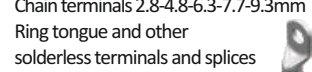
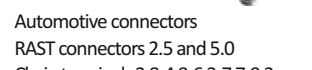
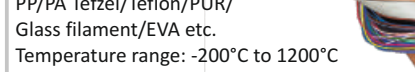
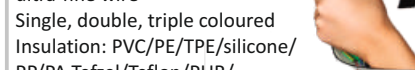
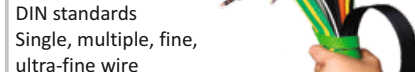


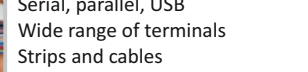
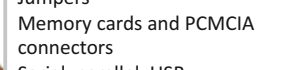
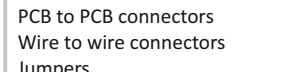
ELECTROMECHANICAL



Tools



Halogen free/flame-resistant/lead-free
*excluding Hungary and Slovenia



Memory cards and PCMCIA connectors
Serial, parallel, USB
Wide range of terminals
Strips and cables
Customized harness

HARNESS MAKING, ASSEMBLING, MACHINES AND TOOLS

Harness making

Crimping all typical connectors, half or full automatic process
Cutting and stripping
from AWG32(0,05 mm²) up to AWG8 (8,00 mm²)
Lead free tin plating

Machines for:

Benchtop Crimping & Stripping
Cutting to Length & Stripping
Full Process Crimping
Marking
Prefeeding
Coiling/Collection
Spare parts

Applicators

Presses
for all types of connectors

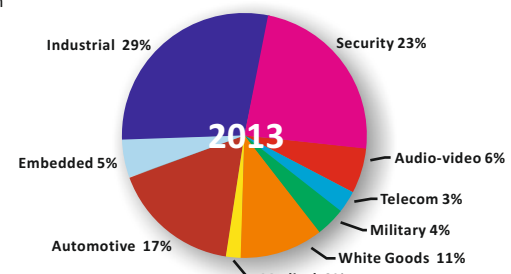
Other tools & applicators

for RAST connectors
Applicators for:
JST, LEAR, TYCO, JAE, FCI
Testing tools

Hand tools for crimping

SERVICES FOR OEMS AND CEMS IN EASTERN EUROPE

- Design-in support - well trained engineers are providing high quality service
- Sample supply and product info - high level and many years of experience
- Trainings - common actions with our franchise partners
- Programming of oscillators, ICs, etc
- Harness making according to specification
- Supply of more than 500 000 components
- Access to more than 100 suppliers
- EDI, e-commerce on www.microdis.net
- Online Order Tracking
- Consignment stock: central as well as local possibilities



