LINECARD

Industrial & Transportation





by Application



Summary by Application

5 Embedded Computer Solutions and Displays

- 6 Display Visions
- 8 Getac Technology Corporation

11 Energy and Power

- 12 DimacRed Spa Products & Services
- 14 Itelcond Srl
- 15 Licap Technologies Inc.
- 16 Ls Materials
- 18 Maxwell Technologies Korea
- 20 Skeleton
- 22 Tecate Industries

23 High-Temperature (SIC), High-Voltage, High-Precision Solutions

- 24 Cissoid
- 26 Dean Technology
- 28 GES High Voltage GmbH
- 30 Nicrom Electronic
- 31 Ohmite Manufacturing Co.
- 32 VPG Foil Resistors

33 Materials and PCBs

- 34 Flux
- 36 Indium Corporation
- 38 Qnnect
- 39 Winslow Adaptics

41 Power Conversion and Railway

- 42 Autronic GmbH
- 43 Gaia Converter
- 44 M+R Multitronik
- 46 MPD Micro Power Direct
- 48 NetPower Corporation
- 50 Polyamp AB
- 54 AllWayTon Co., Ltd.
- 55 Synics AG

57 Radio Frequency Solutions

- 59 Anatech Electronics Inc.
- 60 Johanson Dielectric
- 61 Johanson Technology

63 Sensing Solutions

- 64 Cibas S.r.l.
- 65 NVE Corporation
- 66 Melexis Technologies N.V.
- 69 Omnivision Technologies Inc.

71 Voltage Regulators, Microcontrollers and FPGAs

- 72 Efinix Inc.
- 73 Empower Semiconductor
- 74 Microchip Technologies

Who we are

Dimac Red's mission is to support the success of our customers through the professional supply of innovative electronic products, solutions, design services and consultancy services"

Consulting and Sales of High Quality Electronic Products

Dimac Red Spa is a professional sales organization, established in 1979, dedicated to serving the European market with High Reliability electronic products. Our mission is to provide customers with products and services that require a unique level of technical support.

Our services include design, prototypes and subsystems production, hirel procurement activities, design analyses (WCA, FMECA, radiation) and additional screening/testing.

Focused mainly on the aerospace, military, railway markets (but also on automotive, telecom and medical markets), our experienced technical engineers provide Design-In and Added Value in order to help professionals and designers use High Reliability electronic components and sub-systems. Using this resource, our customers have an easy access to a wide knowledge of the latest advanced technologies suitable for their needs.





Markets

We continue to work as partners with the most significant players in these industries, from the early stages of design right up to the production phase. In addition to this, Dimac Red is able to support startup and mid-size companies with small volumes often associated with the implementation of cutting-edge technologies.

You will find Dimac Red Hi-Rel products and services suitable to the most relevant markets.



LINECARD Industrial & Transportation

Industrial & Transportation Division encompasses a comprehensive range of product lines primarily dedicated to the industrial and transportation sectors. We are committed to delivering innovative solutions that address the unique challenges and needs of these dynamic industries.

Our offerings cover an extensive array of applications within the transportation sector, including automotive, railway, agricultural machinery, construction equipment, bicycles, scooters, and more. On the industrial side, we provide cutting-edge products for a variety of non-hi-rel applications, including the medical field.

By focusing on these specific sectors, our division is able to tailor solutions that meet the stringent requirements and evolving demands of industrial and transportation environments. We are dedicated to continuously scouting for new products and integrating the latest technologies to ensure that our clients benefit from the most advanced and efficient solutions available.

Join us as we drive innovation and excellence in the industrial and transportation sectors, delivering products that enhance performance, safety, and sustainability.



Embedded Computer Solutions and Displays





DISPLAY VISIONS is the innovative, German display manufacturer for highquality industrial displays.

Due to the long-term availability (mostly 10 years), shortest delivery times (often ex stock), highest quality requirements, and their technically excellent support, customers worldwide have been satisfied for 40 years.

The company was founded in 1977 and the company's headquarter in located Gilching, Germany near Munich. From the outset, DISPLAY VISIONS has placed a strong focus on the markets of medical, automation, and industrial technology, as well as automotive.

Inventiveness, pioneering spirit and innovation are the driving force behind our more than 45-year company history.

Product / services supplied

LCD, OLED and TFT displays, High Quality and Long Term available

Market Sector

Industrial, Medical

Product Manager

Simone Benvenuto



Contact the Manager



More info on our website



PLC - Small Control Unit with up to 50 satellite displays

Control and visualization. The new PLC series expands the classic small control unit in the control cabinet with an integrated color display inclusive touch. In addition, this solution enables visualization on up to 50 satellite displays. There, measured values can be displayed and settings can be made by touch. Thanks to edge computing, even complex and visually appealing screen layouts can be easily implemented.



Industrial OLED Display, bright and durable: 3.3V and SPI

Displays of the Superlative

Now the worldwide first OLED display family with pins is available! Pins with pitch 2.54mm provide a much faster and easier design; just put the display directly on a breadboard and application. More than this: even in mass production the pins facilitate all mounting needs automatically. There's no need for any mechanical construction: simply solder the display into a pcb or plug with sockets.

But there are more details that convince:

- Top. -40..+80°C (-40..+176°F)
- from ice cold to brooding heat
- extreme wide viewing angle of more than 170°
- contrast > 1:1000
- display response time typ. 10µs (even at -40°C)

These displays come with an integrated controller and support SPI and I²C bus directly. Power supply is 3.3V (some as singe-supply).



Color HMI operating units with touch - programmable

HMI Units with Touch

The outstanding control panels for installation in your system.

Excellent as a replacement for physical switches and controllers in home automation, in analyzers for the lab, as control panels in mobile homes or for installation in kitchen, wellness or fitness equipment, to control a paper feeder.



Getac

Getac is a global leader in rugged mobile technology and intelligent video solutions, including laptops, tablets, software, body-worn cameras, in-car video, interview rooms, and evidence management software.

Getac goes beyond expectations, tailoring products and solutions to your

The wide range of rugged devices, accessories, and software, along with expert service, means innovation is never compromised.

Product / services supplied

specific industry needs.

Laptops, Tables, Accessories, SW

Market Sector

Industrial, Medical, Defence

Product Manager

Simone Benvenuto



Contact the Manager



More info on our website

Complementary Products







S510 Laptops, Rugged, 15.6-Inch, Windows

With its brilliant 15.6" large screen, cutting-edge Al capabilities, and sleek rugged profile integrating sustainable design, the S510 laptop delivers uncompromising computing performance in challenging environments.



UX10 Tablets, Fully Rugged, 10-Inch, Windows

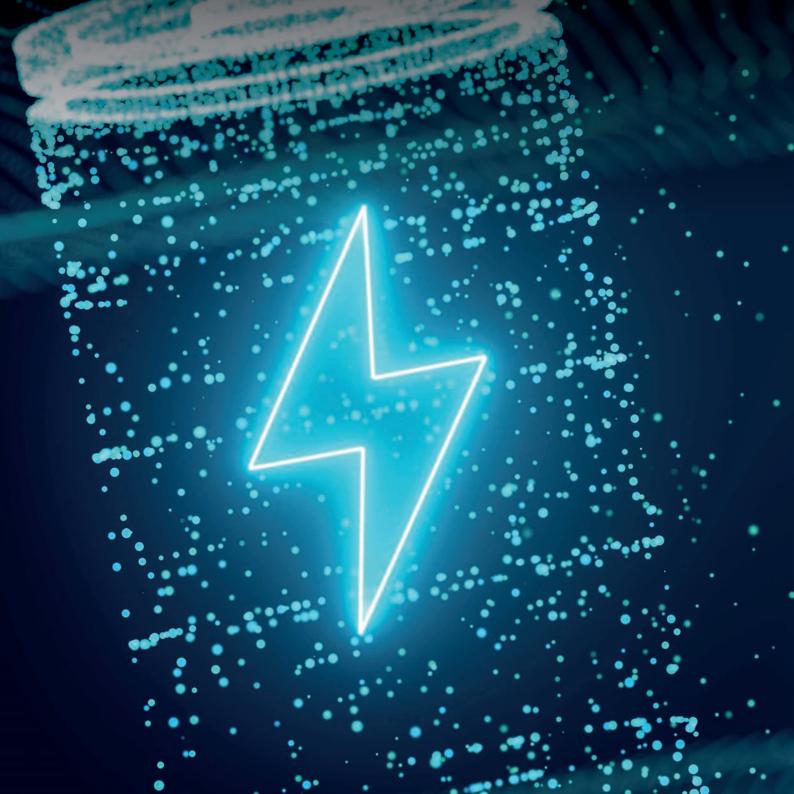
The UX10 was named 2023 Best Rugged Tablet by Techradar. It is a 10.1-inch portable device with incredible rugged performance.





X600Pro Laptops, Fully Rugged, 15.6-Inch. Windows

The X600 Pro never comes up short with its 11th Generation Intel® Core™ i5/i7 Processor (up to 8 cores), optional NVIDIA® Quadro® RTX3000 discrete graphics controller, and up to 128GB DDR4 RAM available. Its dualfan design keeps each of these computing components cool and capable, even during the most computationally-intensive tasks, while data storage can include up to three user-removable PCle solid-state drives (SSDs), totaling 6TB.



Energy and Power

Batteries, Capacitors and Ultracapacitors



Through a network of qualified partners, DIMAC RED develops and produces a small range of custom products, based on super-capacitors and ultra-capacitors technology and designed according to customer's specifications and needs. These products are mainly used in ESS (Energy Storage System) applications, such as Start & Stop Systems, automatic warehouses, packaging machines, etc. The Dimac Red products are characterized by high power density, compact dimensions, high flexibility, very long lifetime, wide range of operating temperature and no maintenance requirement.

Market Sector

Industrial, Automotive, Transport

Product Manager

Antonio Sofo



Contact the Manager



More info on our website

Best Products



X-BOOST 100 LBA

A compact module composed of 6 Supercapacitors (2,7V – 600F) mounted in series, that is suitable for Start&Stop applications, hybrid vehicles and cranking systems.

The technical characteristics are the following:

Capacitance: 100F _ Voltage: 16,2 V Current: 62 A Power : 1 kW



X-BOOST 50 / 55/70

Standard modules from 50 to 70 farads, very flexible and suitable for electrical and mechanical integration of storage systems. Allows to reach various levels of energy stored and rated voltage.

