

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/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



Innovation & Reliability



### HARNESS MAKING, ASSEMBLING, MACHINES AND TOOLS

#### Harness making

Crimping all typical connectors, half or full automatic process  
 Cutting and stripping from AWG32(0,05 mm<sup>2</sup>) up to AWG8 (8,00 mm<sup>2</sup>)  
 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

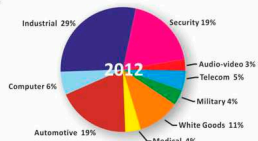
Other tools & applicators for RAST connectors  
 Applicators for: JST, LEAR, TYCO, JAE, FCI  
 Testing tools

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
- EDL e-commerce on [www.microdis.net](http://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

	Bulgaria	<a href="mailto:Bulgaria@microdis.net">Bulgaria@microdis.net</a>
	Croatia	<a href="mailto:Croatia@microdis.net">Croatia@microdis.net</a>
	Czech Rep.	<a href="mailto:Czech@microdis.net">Czech@microdis.net</a>
	Estonia	<a href="mailto:Estonia@microdis.net">Estonia@microdis.net</a>
	Hungary	<a href="mailto:Hungary@microdis.net">Hungary@microdis.net</a>
	Latvia	<a href="mailto:Latvia@microdis.net">Latvia@microdis.net</a>
	Lithuania	<a href="mailto:Lithuania@microdis.net">Lithuania@microdis.net</a>
	Poland	<a href="mailto:Poland@microdis.net">Poland@microdis.net</a>

	Romania	<a href="mailto:Romania@microdis.net">Romania@microdis.net</a>
	Russia	<a href="mailto:Russia@microdis.net">Russia@microdis.net</a>
	Serbia	<a href="mailto:Serbia@microdis.net">Serbia@microdis.net</a>
	Slovak Rep.	<a href="mailto:Slovakia@microdis.net">Slovakia@microdis.net</a>
	Slovenia	<a href="mailto:Slovenia@microdis.net">Slovenia@microdis.net</a>
	Turkey	<a href="mailto:Turkey@microdis.net">Turkey@microdis.net</a>
	Ukraine	<a href="mailto:Ukraine@microdis.net">Ukraine@microdis.net</a>
	Other countries	<a href="mailto:microdis.de@microdis.net">microdis.de@microdis.net</a>

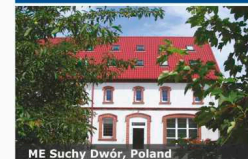
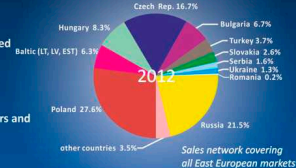


Leading in Eastern Europe as technical broadline distributor of electronic components, logistic provider and always reliable partner for suppliers and customers.



#### 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



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 obtains ISO 9001/2008 Certification
- 2011 Foundation of Microdis Components Elektronik in Turkey (Istanbul)
- 2012 Logistic Center moved to the acquired building in Hockenheim, Germany



locate, communicate, accelerate



State of the art GPS/Glonass/Galileo and GSM/UMTS modules based on the latest u-blox<sup>7</sup> technology  
**MAX, AMY, NEO, LEA and LEON, LISA families**  
 Modules are qualified for in vehicle use (ISO16750)  
 Highest class of navigation features  
 High performance, ultrafast acquisition (<1s)  
 Low power consumption: 5mA/3V@1Hz  
 Position accuracy (CEP, SBAS): 2.0m  
 High in-band jamming immunity  
 Jammer detection  
**GPS**: three aiding options for fast start  
 Direct cooperation with GSM/UMTS modules  
 PPP support (Precise Point Positioning) – accuracy <1m(2D,RS0)  
 Dedicated modules for timing, RAW data (LEA-6T, NEO-6T)  
 Miniature modules with built-in antenna (UC530M)  
 u-blox<sup>7</sup> modules support GPS, Glonass and QZSS systems, and are Galileo & BeiDou/Compass (chinese system) ready



**WIRELESS ACCESSORIES**



**GSM & UMTS PRODUCTS**

High performance GSM, UMTS and CDMA modules  
 Navigation without GPS, based on GSM network  
 eCall ready products with in-band modem  
 Available in compact, SMT form factors