Long-term cooperation with customers covering all industrial segments

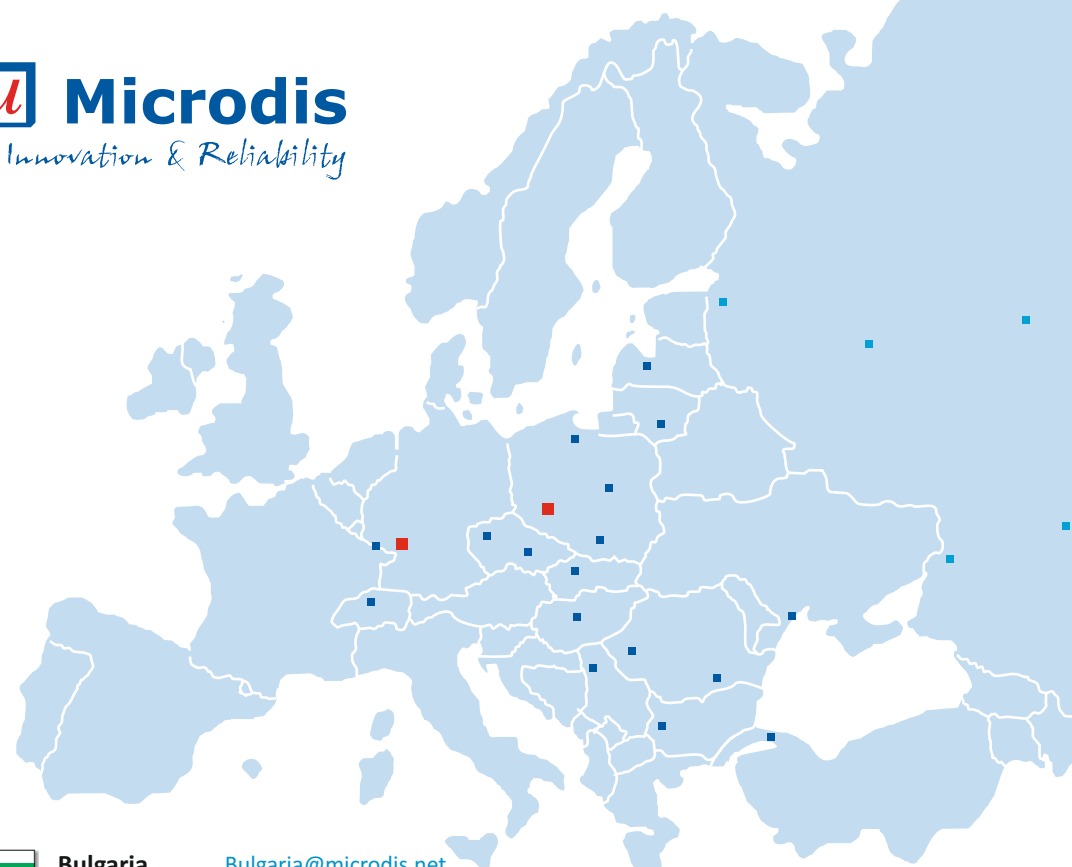
Supply of small quantities by catalogue distribution

www.microdis.net

CONTACT



Innovation & Reliability



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*Electromechanical Competence Center for France

www.microdis.net

EN 5.9



Innovation & Reliability



25 YEARS OF MICRODIS ELECTRONICS

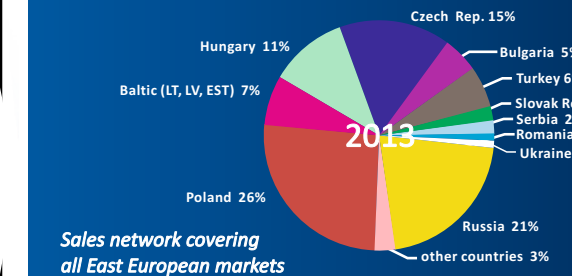
Leading in Eastern Europe as technical broadline distributor of electronic components, logistic provider and always reliable partner for suppliers and customers.



Innovation & Reliability

MICRODIS BUSINESS MODEL

- Franchise Distribution for a selected number of manufacturers
- Special Mass Market Distribution by Internet and Catalogue
- Network Partnership with suppliers and customers