The technical characteristics are the following:

Capacitance: from 50F up to 70F Voltage: 16,2 V _ Current: 30 A

Power: 0,5 kW



CBOX-0050-P048

A module composed of 54 Supercapacitors (2,8V – 350F) used as power supply for automatic shuttle handling materials in cooled warehouses. The technical characteristics are the following:

Capacitance: 50F _ Voltage: 48,6 V Current: 36 A _ Power: 1,8 kW



CBOX-0110-P048

It's a bigger and more powered version of the previous one, that is composed of 18 Supercapacitors (2,7V – 2000F) and used as power supply for automatic shuttle handling materials in cooled warehouses. The technical characteristics are the following:

Capacitance: 110F _ Voltage: 48,6 V Current: 79 A _ Power: 3,8 kW







ITELCOND is a historic Italian company that has been producing large-capacity aluminium electrolytic capacitors since 1976 for applications where a high level of quality is required. Their product range ranges from large screw capacitors to small printed circuit capacitors, always in the professional field. With over 45 years of experience, they have all the necessary skills to contribute to the most complicated projects, supplying from capacitors to more integrated solutions that use them.

Product / services supplied

Electrolytic aluminum capacitors

Market Sector

Railway, Industrial, Grid&Renewable Energy, Automotive, Medical, Defence, Telecom, Transportation

Product Manager

Daniele Gargantini



Contact the



More info on our website



Snap-in Capacitors

- Features: Self-extinguishing electrolyte, From 5k to 20k hours lifetime at 85°C, Low ESR, High ripple, Temperature from -55°C up to 85°C
- · Certifications: ISO 9001, ISO 14001, REACH, RoHS, Up to 500V



Screw terminal Capacitors

- Features: Self-extinguishing electrolyte, From 5k to 20k hours lifetime at 85°C, Low ESR, High ripple, Temperature from -55°C up to 85°C
- Certifications: ISO 9001, ISO 14001, REACH, RoHS. Up to 500V



Energy storage

Itelcond energy storage systems are entirely designed in-house, where they are then assembled and tested. The energy storage module connections are available with or without a central point.



Bus bars

Itelcond design their bus bars, assemble them and test them internally. They are 3-layer sandwiches in aluminum with a thickness of 2mm, insulated with gray polyamide resin with a thickness of 0.25mm and insulating layers in PET + polyamide film tested 100% at 5kVac.



Customized capacitors

Itelcond produce over 40% of their capacitors ad hoc for customers. Their know-how is the greatest contribution to the success of their clients' projects for which we create tailor-made solutions.





LICAP Technologies Inc. (LICAP) is a worldclass manufacturer of supercapacitor and lithium-ion capacitor products with marketleading performance. LICAP successfully demonstrated commercial viability and superior performance of Activated Dry Electrode® technology in ultracapacitor electrodes. Licap's patented Activated Dry Electrode process and equipment lines remove toxic solvent and huge energy consuming drying ovens from Gigafactories, eliminate space-consuming solvent recovery system, and enable high energy and power density.

Product / services supplied

Ultracapacitors, Lithium Ion Capacitors

Market Sector

Railway, Industrial, Grid&Renewable Energy, Medical, Automotive, Transportation

Product Manager

Daniele Gargantini



Contact the



More info on our website

Best Products



Lithium Ion Capacitors

LiCAP offers different LIC with rated capacitance of 200F, 800F, 2200F and 3000F.

As compared to ultracapacitor cells, LIC cells offer a higher energy density, higher per cell voltage and lower self-discharge. LIC cells offer a much longer life than lithium-ion batteries, and higher power capability as well.



Ultracapacitor module for wind retrofit

LiCAP's ultracapacitor based retrofit solution replaces the existing lead-acid battery back-up system for pitch control in wind turbines. Our solution is a drop-in replacement that is designed to fit in the same location as the existing batteries, and will not require any operating system modifications. LiCAP ultracapacitor modules feature laser welded bus bar connections to ensure a robust and reliable connection for the life of the installation.



Ultracapacitor cells and modules

Licap offers different ultracapacitors cells and module for several applications and markets.





LS Materials is a South Korean company specialized in the production of ultracapacitors and it is a core company in LS Group's carbon-neutral value chain with growth potential and stability. LS Materials is the leading partner for new-generation energy storage devices with great power and reliability. LS Materials has been producing ultracapacitor for 20 years and supplying it to more than 500 customers over the world, becoming one of the leading global manufacturers of Ultracapacitors.

Product / services supplied

Ultracapacitors

Market Sector

Railway, Industrial, Grid&Renewable Energy, Automotive, Medical, Transportation

Product Manager

Daniele Gargantini



Contact the



More info on our website

Best Products

Celldule module 16.2V 200F

Innovative structure with jelly roll directly into the module. This innovative structure allows to have more energy density with the same dimensions or to have a compact size with the same energy density. Furthermore, it has the 50% less of component than a traditional ultracapacitor module, allowing to reduce the manufacturing procedures and then the cost.



LS ultragrid module 70F 144V

New 19" module for rack integration, designed for industrial standard cabinets and containers. The module has CAN 2.0B communication interface with whom it can communicate its diagnostic data. Furthermore, it has smart balancing software for improving lifetime and power demand and State-of-health estimation software.



LSUM 054R0C 0188F EA AMD1

LSUM 054R0C 0188F EA AMD1 is a 54V 188F module equipped with CAN bus 2.0. This allows the module to communicate with an external system its status in real-time. It is also featured with warning and protection monitoring and related alarms.



LSUC 003R0L 0360F LE

New 360F 3V cells that has half the internal resistance of its predecessor of 380F. This make this cell suitable for heavy duty application in which high frequency cycles and high rms current are requested.



CTC modules

CTC (Cell to Cell) modules are made by direct connection through nuts of the cells, allowing a reduction of contact resistance and a better dissipation of the heat. Furthermore, the aluminium external case makes this type of module suited for heavy duty applications such as electric vehicles.



LS UltraGrid 19" Rack

Made by several ultragrid module connected in series, this system could reach 1440V and 7F. It could be used for short-term peak power (1/1000 sec) for MV-GW scale grid. It is equipped with Capacitor management system, State-of-health and State-of-Age.





Maxwell technologies Korea is now a brand of UCAP Power™, a global provider of ultracapacitor-based power solutions across a wide range of renewable markets. Ultracapacitor systems use sustainable based products offering a long-lasting source of reliable high-power energy storage that can help eliminate

lead-acid and other hazardous materials in batteries. Their ultracapacitor products provide power solutions for applications in consumer and industrial electronics, renewable energy, automotive, transportation, and information technology.

Product / services supplied

Ultracapacitors

Market Sector

Railway, Industrial, Grid&Renewable Energy, Automotive, Medical, Transportation

Product Manager

Daniele Gargantini



Contact the



More info on



Maxwell's XP™ Series

Maxwell's XP™ Series (3F to 540F cells) comprises ultracapacitor cells designed specifically for reliable performance in applications operating in adverse temperature and humidity conditions. The XP Series includes all the benefits of the Standard Series with the added advantages of:

- Advanced structure and sealing to provide the additional protection necessary for demanding environmental conditions and strict industrial standards
- 3X the lifetime of Standard Series cells in high heat and humidity environments.



5.0 - 7.5 Volt Modules

The 5.0 and 7.5-volt small cell modules are available in 1.0, 1.5 and 2.5 farad versions and are suitable for applications that require pulse power in small form factors. These modules provide ultra-low equivalent series resistance (ESR) and long lifetime with up to 500,000 duty cycles, ensuring reliability and minimal maintenance in deployed systems.



Maxwell Durablue ultracapacitors

Maxwell Technologies' DuraBlue® Advanced Shock and Vibration Technology combines Maxwell's patented electrode formulation and manufacturing process with a robust proprietary cell structure, resulting in a product line specialized for the most demanding shock and vibration requirements. Maxwell's innovative mechanical design behind the DuraBlue product line achieves high performance and reliability for applications in the automotive, railway and industrial markets.

skeleton*

Based on patented Curved Graphene, Skeleton's energy storage solutions represent the biggest technological advancement in the industry in the last 20 years. Curved Graphene significantly increases the energy density of their supercapacitors. Skeleton is also well-positioned to help their customers in the grid industry with their grid solutions, which are unprecedented in the energy storage sector. Their grid solutions could be used in application such as UPS, Statcom, Microgrid stability and virtual inertia.

Product / services supplied

Ultracapacitors

Market Sector

Railway, Industrial, Grid&Renewable Energy, Automotive, Medical, Transportation

Product Manager

Daniele Gargantini



Contact the Manager



More info on our website

Best Products

Skelcap series

Class-leading performance and a large variety of options offer you the upper hand over the competition. SkelCap cells are available at 2.85 or 3.0 V with a very low ESR, or internal resistance, long lifetime, and very high power.



Skeleton ultracapacitor modules

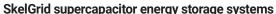
Skeleton offers ultracapacitor module for different application such as 12V and 24V engine start module, Skelmod 17V module for wind, medical and UPS applications and SkelMod 51V 177F rail-certified supercapacitor module for transportation market.





ElevatorKERS

ElevatorKERS is theKinetic Energy Recovery for elevators that is able to cut elevator energy consumption by up to 70% by capturing and re-using energy . The up and down movement of elevators is in many cases a missed opportunity and a waste of energy. The ElevatorKERS recovers and stores the energy generated by the elevator to return it in the next consumption trip or to support the drive's standby.



SkelGrid supercapacitor energy storage systems is the turn-key energy storage solutions for megawatt-level power needs. The SkelGrid energy storage system is designed for demanding applications such as voltage and frequency regulation, peak shaving in addition to having the ability to provide reliable backup power for short-term needs. As a modular system, SkelGrid components can be customized according to the customers' needs. The system consists of individual modules, which come in the industry standard 19" size, and can be installed in 600 mm deep cabinets.



Superbattery

Skeleton's SuperBattery fills the technology gap between supercapacitors and batteries, offering the ideal combination of energy, power, and safety for <45-minute applications. It is an innovative technology combining the characteristics of supercapacitors and batteries. Superbattery is Safe & sustainable, it could be charged in 60 seconds with a lifetime up to 50 000 life cycles.





