREA**

- Europe (for detailed countries, please see clustered country matrix at the beginning of the presentation)

**PRODUCT LINES**

- Filter & Lightning Protection Connectors
- Feedthrough Line Filters
- Military Cables and Harnesses
- ACON- Active converter Copper To Optic
- Custom Connectors & Adapters

**STANDARDS/CERTIFICATES**



**Filtered Connectors, EMI-Filters and Lightning Protection**



**Filter & Lightning Protection Connectors**



**Feedthrough Line Filters**



**Military Cables and Harnesses**



**ACON- Active converter Copper To Optic**



**Custom Connectors**



**Custom Adapters**

## MARKETS



## REPRESENTED AREA

- **Central Europe** (Austria, Germany, Switzerland, Poland, Czech Republic, Slovakia)
- **West Europe** (Belgium, Netherlands, Luxembourg)
- **North Europe** (Estonia, Finland, Sweden)

## PRODUCT LINES

- Diodes
- Transistors
- TVS Modules
- Motion Control
- Rectifier
- GaN Power Bridge
- SiC Power Module
- PDU
- Solid State Relay
- Solid State Power

## STANDARDS/CERTIFICATES



# Semiconductors and Integrated Power Solutions



**JANS QPL Diodes and JANKC Die**



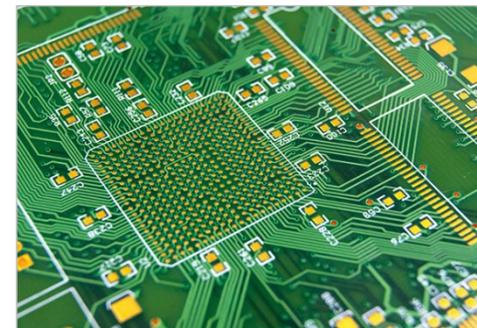
**Space Schottky Diodes**



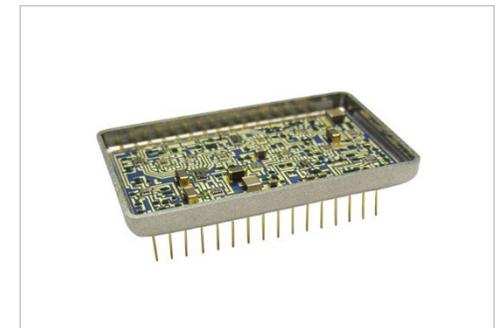
**Space SMD Power Diodes**



**Space Diode Arrays**



**Chip on Board Modules**



**Class K Custom Hybrids**

**SENSITRON**  
**SEMICONDUCTOR**  
YOUR POWER SOLUTIONS PROVIDER

**MARKETS**



**REPRESENTED AREA**

- **Central Europe** (Austria, Germany, Switzerland, Poland, Czech Republic, Slovakia)
- **West Europe** (Belgium, Netherlands, Luxembourg)
- **North Europe** (Estonia, Finland, Sweden)

**PRODUCT LINES**

- Diodes
- Transistors
- TVS Modules
- Motion Control
- Rectifier
- GaN Power Bridge
- SiC Power Module
- PDU
- Solid State Relay
- Solid State Power

**STANDARDS/CERTIFICATES**



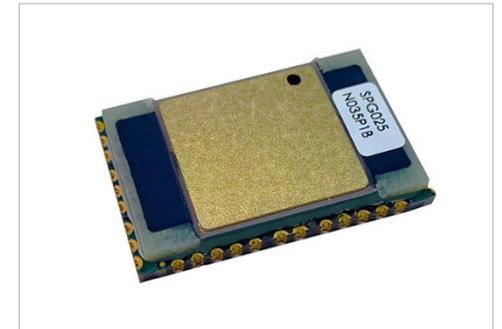
**Semiconductors and Integrated Power Solutions**



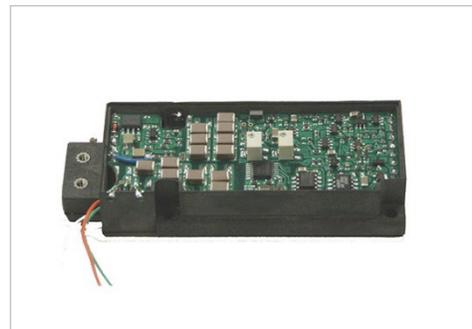
**TVS Modules**



**Rectifier**



**GaN Power Bridge**



**Motion Control**



**Lightweight SiC & IGBT Power Modules**



**SSPC & Protection for High Voltage Relay Contacts**

# skeleton+

## MARKETS

Space Defense Avionic

## REPRESENTED AREA

- Europe
- **Except:** San Marino, Slovakia, Slovenia, Spain, Sweden, Turkey & United Kingdom