Sales network covering all East European markets



ME Suchy Dwór, Poland



ME Hockenheim, Germany

DEVELOPMENT STEPS OF THE MICRODIS ELECTRONICS GROUP

1989 Foundation of the companies in Hungary and Germany

- 1990 Foundation of sales companies in Poland and Slovakia
First deliveries to the industry
- 1992 Foundation of LSB Electronics later renamed to Microdis Plus Poland
Restructuring from retail to distribution
- 1993 Foundation of Microdis KFT in Hungary
- 1995 Consolidation of all companies within the Eurodis Microdis Holding AG in Switzerland (60% Eurodis [later Eurodis Electron PLC] and 40% Microdis)
Foundation of a subsidiary in Czech Republic
- 2000 Europartners Consultants proclaimed Eurodis Microdis No. 1 in Poland and No. 3 in Hungary. Start of catalogue distribution
- 2003 Microdis sells its 40% shares of the Eurodis Microdis Electronics AG to Eurodis Electron PLC and takes over entirely Eurodis Microdis Electronics in Germany
- 2006 Microdis obtained ISO 9001:2000 Certification
- 2007 Foundation of Microdis in Ukraine
- 2008 Foundation of Microdis in Latvia
- 2009 Foundation of Microdis in Bulgaria
- 2010 Microdis Group obtained ISO 9001/2008 Certification
- 2011 Foundation of Microdis Components Elektronik in Turkey (Istanbul)
- 2012 Logistic Center moved to the acquired building in Hockenheim, Germany
- 2013 Inauguration of Electromechanical Competence Center for France, in Sarrebruck

25 years on the Eastern European market was truly a time of "Innovation and Reliability" that we are very proud of, and very grateful to all of our partners and friends. We look forward to a bright future together.

Microdis Electronics Team

www.microdis.net

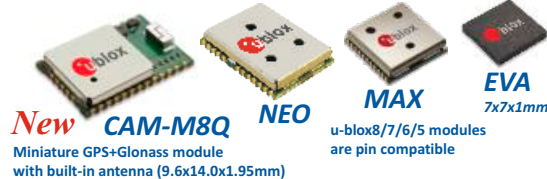
WIRELESS TECHNOLOGY



locate, communicate, accelerate



State of the art GNSS modules based on the latest technology u-blox8 *New*
 Form factors: MAX, NEO, LEA, EVA, PAM, CAM
 Modules are qualified for in vehicle use (ISO16750)
 High performance GNSS receivers, sensitivity: -167dBm
 Flexible modes, fe: GPS, Glonass, GPS+Glonass parallel
 Extremely low power: 4.5mA/3V (fix GPS every 1s)
 Position accuracy (CEP, SBAS): 2.0m
 Built in active antenna support (power, monitor)
 High in-band jamming immunity, Jammer detection
 Assisted GNSS: GPS as well as Glonass supported,
 AssistNow Online, Offline and Autonomous modes
 Direct cooperation with GSM/UMTS modules
 PPP support – accuracy better than 1.0m (2D,R50)
 Dedicated modules for timing, RAW data
 Miniature modules with built-in antenna (CAM-M8Q)



WIRELESS ACCESSORIES

GSM, GPS, GLONASS, Iridium, WiFi, ISM antennas
 Helical GPS & GLONASS antennas
 L1 & L2 band antennas
 HF connectors, adapter cables
 Evaluation kits and software



Reliable, field proven GPS/Glonass/BeiDou/QZSS and GSM/UMTS/LTE modules
 High performance GSM, UMTS, CDMA, LTE modules
 Navigation without GPS, based on GSM network
 eCall ready products with in-band modem
 Available in compact, SMT form factors
 Wide temperature range -40°C to +85°C



Field proven GSM/GPRS modules, families: LEON, SARA
LEON-G1, SARA-G3 - GSM/GPRS modules
 Embedded TCP/UDP/IP, FTP/HTTP/SMTP stack
 ATEX certificate to be used in explosive environments
 Low cost versions (2 GSM bands)
 Low power consumption (<0.6mA idle, DRX9)
 Built-in Assisted GNSS client to support GNSS modules
 Multiple socket & IP addresses
 DTMF support, SIM card detection
 Small form factor 16.0x26.0x3.0mm
 One PCB design for GSM and UMTS modules
 Simple integration with u-blox' GNSS modules

SARA-U2 family of compact GSM/UMTS/HSPA modules
 Form factor as small as 16.0x26.0x3.0mm
 Pin compatible to GSM/GPRS module SARA-G3
 Low cost version available (UMTS only, no GSM support)
 Low power consumption

LISA-U2 GSM/UMTS/HSPA+ modules
 HSDPA (21.1Mb/s), HSUPA (5.76Mb/s)
 Worldwide module
 All 3G (six) and 2G (four) bands support
 3G: 800/850/900/1700/1900/2100MHz
 USB 2.0, SPI, UART

TOBY - LTE modules
 TOBY-L1 - LTE only support
 TOBY-L2 - GSM/GPRS/HSPA+/LTE
 Up to 150Mb/s data rate
 Voice over LTE



The use of u-blox modules does not lead to consequences from infringement of patents and copyrights.