For over forty years, the Tecate Group has been a global manufacturer and supplier of high-quality ultracapacitors, capacitors and hybrid capacitors. CAP-XX is a brand of Tecate Group and it is a world leader in the design and manufacture of thin, flat supercapacitors and energy management systems used in portable and small-scale electronic devices.

Product / services supplied

Ultracapacitors, Hybrid capacitors

Market Sector

Railway, Industrial, Grid&Renewable Energy, Automotive, Medical, Defence, Transportation

Product Manager

Daniele Gargantini



Contact the



More info on our website

Best Products



Ultracapacitor cells and modules

Tecate Group's offers a wide range of ultracapacitor cells form small with radial or snap-in terminals for PCB application to large cylindrical cells with screw terminals. Also, modules offered could be for PCB application with small capacitance or big ruggedized ones.





CAP-XX products

CAP-XX is specialized in ultra small supercapacitors with a working temperature range that goes from -40°C up to 85°C.

- Prysmatic ultra-thin supercapacitors: 35 -2200 mF @ 2.25 5.5 V
- Coin cell supercapacitors: 0.1 1.5 F @ 5.5V



Hybrid capacitors

At Tecate Group, they offer single, 3.8V hybrid capacitor cells in a variety of capacitances. These cells come with radial wire leads or a Molex 87439-0200 quick connector for ease of handling.

High-Temperature (SIC), High-Voltage, High-Precision Solutions



CISSOID is a leader in power semiconductor solutions, delivering multi-phase, high-current power switching motor control systems and software, across a wide range of power requirements. It proposes a wide range of solutions, from system-on-chip to complete SiC (Silicon Carbide) and GaN (Gallium Nitride) based inverter reference

designs, thus supporting an ever-growing range of e-mobility and high-power applications.

Cissoid's products are characterized by extremely high-temperature working range, high reliability and excellent efficiency and therefore are ideal for harsh and demanding environments.

Product / services supplied

Power Modules, Inverter Reference Design, Gate Drivers, Diodes, Inverter Control Modules

Market Sector

Industrial, Automotive, Transport, Heavy-duty & Off-road, Marine, Aviation

Product Manager

Antonio Sofo



Contact the Manager



More info on our website



SiC Inverter Control Module (ICM)

It offers optimal mechanical and electrical integration of the 3-Phase 1200V/340A-550A SiC MOSFET Intelligent Power Module, developed by Cissoid, and the OLEA® T222 Field Programmable Control Unit (FPCU) based controller board and OLEA® APP – T222 INVERTER application software, developed by Silicon Mobility. The ICM reaches very high levels in terms of power density and efficiency, thus being the ideal solution for a wide range of applications.



Benchtop Inverter Reference Design

It's a SiC inverter reference design based on SiC Inverter Control Module, which mechanically and electrically integrates the OLEA® T222 Field Programmable Control Unit (FPCU) based controller board and OLEA® APP - T222 INVERTER application software from Silicon Mobility, together with the 3-Phase 1200V/340A-550A SiC MOSFET Intelligent Power Module from CISSOID. The benchtop inverter reference designs are made to boost the development of electric drivetrains and drastically accelerate time-to-market. This reference design can support up to 800V operating bus voltages and 300kW continuous power output.



Gate Driver

SiC gate drivers offer higher efficiency and increased power density and are ideal for electrical vehicles and industrial power converters, including motor drive inverters and battery chargers.



On-Board Inverter Reference Design

Similar to the previous one, it has been developed to be another step closer to production-ready. These reference designs are targeted for in-vehicle and field testing, further accelerating time-to-market and reducing the engineering required to achieve a functional electric drivetrain. Offering a broad range of voltage and power ranges, based on CISSOIDs SiC Inverter Control Modules (ICMs), the reference designs can support up to 850V operating bus voltages and 350kW power output, reaching an outstanding 52kW/liter power density (60s peak power).



SiC Intelligent Power Module (IPM)

The 3-phase 1200V Silicon Carbide (SiC) MOSFET Intelligent Power Module platform integrates the power switches and gate drivers, based on the CISSOID HADES2® chipset. These modules address high power density converters offering a SiC power module designed for operation at a high junction temperature (up to 175°C). There are 3 variants of the IPM, with different current ratings (350A, 450A and 550A).



IGBT Power Modules

High reliability and high-temperature components, with a half-bridge topology. They are available in standard 62mm power packages and are guaranteed for operation over the full range -55°C to +175°C.









Dean Technology provides innovative and efficient products, services, and solutions of the highest quality and value while focused on earning our customers' respect and loyalty. Our main goal is always a happy customer. This is accomplished by relying on the talents, abilities, and creativity of our employees in an open, cooperative, and

Product / services supplied

Diodes and Rectifiers, Suppressors, High Voltage Power Supply, High Voltage Capacitors, Power Components, Optical Devices, High Voltage Test equipment

Market Sector

Defence, Industrial, Medical

Product Manager

Simone Benvenuto

Contact the Manager



More info on our website

dynamic environment allowing for shared employee, company, and customer successes.

Dean Technology, Inc. has a long and exceptional history providing world-class products, design, and solutions for high voltage and high power markets and applications.

Headquartered in Dallas Texas, with production facilities in the United States and China, as well as sales offices throughout the world, DTI is a truly modern multinational company.

Where other manufacturers abandon products and markets that don't show year over year quantity growth, we see and are committed to the long-term value of everything we sell. Designing with Dean Technology product ensures you will have continued support well into the future.

Levels For XOE™ High Voltage Diodes

XGF Series is an high voltage diodes. XGF Series offers diodes at 25kV and 30kV, and are designed with DTI's newest diode technology, XOETM (eXtreme Optimized Efficiency).



Higher Voltage and Higher Power High Voltage Power Supplies

Higher voltage and higher power modules available on standard high voltage power supply line is the UMR Family. The UMR-A series, designed specifically as a biasing module, now offers output voltages up to 40kV. The UMR-HPC series, originally offering capacitor charging modules at 60W and 125W, now offers a power level up to 250W and voltages up to 30kV.



BRxXF Series is an axial-leaded, high voltage diode line that offers a fast reverse recovery of 40nS, a higher forward surge (IFSM) rating of 50 to 80A, and low leakage current. BRxXF units range from 2 to 10kV at 600 to 1500mA.





New Dielectric Material for High Voltage Ceramic Capacitors

New Class II Y6P dielectric material for ceramic capacitors. This new material offers superior performance and reliability for high voltage and high temperature applications.

DTI's Y6P dielectric material is a Class II ceramic capacitor dielectric that has a high dielectric constant, low dissipation factor, and excellent stability over a wide temperature range. The material is also compliant with RoHS and REACH regulations.

The devices offer a capacitance range from 100pF to 3200pF – with standard tolerances of $\pm 20\%$ – voltages from 3 to 20kVDC, and operate over a temperature range of -30 to +105°C.





GES High Voltage is a manufacturer of premium high voltage connectors located near Seattle/USA and Munich/Germany (HQ). Transmitting voltages up to 100 kV DC in precision equipment and facilities, GES is established in high-technology markets. GES High Voltage provides a large variety of HV connectors in diverse configurations and designs application specific customizations and modifications. GES products are favored by demanding customers worldwide and are deemed as highly reliable and well-engineered solutions for sensitive applications in industry and science.

Product / services supplied

High-voltage interconnection, Hybrid HV-connector systems

Market Sector

Railway, Transportation, Industrial, Medical

Product Manager

Simone Benvenuto



Contact the Manager



More info on our website

Best Products









Series 100 HV connectors

Single-Pin HV Connectors

- Operating voltage: 10 100 kV DC
- Testing voltage: 15 150 kV DC
- Rated current: 30 80 A
- Number of pins: 1
- Termination method: solder or screw
- Wire size: AWG 14
- Protection class: IP 50
- Flammability: UL94 V-0 or HB

Series M connectors

Multi-pin HV Connectors

- Operating voltage: 12 kV DC
- Testing voltage: 18 kV
- Rated current: 30 A
- Number of pins: 2 9
- Termination method: solder
- · Wire size: AWG 14
- Protection class: IP 54
- Flammability: UL94 V-0 or HB

VP Series connectors

Variable HV-Connectors

- · Operating voltage: 13 kV DC
- · Testing voltage: 20 kV DC
- Rated current: 13 A
- · Number of pins: 1-3
- Termination method: crimp
- Wire size: AWG 26-14
- Protection class: IP 20
- Flammability: UL94 V-0

Series MOD connectors

Series MOD, System Components

- High voltage, 2 Pin per module, up to 12 kVDC
- \bullet Signal transmission, 3 20 pin per module, up to 630 V
- · Coaxial, 3 pin per module, 250 V
- Data transmission, RJ45 CAT5e / USB Type 2, 4 x 400 V contacts
- Diverse frames and housings for up to 7 modules







Nicrom Electronic was founded in 1993 by engineers with more than 30 years of experience in Thick Film technology. Our purpose is to design and manufacture High Voltage, High Power, High Precision and Low TC Resistors. Products are 100% designed and manufactured in Switzerland. The development of products begins with a careful selection of the materials to guarantee high precision and quality. Special designs and process technologies provide outstanding performances and technical solutions for most exacting customers.

Product / services supplied

High Voltage Resistors

Market Sector

Railway, Transportation, Industrial, Medical

Product Manager

Simone Benvenuto



Contact the Manager



More info on our website

Best Products



Low TC High Voltage Resistors Series 425

Cylindrical high voltage resistors with low temperature coefficient of 25 ppm/°C, non-inductive design, high precision, low voltage coefficient, high stability, silicone coating.

Voltage Ratings to 60 KV, Power Ratings to 10 Watts, Resistance range to 1 GOhm, Low TC of 25 ppm/°C, Tolerance to 0.1%, Non-Inductive



High Voltage Surge Resistors Series P400

Cylindrical high voltage surge resistors with proprietary power film design, non-inductive, high stability, high pulse energy and high frequency, high temperature silicone coating.

Voltage Ratings to 90 KV, Power Ratings to 20 Watts, Resistance range to 1 MOhm, High Energy to 250 J, Tolerance to 1%. Non-Inductive



SMD High Voltage Chip Dividers Series HVCD

SMD high voltage chip dividers with fine line non-inductive design, high precision, low ratio temperature coefficient, tight ratio tolerances, low voltage coefficient and high stability.