## PRODUCT LINES

- Ultracapacitors
- SkelStart
- Bank of Capacitors

## STANDARDS/CERTIFICATES



## High-Power Storage Solutions



Ultracapacitors



SkelStart



Bank of Capacitors



## MARKETS



## REPRESENTED AREA

- Europe (for detailed countries, please see clustered country matrix at the beginning of the presentation)

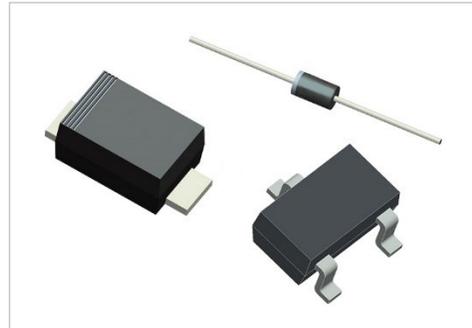
## PRODUCT LINES

- Rectifiers
- Diodes
- TVS
- ESD Protection
- Power Modules
- Thyristor
- SiC MOSFET
- SiC Diodes

## STANDARDS/CERTIFICATES



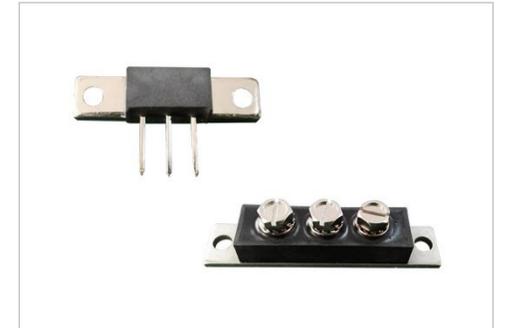
# Diodes and Rectifiers



Rectifiers, Diodes & TVS



ESD Protection



Power Modules



Thyristor



SiC MOSFET



SiC Diodes



## MARKETS

 Defense
  Avionic
  Military

## REPRESENTED AREA

- **Central Europe** (Austria, Czech Republic, Germany, Switzerland, Poland, Slovakia)
- **West Europe** (Belgium, Netherlands, Luxembourg)
- **North Europe** (Denmark, Finland, Norway)

## TEST STANDARDS

- AS6171 Testing
- AS6081 Testing
- MIL-STD-750 Electrical Testing
- MIL-STD-883 Electrical Testing

# Procurement, Testing and Authentication of Electronic Components

Resistance To Solvent And Heated Solvent  
**X-Ray Inspection**  
 Scanning Electron Microscopy FTIR  
**Components Sourcing**  
Decapsulation / Die Verification  
 Raman **Enhanced Visual**  
Solderability XRF

### Sourcing & Authentication

**MIL-STD-883**  
**In-House Design**  
Support Testing of Wide Variety of Component Types  
**MIL-STD-750**

### Electrical & Environmental Testing Services

Web-Portal Value Add  
 Inventory Management  
 Quality/Inspection  
 Facility

### Supply Chain Assurance Services

# Space & Defense Product Lines, Details & Partners

 <b>ADR SAS</b> <a href="#">Homepage</a> 📍 France	 <b>AJ'S Power Source</b> <a href="#">Homepage</a> 📍 USA	 by Honeywell <b>CAES SYSTEMS LLC</b> <a href="#">Homepage</a> 📍 USA	 <b>Cincon</b> <a href="#">Homepage</a> 📍 Taiwan	 <b>Comepa</b> <a href="#">Homepage</a> 📍 France	 <b>ELVIA</b> <a href="#">Homepage</a> 📍 France
 <b>Esterline Research and Design</b> <a href="#">Homepage</a> 📍 USA	 <b>EVERAXIS</b> <a href="#">Homepage</a> 📍 Sweden	 <b>Excelitas</b> <a href="#">Homepage</a> 📍 USA	 <b>Exens Solutions</b> <a href="#">Homepage</a> 📍 France	 <b>FEMSAN</b> <a href="#">Homepage</a> 📍 Turkey	 <b>FLUX</b> <a href="#">Homepage</a> 📍 Denmark
 <b>Frontgrade</b> <a href="#">Homepage</a> 📍 USA	 <b>Frontgrade Gaisler</b> <a href="#">Homepage</a> 📍 Sweden	 <b>KYOCERA AVX</b> <a href="#">Homepage</a> 📍 USA	 <b>Lerity</b> <a href="#">Homepage</a> 📍 France	 <b>MV Electronics</b> <a href="#">Homepage</a> 📍 USA	 <b>NuSil</b> <a href="#">Homepage</a> 📍 USA
 <b>Teledyne - Qioptiq</b> Aerospace & Defense Electronics <a href="#">Homepage</a> 📍 United Kingdom	 <b>SEALEVEL</b> <a href="#">Homepage</a> 📍 USA	 <b>SILICON POWER</b> <a href="#">Homepage</a> 📍 Taiwan	 <b>SRT Microceramique</b> <a href="#">Homepage</a> 📍 France	 <b>SRT Resistor Technology</b> <a href="#">Homepage</a> 📍 Germany	 <b>State Of The Art</b> <a href="#">Homepage</a> 📍 USA
 <b>Steliau Technology</b> <a href="#">Homepage</a> 📍 France	 <b>Synergy</b> <a href="#">Homepage</a> 📍 USA	 <b>TTE Filters</b> <a href="#">Homepage</a> 📍 USA	 <b>U-Blox</b> <a href="#">Homepage</a> 📍 Switzerland		