ISM PRODUCTS

RF modules and modems

Wireless M-Bus modules and devices
 868MHz and 169MHz
 for metering applications

Zigbee modules
 4.5dBm power

Modems & USB Dongles

Certified industrial Bluetooth modules and Stacks
 (BT 2.1, 3.0 and BLE 4.0
 Up to 320m Bluetooth range - Class 1)



ISO Cards, Key Fobs, Wrist Bands, PET laminates RFID system solutions for: Access control, Animal identification (Pet, bird and livestock), Industry and logistic (also KEG and waste ID)
 The most popular standards on the market:
 125kHz: EM Marin/Unique/Temic, Philips (Hitag)
 13.56MHz: Philips (Mifare), Legic

Reliable interconnect products

SIM / Nano SIM / Pico SIM connectors
 Memory Card Connectors
 USB Connectors
 Board to board connectors
 FFC connectors
 Dedicated white connectors for LED boards



INDUSTRIAL COMPUTING PRODUCTS



In-vehicle computers and displays
 Wireless communication: GPS, GSM, WLAN
 Flexible ignition control, easy adoption to car power-systems
 High vibration resistance, wide operating temperature
 Additional IP65 housing

Full HD Digital Signage Solutions
 Wide range of industrial players designed for 24/7 operation
 Perfect graphic performance, various video outputs
 Single, dual, triple and quad display possibility

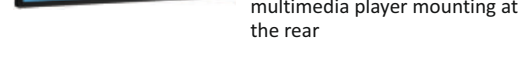
Panel PCs and fanless box computers for automation industry
 Compact sizes, low power consumption
 Many options of I/O interfaces, high reliability
 Embedded OS, watchdog built-in, long life



IP67 Panel PCs, Industrial displays, Embedded boards
 Fanless with Intel, VIA and AMD CPUs, RISC
 Different form factors: FSB, HSB, 3.5", 5.25", PC/104
 EPIC, ETX, ITX, TX, COM, Qseven

ASRock Cost-effective and reliable mini-ITX boards
 Intel Atom/i3/i5/i7 and AMD G-series platforms
 Industrial design
 5 Years life cycle support

iivama 32 - 65" Large Format Displays with Touchscreen
 Fanless, great viewing angles and exceptional color clarity,
 wide range of video and audio inputs, dedicated space for multimedia player mounting at the rear



LIGHTING PRODUCTS

SEOUL SEMICONDUCTOR

ACRICH2 - supplied directly from 230VAC. Luminous flux of one module up to 1450lm (17.5W), and up to 140lm/W efficacy (10W module)



Z-POWER LED - super bright power LEDs. Efficacy up to 160lm/W
SIDE, TOP, CHIP, LAMP - available as through hole and SMD, ultrabright, multicolor, full-color (RGB), efficacy of 5630 LED up to 180lm/W (@65mA)



Japanese Power LEDs, SMD and THT
 155lm/W with CCT 5000K
 Power LEDs with high CRI (up to 95)
 Special colors for food lighting (meat, fish, dairy and baked goods)
 2000K for mood lighting
 LEDs for automotive market, IR LEDs



Taiwanese cost-effective LEDs
 Wide portfolio of signalling LEDs
 Double color (warm + cool) power LEDs
 Standard form factors
 12W-36W (9090) 4-chip power LEDs
 Power LED matrix modules

Customized solutions
 LED modules
 Square and round modules in different sizes
 LED strips
 Acrich2 modules
 Lighttubes