Voltage Ratings to 10 KV, Power Ratings to 1.3 Watt, Resistance range to 100 GOhm, Low Ratio TC to 10 ppm/°C, Ratio Tolerance to 0.1%, Ratio from 1:100 to 1:10'000





Ohmite Manufacturing Company has been the leading provider of resistive products for high current, high voltage, and high energy applications for over 95 years. The company's full complement of resistor construction includes wirewound, wire element, thick film, and ceramic composition. OHMITE offer a broad selection of Power Resistors to worldwide customers in the industrial, medical, military, and aerospace industries. Through ongoing product development, we continue to provide the latest in resistor technology required by today's sophisticated high voltage, high current, and high energy circuit designs.

Product / services supplied

Power Resistors, Ceramic Resistors, EMI Filters, Industrial Resistor Power Control, Industrial Heatsinks, Electric Double Layer Capacitators

Market Sector

Railway, Transportation, Industrial, Medical

Product Manager

Simone Benvenuto



Contact the



More info on our website

Best Products

A Series, PulsEater® Ceramic Composition

The "A" Series non-inductive, ceramic composite resistors are designed for a variety of applications where high energy handling capabilities are crucial. These resistors are ideal for any application which is subject to surges, high peak power, or impulse energy. Their unique design allows uniform distribution of energy throughout their structure which results in low thermal stress. The high-temperature, solvent-resistant epoxy coating carries a UL94V0

almost any environment.

flammability rating which is suitable for

Maxcap Series Electric Double Layer Capacitators

The Maxcap® electric double layer capacitor standard products series from Ohmite offers a wide range of product geometries and electrical characteristics from which to choose. The major design considerations in selecting a Maxcap® electric double layer capacitor for a given application include the load characteristic, the allowable voltage drop, required backup time, and available board space. • High Energy Density Capacitors for Memory Backup and Data Transmission Power • New LM Surface Mount Product Series • Very high capacity in small size: Up to 100 times that of conventional capacitors. • Useful voltage ratings: 3.5 and 5.5 volt – Ideal for CMOS operating voltage range. 11 volt – LV Series, backup for relays, actuators, small motors. • Full range of sizes: from 0.01 to 5.6 farads @

5.5 volts; 0.47, 1.0 and 5.0 farads @ 11 volts. • Low profile with LP, LJ and LK Series • Ultra long life: unlike batteries, Maxcap DLCs have no parasitic chemical reactions. They can be fully charged and discharged indefinitely. There is no "memory" effect.



ALN series Thick Film High Power Chip Resistor

Ohmite has the solution for high wattage surface mount chips. The ALN series thick film chips offer 3.5 watts of power dissipation in a 2512 package size. This is accomplished with the use of an Aluminum Nitride

substrate. Aluminum Nitride (AIN) dissipates heat far more efficiently than standard Alumina or Ceramic substrates. Ohmite has engineered a thick film printing process to apply a resistive ink to the AIN substrate creating an optimal chip for high power. Temperature coefficients are down to 150 ppm providing a chip with great stability.







VPG Foil Resistors (a business unit of Vishay Precision Group) delivers deep engineering expertise in the design and manufacturing of high-value precision resistors and measurement systems. Known for innovative market-leading brands, VPG has built a reputation over the last six decades for products that provide the highest levels of accuracy, stability, and reliability.



Bulk Metal® Foil Resistors

Since the introduction of the technology (which Vishay Group spearheaded in the '60s), Bulk Metal® Foil devices have had the best precision and stability of any resistor available. The product portfolio includes discrete resistors and resistor networks in surface mount and throughhole (fixed-lead) configurations.



Power Current Sensors

Power current sensors available in SMD or axial versions with optional heat sinks, and are available with 4terminal Kelvin connections for precise measurement.



Bulk Metal® Foil Resistors, Power Current Sensor, Hermetic Sealed Resistors, MIL Qualified Resistors



Avionics, Defence, Industrial, Medical, Space, Telecom, Grid&Energy

Product Manager

Stefano Chiesa



OPL & EPPL resistors

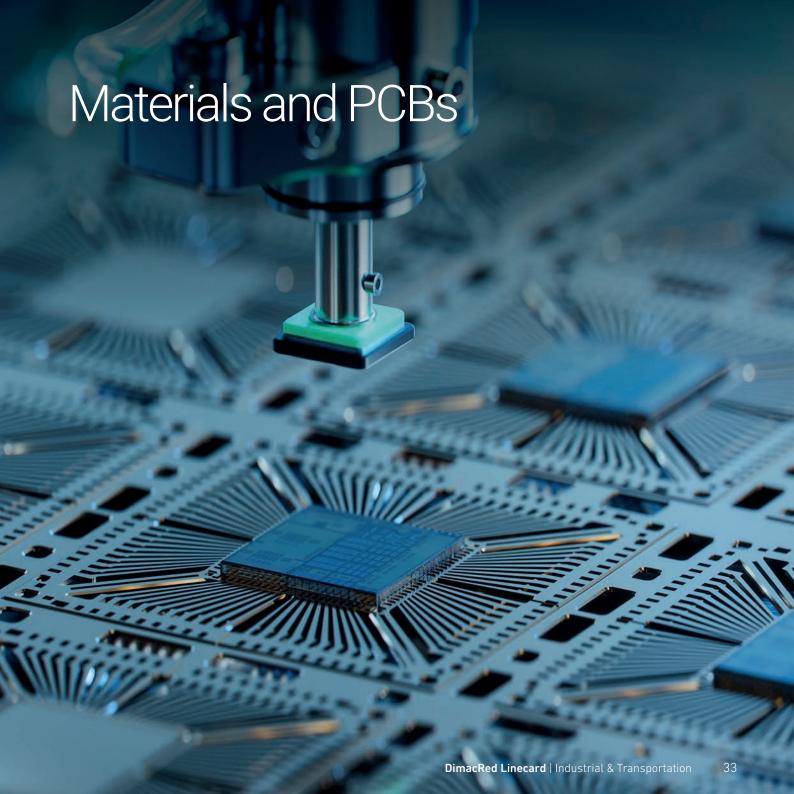
Vishay Foil resistors have been used for more than 40 years in space and military equipment, even before a suitable MIL SPEC was established. In the late '60s, MIL R 55182 was established and the RNC90 style applied to the Vishay Foil resistors; they have been used continuously ever since. Specific parts have been included also in the European EPPL.



Contact the Manager



More info on our website







Flux is a leading expert in the development and production of magnetic components of superior performance for power supplies. Typical applications are those where standard components are not suitable and that require extensive testing and quality assurance, in defence and space, commercial space, renewable energy, automotive and industrial markets. Flux applies a full control of the product development, from design to manufacturing. Reliability encompasses the whole supply chain, from dual sourcing material solutions, to 0% fail-rate testing program. Quality system meets the most exacting standards, among which, ESA Certificate of Technology Flow Qualification No. 364 and IATF 16949 Automotive Quality Management.

Product / services supplied

Chokes, Transformers, Inductors

Market Sector

Automotive, Avionic, Railway, Industry, Space, Hi-Rel, RF&Telecom, Grid&Energy, Defence, Transportation

Product Manager

Sara Boarin



Contact the Manager



More info on our website

Best Products



Chokes

(output chokes, differential mode and common mode). Transformers produced according to UL systems; wide range of temperature ranges available.



Transformers

in the 1W - 10kWh power range, with custom-design bobbins and cores shapes. Transformers include traditional (Half/full bridge, forward, push-pull), resonant transformers (Half/full bridge LLC, DAB, Forward), current sense transformers and GFCI.



Inductors

(PFC, Boost, Buck, Resonant) customdesigned to get optimized solutions, concerning efficiency and physical size. Flux inductors are typically used in power supplies for industrial applications, EV Charging, eMobility systems, aviation, and in advanced electronics for satellites, spacecraft, and rocket boosters.







INDIUM CORPORATION is a world leader provider of cutting-edge technologies and material solutions for advanced electronics assembly, with the highest quality and the widest selection of materials: high-temperature die attach, lead-free alloys, Au and braze alloys, PCB assembly, thermal interface materials, etc.

Formulations are designed to deliver low-voiding and withstand extreme temperatures, thermal cycles and mechanical stress for more and more demanding operating environments in power electronics, automotive, etc. Solder pastes are based on six alloys families (GA, Bi, In, SN, Pb, Au); melting temperatures range from 7-1064°C.

Product / services supplied

Soldering Materials, Thermal Interfaces

Market Sector

RF&Telecom, Railway, Automotive, Industry, Medical, Space-Defence

Product Manager

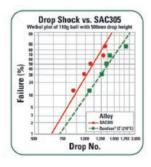
Sara Boarin



Contact the Manager

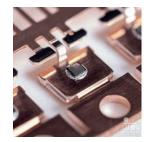


More info on our website



Durafuse® LT

is a patented two-alloy system paste that provides a lead-free solution in low-temperature applications with thermally sensitive components, with drop shock resilience and peak reflow temperature is under 210°C.

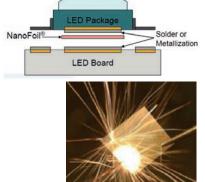


QuickSinter®

Pressureless Ag Sinter Paste, Ag sinter paste formulated for use in power dieattach and clip-attach applications where a pressure sintering option may not be suitable or available, such as discrete power devices (high-Pb replacement), LED-attach, and WBG semiconductor die attach.

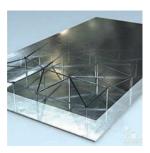
Durafuse® HR

is a mixed-alloy system designed for applications requiring extended thermal cycling reliability, beyond that available with traditional Pb-free alloys (-40°C/125°C and -40°C/150°C). The low-voiding alloy initiates wetting while the high-reliability elements enhance strength and durability of the solder joint.



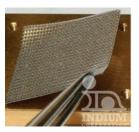
NanoFoil®

is a reactive material that can be activated to create a self-sustaining, heat-releasing reaction. It acts as localized heat source to melt adjoining solder layers at room temperature. It eliminates the need for an oven and manages CTE mismatch. It is suitable for use with high-temperature solders or brazes and enables high-strength bonds between most combinations of materials.



InFORM®

is a reinforced matrixed solder composite. A copper grid inside the preform improves strength and creates a more consistent bondline thickness. This maximizes the thermal and mechanical reliability in the solder joint. InFORMS® can be manufactured into a wide variety of shapes.



