

ELECTROMECHANICAL



Automotive connectors
 RAST connectors 2.5 and 5.0
 Chain terminals 2.8-4.8-6.3-7.7-9.3mm
 Ring tongue and other
 solderless terminals and splices
 Tools



Industrial Cables
 VDE/UL/CSA/MIL approvals
 DIN standards
 Single, multiple, fine, ultra-fine wire
 Single, double, triple coloured
 Insulation: PVC/PE/TPE/silicone/PP/PA Tefzel/Teflon/PUR/Glass filament/EVA etc.
 Temperature range: -200°C to 1200°C
 Halogen free/flame-resistant/lead-free
*excluding Hungary and Slovenia



Wire to PCB connectors
 PCB to PCB connectors
 Wire to wire connectors
 Jumpers
 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

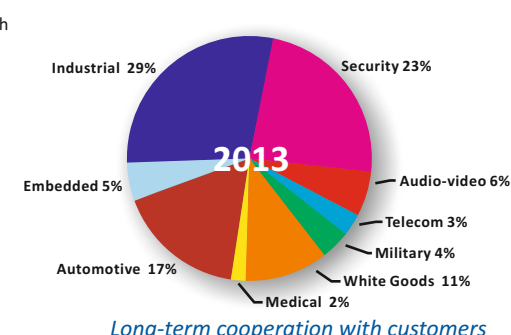
for all types of connectors

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

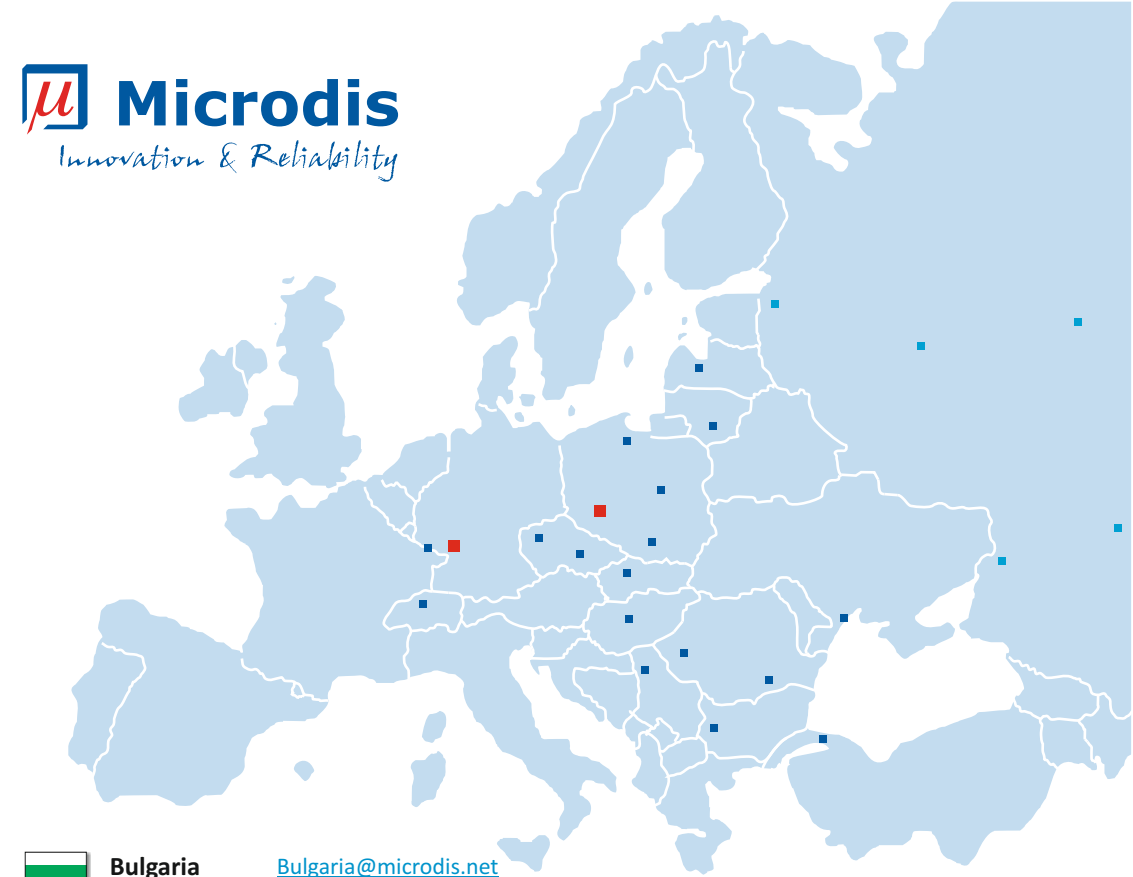
Hand tools for crimping

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



CONTACT



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*Electromechanical Competence Center for France