Design support and contract manufacturing



Customized solutions



Design support and contract manufacturing

SEMICONDUCTORS



High quality semiconductors
 Transient Voltage Suppressors
 Zener and switching diodes
 Rectifier diodes
 Rectifier bridges
 Linear and switching voltage regulators
 Amplifiers and comparators
 Voltage references
Industry standards:
 78(9)xx, 78(9)Lxx, LM317, LM339, LM358, LM431, LM810, SMAJ, SMBJ, SMCI, P4KE, P6KE, 1.5KE, BAV, BAS, BAT and many others



Timing and Sensing quartz based devices

Crystal units
 kHz Range
 MHz Range
 SAW Resonators

Oscillators
 SPXO kHz & MHz range
 TCXO
 VCXO
 SAW Oscillators

SAW Filters

RTC Modules

Gyro sensors

Programmable Oscillators
 Customer specified frequency (1.000MHz to 166.000MHz)
 Customer specified logic (5V, 3.3V, 2.5V, 1.8V)
 10 sizes available including THT, SMD plastic package or SMD ceramic package

Available within 24h from stock!



QMEMS is a combination of 'Quartz', a crystal material with excellent characteristics such as high stability and high precision, and "MEMS" (a microfabrication technology). To a semiconductor MEMS material, EPSON applies precision microprocessing based on quartz material to create a quartz device called 'QMEMS' which offers high performance in a compact package.

ELECTROMECHANICAL



Push-pull circular connectors and cable assembly solutions

Generic connectors
 Core Series – Brass connectors
 AluLite™ Series – Aluminum connectors
 Plastic Series – Plastic connectors
Specific Connectors
 Nim-Camac – Coax and Triax Connectors
 Disposable – Low cost, high performance connectors
 PLUGCON – pin strips
 UltiMate™ - high performance military connectors



Wide range of electromechanical solutions

Tact Switches
 Snap-in types available in 4.5x4.5mm to 12x12mm sizes
 Surface Mount types available in 2.8x2.4mm to 10x10mm sizes
 Sharp and Soft feeling types
 Multiple operating force versions (stem color coding)
 Dust proof & water proof versions available

Encoders

Rotary and slide potentiometers, industrial and pro-audio types available

Multicontrol Devices

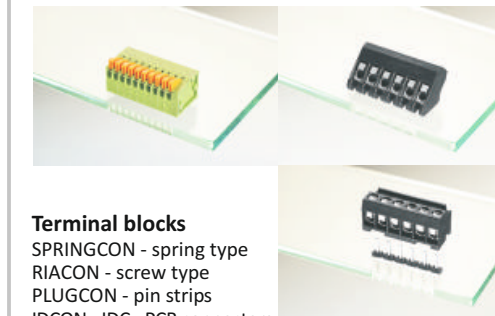
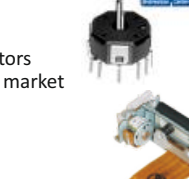
Power Switches

Memory and SIM card connectors also dedicated for automotive market

Detector switches

Magnetic, MEMS and capacitive sensors

Thermal Printers



Terminal blocks
 SPRINGCON - spring type
 RIACON - screw type
 PLUGCON - pin strips
 IDCON - IDC - PCB connectors



Heatsinks
 Machined extruded heatsinks
 Extruded heatsinks with retaining springs for PCB mounting
 Heatsinks and fan coolers for processors, PGA & BGA components
 Cooling aggregates
 Thermal conductive materials

Cases
 Miniature aluminum cases
 Combination cases
 Desk consoles and shell cases
 19" system cases

Connectors
 Hi precision board-to-board connectors
 IDC connectors
 D-SUB connectors
 DIL PGA, PLCC sockets

Services
 Precision CNC machining of heatsinks, cases, front panels
 Powder coating
 Screen printing
 YAG laser engraving