Heat Spring®

is a soft metal alloy, patterned and pliable, to be used as a thermal conduit between two compressed surfaces. The indium content makes it ductile: its pattern profile accommodates the irregular substrate features creating a more intimate contact between the surfaces and improving the heat exchange. Heat-Spring® is designed for a variety of high-performance applications, including TIM2, TIM3, TIM1.5, burn-in, and immersion cooling.





HIGH-REL GROUP: highly specialized metal components for the microelectronic packaging industry and the hermetic sealing, including getters & absorbers, lids (solder seal Lids, window, domed, stepped/flat), ring frames, thermal management solutions, standard and specialty solder preforms and more. QNNECT: high quality relies on laser, high tolerance CNC machining, waterjet, stamping, and Nadcap™ accredited plating.

Product / services supplied

Hermetic Packaging Solutions, Thermal Interfaces

Market Sector

RF&Telecom, Railway, Automotive, Industry, Medical, Space-Defence

Product Manager

Sara Boarin



Contact the Manager



More info on our website





TIMCool

up to 850 w/mK

DiaCool™

Graphene based Thermal Interface Material with TC up to 90w/mK in Z axis. It is compressible and acts as an optimal gap filler, viable for use in FlipChip TIM1 and TIM2 applications, with no pumpout.

Thermal Interface Material, Silver-

composites with Thermal conductivity

Diamond, Copper-Diamond and

Aluminum-Diamond isotropic

Getters

Zeolite type for the absorption of H2, CO2, H2O and organics, even for medical implants.

PA&E, LTI, SINCLAIR

Hermetic packages and connectors for microelectronics, fiber-optic, microwave, optical applications, medical-implantable.











Winslow Adaptics has more than 40 years of experience in developing robust and innovative solutions for all electronic interconnect needs, in several markets. Winslow remanufactures legacy components for fast, cost effective obsolescence solutions and supply chain shortages, with adaptability to any footprint. Winslow has reverse engineering capability of plastic & metal parts where drawings no longer exist. Precision engineering capability with experienced toolmakers who can work a broad range of ferrous and non-ferrous metals and engineering plastics, or can propose materials, treatments, surface finishes and coating specifications suited to client's requirement.

Market Sector

Automotive, Avionic, Railway, Industry, Medical, Space, Hi-Rel, RF&Telecom, Grid&Energy, Defence, Transportation

Product Manager

Sara Boarin



Contact the



More info on our website

Best Products

Winslow product includes transistor clips, mounting pads, sockets, heatsinks, and other accessories used in semiconductor applications and a broad line of industry standard Interconnect, including legacy lines.



PLCC (Plastic Leaded Chip Carrier) Sockets



SIMM Sockets (Single Inline Memory Modules)



Transistor and IC circular sockets



Opto/Diode Display Sockets









AUTRONIC, is a German company specializing in the development and production of high-quality power solutions. Known for their reliability, Autronic focuses on delivering efficient and robust power systems that meet strict industry standards, particularly for applications requiring high levels of safety and durability. Their product's power range goes from 3W to 350W and complies with key international standards such as EN50155, EN45545, EN50121-3-2, and EN61373, ensuring top safety, quality, and reliability in the railway and industrial sectors. Autronic blends innovative technology with deep industry expertise to meet specific customer needs.

Product / services supplied

DC-DC Converter, Custom specific solution

Market Sector

Railway, Industrial, Transportation

Product Manager

Paolo Sala



Contact the Manager



More info on our website

Best Products



PCB Mounting

Compact, railway-approved converters like the AER and HPC series offer power ranging from 3W to 75W, with wide input ranges for harsh environments ideal for compact, highefficiency applications.



Wall Mounting

Includes high-power options like the HFC and HFBC series providing from 30W up to 500W with ultra-wide input ranges from 14.4V to 154V. Standard features include active reverse polarity protection, inrush current limitation, and overvoltage, overtemperature protection, they are open-circuit proof, permanently short-circuit proof, and can be switched off externally.



19" Rack

HEC series is designed for 19" rack installation, have an ultra-wide input voltage range between 14,4 V and 154V with a power of 120W and 150W, efficiency up to 91%, temperature range of -40 °C to 85°C according class OT4. The galvanically isolated DC/DC converter has many features integrated, such as active inrush current limitation and polarity reverse protection, temperature, overcurrent and overvoltage protection, parallel and redundancy operation with integrated 0-ring controllers, 10 ms hold up time and a high insulation resistance.



DIN Rail Mounting

Key models include the HPBC20-WT and HFC100-W/T series, offering power outputs from 20 W to 100 W. These converters features ultra-wide input voltage range between 14,4 V and 154 V, protection against short circuits, over-temperature, and over-voltage, ensuring consistent and reliable performance in harsh environments.





GAIA Converter is a leading manufacturer of DC-DC converters with modular power conversion solutions. Their products are designed to offer high efficiency, reliability, and compactness, making them ideal for a wide range of Avionics, Military, Railway/ Transportation and high-end Industrial application. GAIA's converters comply with key standards such as MIL-STD-461, MIL STD-704, MIL-STD-1275. DO-160. EN50155 ensuring robust performance under harsh conditions. With power ranges from 4W to 500W converters, front-ends, filters, bus conditioners and protection modules GAIA provides unprecedented advantages to facilitate the design of sophisticated power architectures. regardless of requirements and standards.

Product / services supplied

DC-DC Converter, DC-DC Front-End Modules, AC-DC Power Factor Corrected Front-Ends

Market Sector

Avionics, Defence, Railway, Industrial

Product Manager

Paolo Sala



Contact the



More info on our website

Best Products





Isolated DC/DC Converter

GAIA Converter offers a wide range of high density and low profile Isolated DC-DC Converters from 4W to 500W divided into 3 technology families. This includes ultra-wide input range and a large range of voltages to enable you to meet the requirements of any input voltage standard. - MGDxx Series



Non-Isolated DC/DC converter

Small size Non-Isolated DC-DC Converters with a maximum input voltage of over 35V. These converters have low output voltage for use as PoL, with sequencing and synchronization capability. They deliver maximum current of 14A at low output voltage and 260W at higher output voltage. Output voltage is adjustable over a wide range and adapted to fast-load transients - MPGS-14A Series



DC-DC Front-End Modules

GAIA Converter offers a complete range of Front-End elements to protect and adapt the power conversion stage, like EMI filter, reverse polarity, surge limiter, under voltage limiter, inrush current limitation, hold-up (transparency during momentary input bus drop-outs), On/Off, supply of commentary signals to ensure perfect management of power supply. LGDS, PGDS, LHUG and FLHG Series





M+R Multitronik, power supply specialist for industrial, medical and LED power supplies based in Rellingen, was founded in 1981. They cover the entire power range of power supplies and offer support for design-in projects, technically sophisticated advice and a large range of standard power supplies immediately available from stock. They represent a wide range of manufacturers and have been an authorized Mean Well distributor since 1993. To complement the portfolio, they have inrush current limiters from Camtec, piezoceramic signal generators and loudspeakers from Sonitron and EAST.

Product / services supplied

DC-DC Converter, AC-DC Converter, Loudspeakers, LED power supply, Signal Generator

Market Sector

Railway, Industrial, Transportation, Medical

Product Manager

Paolo Sala



Contact the Manager



More info on our website

Best Products

Power supplies in the housing/U-frame

AC/DC switching power supplies in a housing or in a U-frame for installation and DIN rail mounting.

We can access a power range from 15 to 10,000 watts. Depending on the type and series, they deliver up to 14 output voltages and have an active integrated PFC function from $75\,\mathrm{W}$

We also have power supplies for DIN rail mounting. These are available with outputs from 10 to 960 W. They are each equipped with an output voltage and, depending on the output, have a 1- or 3-phase input.



Power supplies in open frame/modular design

As an open version, the AC/DC switching power supplies provide outputs of 5–300 W. Depending on the type and series, they are equipped with up to four output voltages and are also available with medical approval according to IEC60601.

Switching power supplies are also available as encapsulated print modules.



DC/DC power supplies

Our DC/DC converters in the power range from 0.5 to 600 W are available in more than 20 different housings: with one, two or three output voltages for circuit board and partly also SMD mounting. All converters are galvanically isolated (at least 500 VDC standard, optionally up to 6 kV), short-circuit proof and mostly have a wide input range (2:1); many series are also available with a 4:1 range or with 43-160 VDC for railway applications.

These products are mainly used in industrial, medical and railway applications.



LED power supplies

Our AC/DC power supplies specifically for LED lighting cover a power range from 8 to 600 W and have an active PFC function. With the universal input of up to 305 VAC, they are used worldwide. The highlights are the extremely compact and flat design high efficiency and optional dimming using 1-10 VDC, PWM signal, resistor, triac or DALI protocol.



Signal Generator

Sonitron's piezoceramic signal generators were designed for a wide range of applications.

The compact design of the SMA series is suitable for installation in a housing and is available as a pin or SMD version. The SMB series has an individually controllable multi-frequency range.

These signal generators are shock and water resistant according to IP65 and are therefore suitable for use in harsh environments.







MICRO POWER DIRECT, is a leading supplier of high-performance DC/DC power converters and AC/DC power supplies. Our AC/DC power supplies deliver consistent power, ranging from 3W to 550W, and come in a variety of packaging options, including PCB mount, chassis mount, and DIN-rail mount. Our extensive range of DC/DC converters are available from 1W to 150W and many feature industrial-grade packaging ensuring durability and reliability in harsh environments.

Product / services supplied

DC-DC Converter, AC-DC Converter, IGBT drivers & SiC DC-DC, Medical Approved Power Supplies, POL Regulators

Market Sector

Railway, Transportation, Industrial, Medical

Product Manager

Paolo Sala



Contact the Manager



More info on our website

DC-DC Converter

SMD package from 1 to 6W, SIP (System In a Package) package from 0.25 to 9W, DIP (Dual in Line Package) package from 0.25 to 15W, modules from 6 to 50W, Photovoltaic and Railway from 6 to 75W, Medical from 1 to 40W.