# Space & Defense Product Lines, Details & Partners

 <p><b>3D PLUS</b> STECO company</p> <p><a href="#">Homepage</a> 📍 France</p>	 <p><b>EATON</b> Powering Business Worldwide</p> <p><a href="#">Homepage</a> 📍 Germany</p>	 <p><b>Exxelia</b></p> <p><a href="#">Homepage</a> 📍 France</p>	 <p><b>HARWIN</b></p> <p><a href="#">Homepage</a> 📍 United Kingdom</p>	 <p><b>Isabellenhütte</b></p> <p><a href="#">Homepage</a> 📍 Germany</p>	 <p><b>KOLT</b></p> <p><a href="#">Homepage</a> 📍 Turkey</p>
 <p><b>MIL-KABEL-SYSTEMS</b></p> <p><a href="#">Homepage</a> 📍 Germany</p>	 <p><b>Omnetics</b> CONNECTOR CORPORATION</p> <p><a href="#">Homepage</a> 📍 USA</p>	 <p><b>PAVE</b> Pressure And Vacuum Electronics</p> <p><a href="#">Homepage</a> 📍 USA</p>	 <p><b>Positronic</b> an Amphenol company</p> <p><a href="#">Homepage</a> 📍 USA</p>	 <p><b>Pyramid Semiconductor</b></p> <p><a href="#">Homepage</a> 📍 USA</p>	 <p><b>RF Immunity</b> EMI/RFI Connectors, Filter &amp; Power Units</p> <p><a href="#">Homepage</a> 📍 Israel</p>
 <p><b>Skeleton</b></p> <p><a href="#">Homepage</a> 📍 Estonia</p>	 <p><b>Sensitron Semiconductor</b> YOUR POWER SOLUTIONS PROVIDER</p> <p><a href="#">Homepage</a> 📍 USA</p>	 <p><b>SMC Diode Solutions</b></p> <p><a href="#">Homepage</a> 📍 China</p>	 <p><b>SMT Corp.</b></p> <p><a href="#">Homepage</a> 📍 USA</p>		

# What We Sell in DACH Territories

## ACTIVE COMPONENTS

- DDR3 & 4 Memories
- Flash Memories
- Diodes
- Rectifiers
- TVS Arrays
- Power Modules
- Thyristor

## PASSIVE COMPONENTS

- Capacitors
- Filters
- Magnetics
- Potentiometer
- Resistors
- Shunts
- Chokes
- Inductors
- Toroid
- Transformers

## INTEGRATED SOLUTIONS

- TVS Suppressors
- DC-DC Converters
- Brick Modules
- Packaged brick
- High Power
- EMI Filters
- Brick Modules
- AC-DC Power Supply
- DC-DC Power Supply
- AC-DC Power Modules
- UPS System
- Solid State Power Controllers
- Power Distribution Units
- GaN Power Bridge Modules
- EMC-Shielding

## INTERCONNECT

- Nano & Micro-D
- Micro & Nano Circulars
- IP68 Micro Circulars
- IP68 Nano Circulars
- D-Subminiature
- Rack & Panel
- Power & Signal Hybrid connector
- Circulars
- Signal Connectors
- Power Connectors
- Hermetic Seals
- Wide Range of Standard Connectors with Integrated EMI Filters

# WHERE INNOVATION MEETS RELIABILITY

**Thank you**  
for your attention !

Keep in touch !



[mailadres@steliau.com](mailto:mailadres@steliau.com)



[Steliau-hirel.com](http://Steliau-hirel.com)



Telephone number if wanted



Hi-Rel Solutions by Steliau Technology