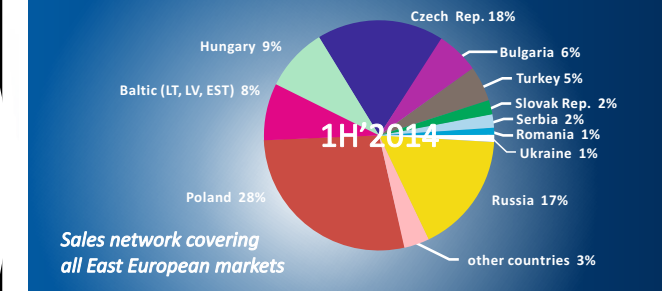


25 YEARS OF MICRODIS ELECTRONICS

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

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



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

WIRELESS TECHNOLOGY

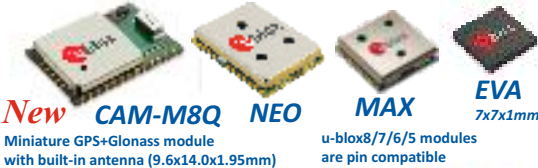


locate, communicate, accelerate



State of the art GNSS modules based on the latest technology u-bloxM8

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)
Modules with built in sensors (gyroscope, accelero.)
Dedicated modules for timing, RAW data
Miniature modules with built-in antenna (CAM-M8Q)



New CAM-M8Q Miniature GPS+Glonass module with built-in antenna (9.6x14.0x1.95mm)
NEO u-blox8/7/6/5 modules are pin compatible
MAX
EVA 7x7x1mm

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



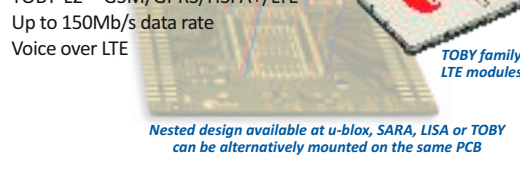
Field proven GSM/GPRS modules, families: LEON, SARA

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, 2.9mA active mode)
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



Nested design available at u-blox, SARA, LISA or TOBY can be alternatively mounted on the same PCB

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

ISM PRODUCTS

Wireless M-Bus modules and devices
868MHz and 169MHz for metering applications
Zigbee modules up to 4.5dBm power
Modules, Modems & USB Dongles for 868MHz, 169MHz, 2.4MHz
Certified industrial Bluetooth modules and Stacks
BT 2.1, 3.0 and BT 4.1 (BLE), Class 1 & 2, also dedicated modules for medical applications (HDP compliant with IEEE 11073)
Multiradio modules
Wi-Fi, Classic BT and BT 4.0 (BLE) combined in one host based module



OBS421 dual-mode Bluetooth module
AMB8426-M & AMB8466 Wireless M-Bus module and bridge
ODIN-W160 BT 2.1+BT 4.0+Wi-Fi Multiradio module 22.3x14.8mm



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)

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

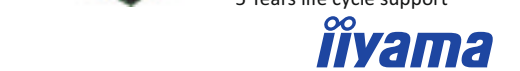
Full HD Digital Signage Solutions
Wide range of industrial players designed for 24/7 operation
Perfect graphic performance, various video outputs
Single, dual, triple and quad display possibility

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

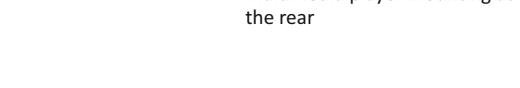


IP67 Panel PCs, Industrial displays, Embedded boards
Fanless with Intel, VIA and AMD CPUs, RISC
Different form factors: FSB, HSB, 3.5", 5.25", PC/104
EPIC, ETX, ITX, TX, COM, Qseven

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



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

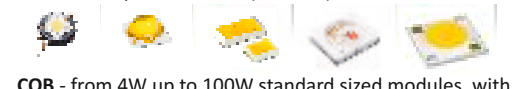


LIGHTING PRODUCTS

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 5630D LED up to 200lm/W (@65mA)

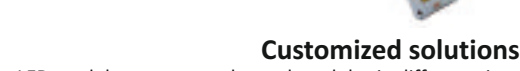


COB - from 4W up to 100W standard sized modules, with up to 11800lm per array, and 149lm/W
MJT (Multi Junction Technology) - HV LEDs for ease of design, cost effective mid-power (i.e. 5630) and high power (i.e.5050) packages available

Japanese Power LEDs, SMD and THT
155lm/W with CCT 5000K
Power LEDs with high CRI (up to 95)
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



LED modules: square and round modules in different sizes
LED strips
Acrich modules
Lighttubes

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!

QUARTZ+MEMS
High accuracy and high stability
MEMS sensors

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
SD/HD Camera connectors - Triax or Fiber Optic
UltiMate™ - high performance military connectors



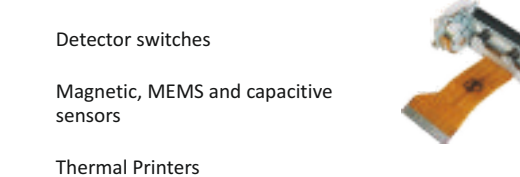
Wide range of electromechanical solutions
Tact Switches
Snap-in types available in 4.5x4.5mm to 12x12mm sizes
Surface Mount types available in 2.8x2.4mm to 10x10mm sizes
Sharp and Soft feeling types
Multiple operating force versions (stem color coding)
Dust proof & water proof versions available

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



fischer elektronik
Heatsinks
Machined extruded heatsinks
Heatsinks for LEDs
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