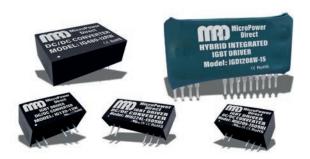
AC-DC Converter

Modules from 1 to 60W in compact packaging, Open frame from 1 to 500W, DIN rail from 20 to 240W, Medical from 5 to 400W, Enclosed from 35 to 320W, U-channel from 60 to 600W.



IGBT drivers & SiC DC-DC

IGBT and SiC DC/DC converters are designed to help simplify the task of controlling high-speed semiconductor switches. Unlike the typical DC/DC converter, these units feature asymmetrical outputs. Units are available that provide the specific output levels required to control a wide variety of high speed IGBT and SiC semiconductors.



POL Regulators

POL regulators simplify board design and optimize space by integrating various functionalities like switching, control, and protection within a single compact package. Our POL regulators are compact, easy to integrate and have enhanced efficiency.





Medically Approved Power Supplies

Medically approved power supplies comply with stringent international safety standards such as IEC 60601-1, ensuring patient safety and minimizing risks of electrical shock, leakage currents, and fire hazards. Our broad range of medically approved DC/DC converters and AC/DC power supplies ensure you can power your healthcare innovations with confidence.









NETPOWER, is an industry leading supplier of high efficiency high power density DC-DC converters. NetPower's designs provide excellent thermal management in the industry, leading to higher performance and longer reliability. DC-DC modules includes 2:1, 4:1 and 8:1 ranges operating voltages and have many product sizes including thirty-second brick to the full brick, SIP, DIP and SMT packages. Netpower products are extensively applied in networking, communication, railway, medical, EV and industrial application. NetPower can build fully customized products.

Product / services supplied

DC-DC Converter, E-mobility Converter, Heatsinks, EMI Filters and Baseplates

Market Sector

Industrial, Transportation

Product Manager

Paolo Sala



Contact the Manager



More info on our website

Best Products

Isolated DC-DC Converters

NetPower isolated DC-DC converters feature high efficiency and high power density, and are available open-frame and/or encapsulated. The input voltage spans from 9V to 650V in 8:1, 4:1 and 2:1 ratios. The output power of these converters ranges from 15W to 1000W. These DC-DC converters are in industry-standard packages including bricks (1/32, 1/16, 1/8, 1/4, 1/2, and full) and 1"x1" DIP.





EV on-board DC-DC Converters

NetPower e-Mobility power converters include on-board DC/DC, on-board charger (OBC) and OBC+DC/DC combo with various input voltage ranges. To comply with the automotive quality standard, NetPower has implemented total quality control for efficient and high-quality manufacturing and lifecycle traceability.



Non-Isolated DC-DC Converters

NetPower non-isolated point-of-load (POL) DC-DC converters have high efficiency up to 96% and are in DOSA standard footprints. The input voltage spans from 2.5V to 60V; the output voltage ranges from 0.5V to 60V; output current goes up to 60A. Over-voltage, over-current, short-circuit and over-temperature protections are standard. Output voltage tracking and load sharing are available options on selected models. These non-isolated DC-DC converters are with SMT, SIP or Horizontal TH interfaces, and are in open-frame, baseplate, or encapsulated packages.



Heatsinks, EMI Filters and Baseplates

NetPower heatsinks are suitable for industry standard DC-DC power modules and are available in various sizes and fin orientations. These heatsinks improve thermal performance of power modules in convection cooling.







POLYAMP, since 1960s manufactures DC/DC converters that are used in applications where the electrical/physical environment is tough and/or the customers have high demands on reliability, EMC and safety. They can be installed in any weather-protected area and are convection cooled. As such they can be mounted in any direction. The DC-DC can be mounted in environments that are sensitive to interference, such as military, marine and telecom. At the same time, they can be in electrically poor environments such as switchgear, power industry, trains and heavy industry.

Product / services supplied

DC-DC Converter, AC-DC Converter, DC-AC Inverted

Market Sector

Railway, Transportation, Industrial, Telecom, Grid&Energy

Product Manager

Paolo Sala



Contact the Manager



More info on our website











DC-DC Converter

The standard operating temperature is -25 to + 55 ° C optionally -40 or + 70 °C with full output. They have units 19"- cabinet compatible 2 - 3U and Euroformat 3 & 6 HE or DIN TS-35 mounting. Their designs are made for convection cooling. Self standing units with no need for forced ventilation. Can be mounted in any direction.

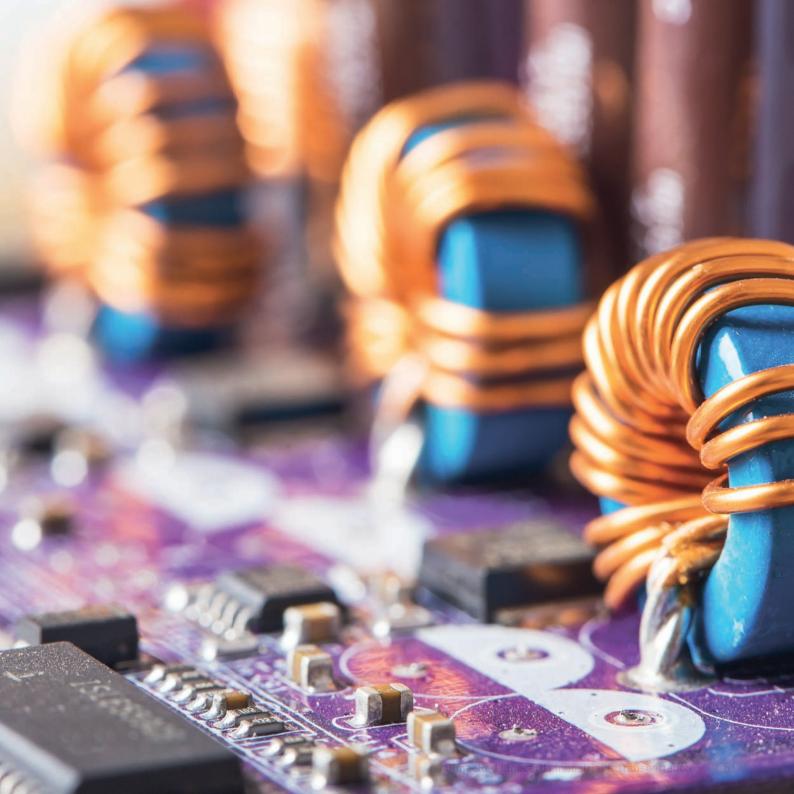
MTBF > 1 Million hours

AC-DC Converter

Input voltage 176 - 264 Va.c., 85 - 264 Va.c., 85 - 135 Va.c.
Single outputs 5 - 48 V, 100 - 150 W
Single outputs 12 - 220 V, 200 - 240 W
Output over voltage limit OVL
Temperature power limit
Alarm circuit with relay
Accessible on front panel
Output OK status green/red LED
Output voltage adjustment
Output voltage measurement
Wall, case, DIN mounting

DC-AC Inverted

DC-AC inverters are available for input/battery voltages 24, 48/60, 110/125 and 220 Vdc with programmable 230 Vac 50 Hz output. These can be supplemented with automatic by-pass, manual switch and fuse distribution. Modular power convertion architecture 1-24 kVA. Configuration as 1-phase or 3-phase systems, with or without true redundance hot swapable.









ALLWAYTON specializes in high-speed railway wireless communication products, particularly GSM-R phones and modules. The company, staffed by experts in mobile communication, emphasizes adherence to both Chinese and European railway standards. AllWayTon aims to deliver reliable products while actively engaging in the development of 5G communication technologies (FRMCS) and contributing to industry standards. Their products are designed for high performance and durability, suitable for global markets.

Product / services supplied GSM-R Phone, GSM-R Module

Market Sector Railway

Product Manager

Paolo Sala



Contact the Manager



More info on our website

Best Products



GSM-R Phone

Advanced GSM-R phones designed for reliable railway communication. These devices feature a 2.2-inch TFT display, IP68-rated rugged construction, and battery standby time up to 262h. Supporting voice group call, SMS, and emergency call functions, they meet industry standards for safety and performance, ensuring clear and secure connectivity in challenging environments.



GSM-R Module

GSM-R modules provide essential communication capabilities, enabling seamless integration into railway systems. They support voice, data, and SMS services. Designed for high performance, these modules feature low power consumption, robust performance, and compliance with EIRENE standards, ensuring reliable communication in demanding railway environments.



SYNICS

Synics Rail is a Swiss company, system provider of electronic journey data registration systems and accessories for public transport. With over 30 years of expertise in data recording and vehicle safety, they serve vehicle manufacturers, municipal transport, and railway companies. Their products are known for reliability (SIL2-SIL3), low obsolescence, regulatory compliance, and customizability.

Product / services supplied

Security data recorders

Market Sector

Railway, Transportation

Product Manager

Paolo Sala



Contact the Manager



More info on our website

Best Products

Asis VS-100 Data recording and control system

Asis VS-100 is an advanced data recording and control system designed to provide detailed journey monitoring. The system also controls essential vehicle functions such as vigilance, dead man, roll-back protection, wheel flange lubrication, deceleration monitoring and others, enhancing safety. Additionally, it offers comprehensive journey data analysis tools to optimize performance and efficiency. This makes the AsisVS-100 a critical component for improving operational effectiveness. The storage of the trip data takes place in several stages. This multiple storage guarantees that if the SDHC memory card is missing or manipulated, the most recent driving data can always be reproduced. Instead of SDHC card removal, device status and data can be transferred via WLAN to customer-defined servers, enabling centralized monitoring of the vehicle fleet.





GPS system

AsisGPS is a robust positioning system designed for precise navigation in challenging environments. It provides accurate positioning, time synchronization, altitude measurement, and speed data using satellite information via NMEA 0183. With interfaces like CANopen, sdxCAN for direct AsisVS-100 connection, and RS 485, it integrates seamlessly into advanced systems, ensuring reliable operation and accurate data.





Radio Frequency Solutions

Antennas, EMI filter and High-voltage capacitors







Anatech Electronics Inc. is a US manufacturer which offers the industry's largest portfolio of high-performance RF filters and related products covering the range of 10 kHz to 40 GHz.

Anatech Electronics also provides tailored solutions to fit customer requirements.



Cavity Bandpass Filters

Anatech Electronics cavity bandpass filters are available in a wide range of frequencies, power levels, bandwidths, and rejection. The resonators and cavities are silver plated for low RF resistivity, in order to achieve low insertion loss and high selectivity.