**LEON & SARA GSM/GPRS modules**  
 Embedded TCP/UDP/IP, FTP/HTTP/SMTP stack  
 Built-in Assisted GPS client to support GPS modules  
 FOTA (firmware upgrade over-the-air)\*  
 Multiple socket & IP addresses  
 Low power consumption (<0.90mA idle, DRX9)  
 DTMF support  
 Small form factor 26.0x16.0x3.0mm  
 One PCB design for GSM and UMTS module  
 Simple integration of u-blox GPS modules  
 Wide temperature range -40°C to +85°C  
 \*available on demand

**LISA - GSM/UMTS/HSPA+**  
 Extremely small footprint (33.2x22.4mm)  
 HSPA+ (21.1Mb/s), HSUPA (5.76Mb/s)  
 Low power (<1.2 mA in 3G idle mode)  
 Six 3G and four 2G bands support  
 3G bands: 800/850/900/1700/1900/2100MHz  
 USB 2.0, SPI, UART  
 Wide temp. range (-40°C to +85°C)  
 RIL support

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

**Reliable interconnect products**



**ISM PRODUCTS**

**RF modules and modems**  
 Available as complete modules with integrated transmission stacks  
 Wide range of modules: from simple and cost efficient up to complex modules with range up to 20km

**Wireless M-Bus modules and devices**  
**868MHz and 169MHz**  
 designed to be used in metering applications with integrated Wireless M-Bus protocol according to EN 13757-4:2005

**Zigbee modules**  
 Low power consumption up to 4.5dB power

**Modems & USB Dongles**  
 Modems in IP65 housing with range up to 1km  
 USB modems for 868MHz & 2.4GHz

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

**Near Field Communication**  
 Modules and Stacks – the latest RFID technology

**Wi-Fi modules**  
 Easy to embed, Linux ready



**ISO Cards, Key Fobs, Wrist Bands, PET laminates**  
 The most popular standards on the market:  
 125kHz: EM Marin/Unique/Tempic, Philips (Hitag)  
 13.56MHz: Philips (Mifare), Legic

**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: F5B, H5B, 3.5", 5.25", PC/104  
 EPIC, ETX, ITX, XTX, COM, Qseven

**ASRock**  
 Cost-effective and reliable mini-ITX boards  
 Intel Atom/13/15/17 and AMD G-series platforms  
 Industrial design  
 5 Years life cycle support

**iiyama**  
**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)



**Z-POWER LED** - super bright power LEDs. Efficacy up to 160lm/W  
**SIDE, TOP, CHIP, LAMP, HIGH FLUX LED** - available as through hole and SMD, ultrabright, multicolor, infrared, ultraviolet, full-color (RGB)



**Japanese Power LEDs, SMD and THT**  
 151lm/W with CCT 5000K  
 Power LEDs with high CRI (up to 95)  
 Special colors for food lighting (meat, fish, dairy and baked goods)  
 2000K & 2400K 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



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)Vxx, 78(9)Lxx, LM317, LM339, LM358, LM431, LM810, SMAJ, SMB, SMCJ, P4KE, P6KE, 1.5KE, BAV, BAS, BAT and many others



**Transoptors and MOSFET drivers**  
 High performance infrared optoelectronic devices VDE, UL, NEMKO, ISO9001:2000 certified.

Pin-to-pin equivalents to most typical solutions like TLP12, TLP18, PC817, PC357, MOC30, CNY17, SFH6 and many others available.

Outstanding quality available with short lead time.



**Timing & Sensing Devices**  
 Programmable Oscillators  
**Customer specified frequency (1.000MHz to 166.000MHz)**  
 Crystal units/Resonators - kHz and MHz range SAW resonators  
 Oscillators – SPXO, VCXO, TCXO, OCXO, Rubidium  
 Filters – Crystal, SAW  
 RTC Modules  
 Sensors – Gyro, Temperature sensing crystals, Pressure sensing crystals



**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

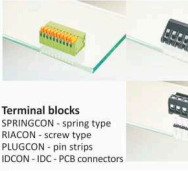
Power Switches

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



**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