Product / services supplied

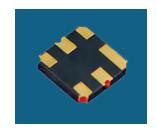
RF Filters, Multiplexers, Specs Matched Filters, Custom Filters

Market Sector

Defence, Space, Telecom, Industrial

Product Manager

Federico Miorelli



Surface Acoustic Wave (SAW) Filters

These filters employ the piezoelectric effect to convert an electromagnetic signal into an acoustic signal and vice versa. SAW bandpass filters provide sharp cut-off, very linear phase characteristics, high stability, and are highly reliable. These extremely compact surface-mount devices can be specified for operating frequencies from 4.75 MHz up to 6 GHz.



Duplexers/LNAs

Combining a high-performance duplexer filter with an integrated low-noise amplifier, these products are well suited for both commercial and military applications. The LNA increases the dynamic range and sensitivity of the receive portion of the duplexer or when combining signals will increase the sensitivity of the receiver. The LNA/duplexers operate in the C, X, and Ku bands (2 to 20 GHz).



Contact the Manager







Johanson Dielectric specializes in high-reliability components for the automotive industry, adhering to AEC-Q200 standards. Their product line includes EMI filters and high-voltage capacitors, all designed to meet the demanding needs of modern vehicles, including electric and autonomous vehicles. Johanson provides custom solutions tailored to unique design requirements and supports automotive engineers with expert consultation.

Product / services supplied

RF Capacitors, RF inductors, Integrated passive

Market Sector

Automotive, Transportation, Industrial, Medical, Telecom

Product Manager

Daniele Viganò



Contact the Manager

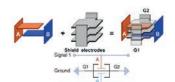


More info on our website

EMI Filters (X2Y)

Johanson's EMI filters provide superior attenuation with a small, single-chip solution. They are ideal for managing common mode noise in applications such as electric motors, power windows, and satellite radios.







High Voltage Capacitors

Offering safety-certified options with DC voltages from 500V to 6kV, these capacitors are available in various sizes and capacitance ranges. They are used in electronic power steering, fuel pumps, and DC/DC converters for hybrid and electric vehicles.







Johanson Technology specializes in high-reliability components for the automotive industry, adhering to AEC-Q200 standards. Their product line includes antennas, integrated passive components (IPCs), EMI filters, high-Q capacitors, and high-voltage capacitors, all designed to meet the demanding needs of modern vehicles, including electric and autonomous vehicles. Johanson provides custom solutions tailored to unique design requirements and supports automotive engineers with expert consultation.

Product / services supplied

RF Capacitors, RF inductors, Integrated passive

Market Sector

Automotive, Transportation, Industrial, Medical, Telecom

Product Manager

Simone Benvenuto



Contact the



More info on our website



RF Ceramic Chip Antennas

Johanson offers AEC-Q200 qualified antennas that excel in small size and detuning resilience. They support a range of applications such as WiFi, Bluetooth, and wireless automotive systems, and come with antenna design and tuning services.



IPCs (Integrated Passive Components)

Their IPCs cover RF bands from 300MHz to 30GHz and are used in applications like tire sensors and infotainment systems. Features include low insertion loss and a variety of components such as filters and couplers.



High-Q Capacitors

These capacitors ensure lot-to-lot RF consistency and come in various EIA case sizes. They are used in applications including Bluetooth, GPS, and wireless phone chargers, and are designed to control self-resonant frequencies.









CIBAS specializes in delivering tailored solutions for the industrial and electronics sectors. With a focus on engineering, production, and supply chain management, they provide services such as electronic assembly, cable harness production, and industrialization. CIBAS offers high-quality manufacturing and end-to-end support, ensuring flexibility and precision to meet specific client needs.

Product / services supplied

Magnets

Market Sector

Industrial, Automotive, Transportation, Railway, Medical

Product Manager

Daniele Viganò



Contact the Manager



More info on our website

Best Products















Flexible Rubber Magnets



Sintered Ferri

Rare Earth Sintered Magnets (Including Compressed NdFeB, SmCo)

Rare Earth Sintered Magnets are highperformance magnets made from rare earth elements like neodymium and samarium. They offer superior magnetic strength, resistance to high temperatures, and excellent durability. These magnets are widely used in applications such as motors, sensors, and aerospace due to their efficiency and reliability.

Plastic Bonded Magnets (including Injected/ Compressed NdFeB, SmFeN)

Plastic Bonded Magnets are created by blending magnetic powders with plastic binders. They offer flexibility, corrosion resistance, and easy machinability. Ideal for complex geometries, these magnets are often used in automotive sensors, medical devices, and precision instruments where customization and lightweight solutions are essential.

Other Materials (including ferrite, AlNiCo, and flexible magnets)

These materials cater to diverse applications, offering varying degrees of magnetic strength, temperature resistance, and adaptability. They are commonly used in automotive, consumer electronics, and industrial applications where specific magnetic properties are required.





NVE Corporation specializes in the development of innovative spintronic products, utilizing nanotechnology for sensing and communication.

They are renowned for their highperformance magnetic sensors and isolators, offering precise and reliable solutions for industrial, automotive, and medical applications, ensuring robust performance even in demanding environments.

Product / services supplied

Voltage Regulators, Sensors, Isolators

Market Sector

Industrial, Automotive, Medical

Product Manager

Daniele Viganò

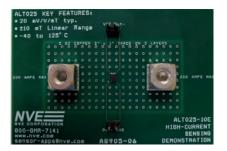




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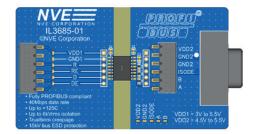
Sensors

NVE's sensors leverage Giant Magnetoresistance (GMR) and Tunnel Magnetoresistance (TMR) technologies, which provide high sensitivity and precision in magnetic field detection. Their current sensors offer accurate current measurement, while proximity and position sensors detect the presence or movement of objects. These technologies ensure low power consumption and high reliability in industrial, automotive, and medical applications.



Isolators

NVE's isolators provide high-speed, reliable digital signal transmission while protecting circuits from electrical surges. They include couplers and transceivers that ensure data integrity and safety in industrial, automotive, and healthcare applications, offering robust isolation and fast communication.







Melexis is a global supplier of microelectronic semiconductor solutions, offering innovative and advanced products primarily in the automotive, industrial, medical, and consumer markets. With a strong focus on sensing, driving, and communication technologies, Melexis delivers a wide range of integrated circuits (ICs).

Product / services supplied

Magnetic Position sensors and Current sensors, Temperature sensors, Pressure sensors, Optical sensors, Motor drivers, LED drivers, Wireless communication ICs, LIN/CAN Transceivers

Market Sector

Automotive, Transportation, Railway, Industrial, Medical.

Product Manager

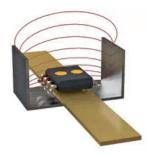
Daniele Viganò



Contact the Manager

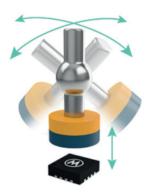


More info on our website



Magnetic Current Sensor

Available in standard magnetic core, IMC-Hall with ferromagnetic shield, or fully integrated solutions with direct current flow. Comes in SOIC-9 or TSSOP-16 package. Suitable for applications from a few amperes to 2kA (AC/DC) with isolation up to 4.8 kV and analog outputs. Automotive grade qualified for reliable performance in demanding environments.



Magnetic Position Sensor

Designed for precise and reliable position detection in automotive and industrial applications, featuring high accuracy and robust performance. Utilizing advanced Hall effect and Triaxis® technology, they offer contactless position sensing, reducing wear and enhancing durability. Compatible with various interfaces (Analog/PWM/SENT/PSI-5/SPC Sin/Cos), ideal for rotary, linear, and joystick applications. Automotive grade qualified for stable position measurements.



Inductive Sensor

Offer precise, reliable position detection for automotive and industrial applications with contactless, wear-free operation. Key features include high accuracy, durability, absolute position measurement, and reduced system costs. Support both linear and rotary motion without magnets, minimizing electromagnetic interference (EMC). Ideal for stable, maintenance-free position sensing in harsh environments.



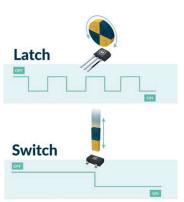
Pressure Sensor

MEMS PCB sensors offer high accuracy for 5-70 bar. PCB-less and TPSM solutions handle 0-5 bar. Bare Die sensors are flexible for custom designs within 5-70 bar. INTERFACES solutions cover over 70 bar. Available as absolute or relative sensors with analog and SENT outputs, ideal for automotive and industrial use.



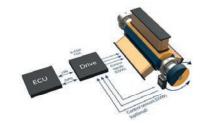
Optical Sensor

Advanced 3D imaging and distance measurement using infrared light for accurate distance and detailed 3D mapping. Features high resolution, fast response, and robust performance in various lighting. Melexis ToF sensors are easy to integrate, ideal for automotive, industrial, and consumer electronics. Perfect for gesture recognition, object detection, and occupancy sensing. Evaluation Kit available.



Lacht & Switch Sensor

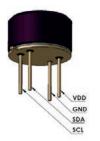
Reliable magnetic sensors for proximity and motor applications, available in 2-wire for low power. 3-wire for high-speed, and 4-wire for advanced diagnostics and accuracy. Melexis Latch & Switch ICs ensure durable, precise performance in tough environments



Microcontroller, Fun&Pump **Driver & Transceiver**

LIN Motor Drivers (<1A) and Pre-Drivers (>1A) offer full or dual half bridge control for small motors in compact SO8, QFN24, and QFN32 packages. Suitable for 12, 24, and 48V, they optimize automotive mechatronics. LIN-CAN-RFID transceivers provide flexible solutions for LIN or CAN invehicle networks and affordable RFID/NFC communications.PSI-5/SPC Sin/Cos), ideal for rotary, linear, and joystick applications. Automotive grade qualified for stable position measurements.

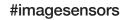
1-coil fan/pump driver: cost-effective, compact and silent for automotive and consumer use. Code-free design for 1-50 W (12V/24V) with EMC, ideal for stable, maintenance-free sensing in harsh environments.



Infra-red Temperature Sensor

Infra-red sensors in TO39 and OFN (3x3x1 mm) packages offer robust performance, multiple FOV options, -40°C to 380°C, ensuring stability and precision. With fast response they are ideal for engine management, climate control, and analog and PWM outputs for wide compatibility.







OMNIVISION is a leading company in developing and delivering advanced digital imaging, analog and touch & display solutions for multiple applications across several industries. Its innovative technologies, as a global fabless semiconductor organization, have enabled smoother human/machine interfacing solutions within the automotive, medical, security & surveillance, computing, mobile phone and IoT/emerging markets.

Product / services supplied

CMOS image sensors, Camera Cube Chips (CCC), LCOS (Liquid Crystal On Silicon), ASIC (Application-Specific Integrated Circuit)

Market Sector

Automotive, Industrial, Medical, IoT/Emerging, Mobile devices

Product Manager

Antonio Sofo



Contact the Manager



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Complementary Products



Viewtech

Best Products



CMOS image sensor

A CMOS image sensor is the core of every advanced image system solution. This sensor converts the optical image into an electric signal: each pixel has a photodiode and a CMOS transistor to amplify the output signal. Available in CSP (Chip Scale Package) or in reconstructed wafer package (bare die).



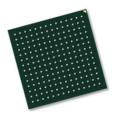
Camera Cube Chip

Miniature camera module that integrates image sensor and lenses in a very tiny space. Can be directly soldered to the printed circuit board without any socket or insertion.



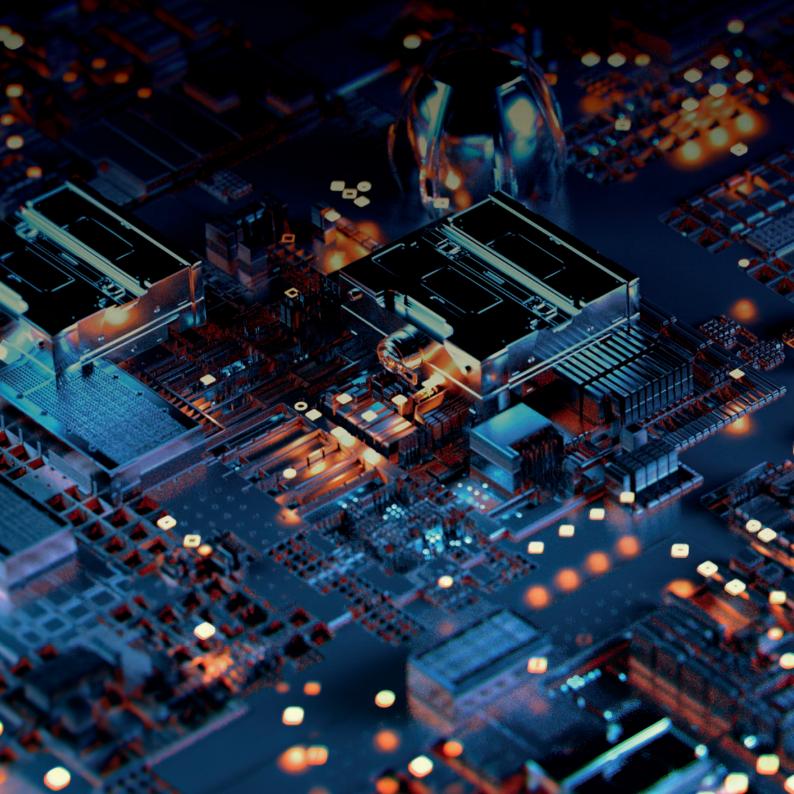
Liquid Crystal On Silicon

Miniaturized liquid crystal display made by a liquid crystal layer on a silicon baseplate, for a variety of display applications.



Application-Specific Integrated Circuit

intelligently enpowered video processor that can be used for automotive, mobile camera and IoT applications.









Efinix, founded in 2012, is a semiconductor company specializing in innovative FPGA technology. Their Quantum® architecture revolutionizes FPGA design by offering a scalable, process-agnostic platform that combines flexibility and high performance. Efinix's Titanium and Trion® FPGA families target various applications, from IoT and mobile devices to industrial automation and Al-driven systems. With a global presence and strong backing from leading industry investors, Efinix empowers edge computing with efficient, low-power solutions.

Market Sector

Industrial, Transportation, Automotive, Medical, Railway, RF&Telecom

Product Manager

Daniele Viganò



Contact the Manager



More info on our website

Best Products



TITANIUM™

Low Power, Small Footprint, Big Compute. You only have a few square millimeters to spare and you need to pack in as much computing power as you can? Efinix's next-generation Titanium FPGAs are fabricated on a 16 nm process and deliver high performance with the lowest possible power and a small physical size.



TOPAZ™

Low Power, High Volume, High Performance. When you are ready to go big, you need a device that is just right for volume production. Topaz FPGAs combine an extra efficient architecture with the features and protocols commonly used today (think PCIe Gen3, MIPI, LPDDR4, and LVDS), so you can go big and still have room to innovate.



TRION™

Delivering Power-Performance-Area Advantages. Trion® FPGAs are built on a 40 nm process with a logic density range from 4K to 120K logic elements (LEs) and standard interfaces such as GPIO, PLLs, oscillators, MIPI, DDR, LVDS, etc. Trion FPGAs target general-purpose custom logic markets (mobile, IoT, general consumer, industrial, and medical) as well as fast-growing markets such as compute acceleration and deep learning in edge devices



Visit



Visit trs-star.con



Empower Semiconductor is a leader in developing high-performance power management solutions. Focused on efficiency, Empower delivers innovative power integrated circuits (ICs) that minimize energy consumption, size, and complexity in modern electronics. Their patented technology supports a wide range of applications, from data centers to portable devices, ensuring optimal power delivery. Key sectors benefiting from their solutions include data centers, networking, telecom, computing, storage, and consumer electronics, where power efficiency and compact design are crucial.

Product / services supplied

Voltage Regulators

Market Sector

Industrial, Medical

Product Manager

Daniele Viganò



Contact the Manager



Best Products

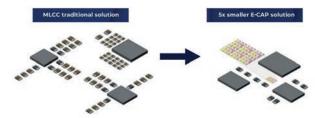
Power Conversion Integrated Voltage Regulators (IVR)

Empower's 3.3V and 1.8V IVRs offer highly efficient power conversion with ultra-fast transient response. These compact regulators reduce board space and enhance performance, making them ideal for applications in computing, telecom, and IoT devices where efficiency and size are critical. Empower's patented IVR™ technology eliminates dozens of discrete components. The result is power delivery with unprecedented simplicity, speed, accuracy, and no discrete components!

EP70XX	EP71XX
10A total current	12A total current
1-3 outputs	1-4 outputs
1.8V _{IN} optimized	3.3V _{IN} optimized
I ² C interface	I ² C interface
5mm x 5mm package	5mm x 7mm package

Silicon Capacitor ECAP

The ECAP silicon capacitor offers superior reliability, high capacitance density, and temperature stability. Its small form factor makes it perfect for high-frequency applications in RF, 5G, and medical devices, ensuring performance where miniaturization and stability are essential.





MICROCHIP is a leading provider of smart, connected and secure embedded control solutions, that produces microcontroller, mixed-signal, analog, and Flash-IP integrated circuits. Its easy-to-use development tools and comprehensive product portfolio enable customers to create optimal designs, while lowering total system cost and time to market. In order to broaden the range of its products, Microchip has acquired many companies over the years (Actel, Adaptec, Atmel,

Product / services supplied

Microsemi, Neuronix, Vectron).

Microcontrollers (PIC, dsPIC, AVR and SAM), Serial EEPROM devices, Serial SRAM devices, Embedded Security devices, Battery Management Analog devices

Market Sector

Industrial, Automotive, Transportation, IoT, Communications

Product Manager

Antonio Sofo



Contact the Manager



More info on our website

Best Products



Microcontrollers

Microchip portfolio includes 8-bit, 16-bit and 32-bit microcontrollers (MCUs) and Digital Signal Controllers (DSCs). The flexible peripherals and functions allow customers to create a wide range of differentiated solutions. Reference designs and software libraries are also provided.



Microprocessors

Microchip offers a comprehensive portfolio of 32-bit and 64-bit microprocessors (MPUs) based on Arm or RISC-V architectures to provide powerful and flexible options for applications. The MPUs range includes single-core and multi-core options, and System-on-Module (SoM) and System-in-Package (SiP) solutions.



PolarFire FPGA

The PolarFire FPGAs are optimized for deploying systems with high-compute performance in small form factors. They are characterized by very high performance and power efficiency.





Microchip offers a broad portfolio of serial EEPROM, serial EERAM, parallel EEPROM, OTP EPROM, serial Flash, parallel Flash, serial SRAM, NVSRAM, and CryptoMemory® security ICs.



Power Management

Microchip provides an extensive offering of power management products, providing power supply, voltage/current regulation and conversion, power switching, battery management and DC-DC control.



Microchip sensors feature high-accuracy, low-power performance, real-time protection, robust interfaces and compact packages, to satisfy the most demanding requirements in industrial, automotive and consumer applications.







Discrete Semiconductors

Microchip discrete products include high-power diodes, Radio Frequency (RF) diodes, Zener diodes, Negative-Positive-Negative (NPN) transistors, Positive-Negative-Positive (PNP) transistors and virtually every variety of diode and transistor used in industrial applications.





Amplifiers and Linear ICs

Microchip wide range of amplifiers and comparators enable to develop the best solutions with minimal risk of a forced redesign. These products are characterized by extended buttery run time, additional electromagnetic filtering, small packages and wide operating temperature.

index by Tag

```
#capacitors > 14
#communication > 54
#connectors > 28
#converters > 42, 43, 44, 46, 48, 50
#datarecording > 55
#displays > 6
#fpga > 72
#hermeticpackage > 38
#high-voltage > 26
#imagesensors > 69
#magnetics > 34
#magnets > 64
#microcontrollers > 74
#obsolescence > 39
#resistors > 30, 31, 32
#rfcomponents > 59, 60, 61
#ruggedpc > 8
#sensors > 65, 66
\#sic > 24
#soldering > 36
#ultracapacitors > 12, 15, 16, 18, 20, 22
#voltageregulators > 73
```

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Dimac Red Spa - Engineering and Sales Via Giovanni XXIII, 25 - 20853 Biassono (MB) Italy Tel: +39 039 2494856 - Fax: +39 039 491773 dimacred@dimacred.com