



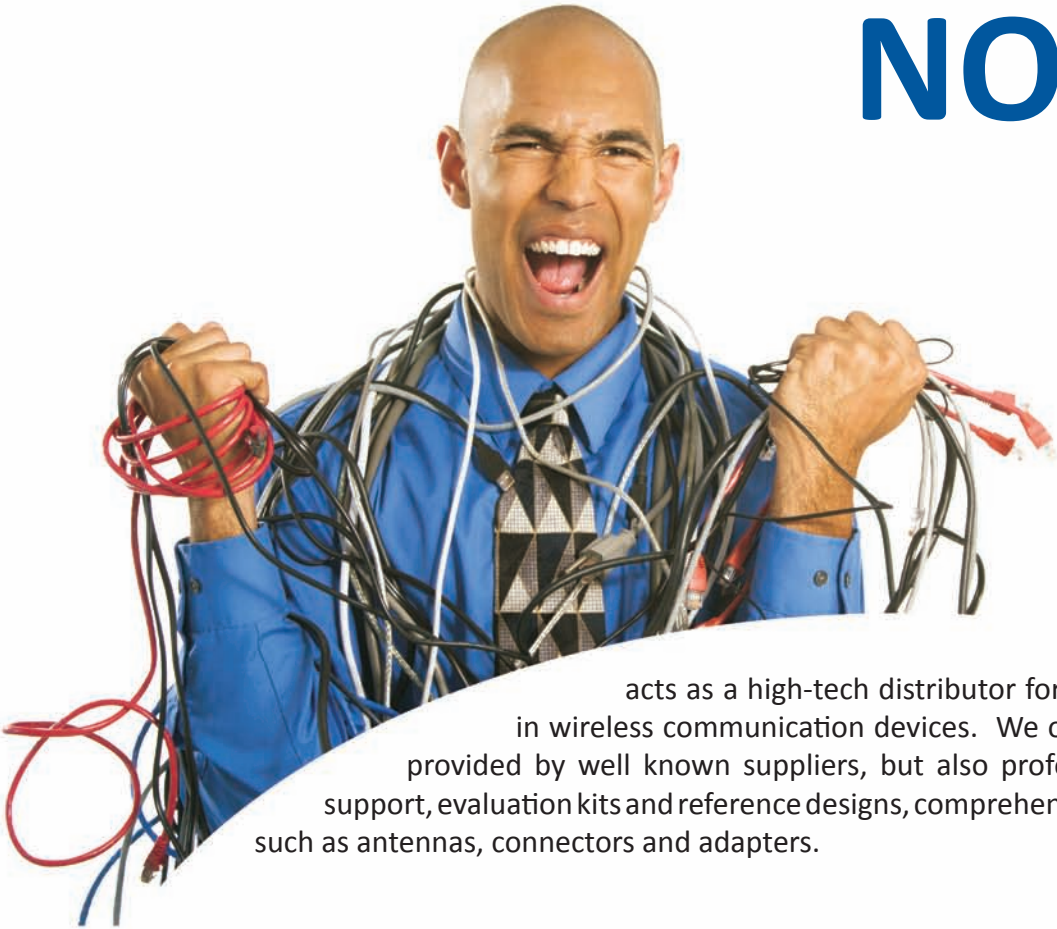
WIRELESS TECHNOLOGIES

GSM/UMTS/CDMA
GPS/GALILEO/GLONASS
RFID
Bluetooth
ISM
ZigBee/WiFi
Antennas & accessories



NO MORE WIRES

Microdis Electronics



acts as a high-tech distributor for many years, collecting experience in wireless communication devices. We offer not only the latest technology provided by well known suppliers, but also professional technical and commercial support, evaluation kits and reference designs, comprehensive deliveries including accessories such as antennas, connectors and adapters.

Microdis Electronics supports the most sophisticated wireless applications, like Emergency Call - eCall in Europe and Era Glonass in Russia. Both, based on the state of the art GPS/Glonass technology and dedicated GSM and UMTS features provided by u-blox, will save human lives in case of car accidents.



3	GPS/GLONASS	●	●		
6	GSM/UMTS/CDMA		●	●	
10	RFID				●
10	BLUETOOTH		●		●
11	ISM/SRD		●	●	
11	ZIGBEE/ WiFi		●		



GPS AND GLONASS



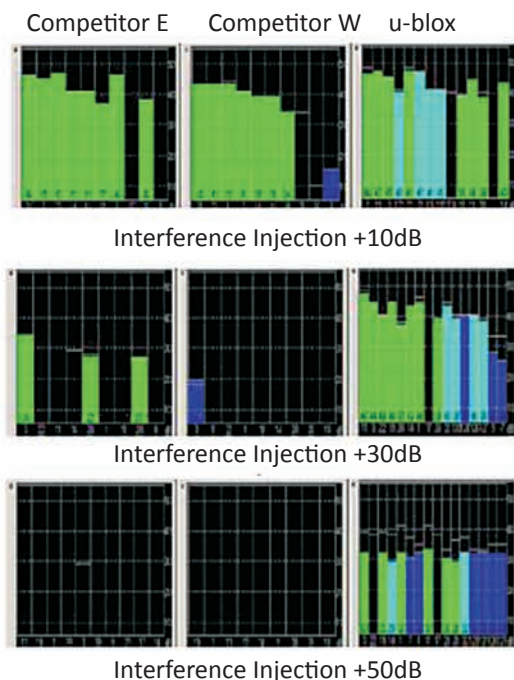
locate, communicate, accelerate

u-blox7 - the latest multiple GNSS navigation technology dedicated to applications requiring high sensitivity, short wake-up time, low energy consumption and stable functionality under harsh conditions in vehicles.

- ✓ All u-blox7 modules support GPS, Glonass, QZS, and are ready to work with Galileo and BeiDou (Compass).
- ✓ High performance navigation, ultrafast acquisition (<1s)
- ✓ GPS & Glonass positioning with SBAS & RTCM corrections
- ✓ Position accuracy (CEP, SBAS): 2.0m
- ✓ Precise Point Positioning accuracy: < 1.0m
- ✓ Ultralow energy consumption (5mA / 3V, 1Hz tracking)
- ✓ Additional power saving modes
- ✓ Assisted GPS Online, Offline and Autonomous
- ✓ Aided starts: 1s
- ✓ Best in class jamming immunity
- ✓ Jammer monitor/detection
- ✓ Data logger
- ✓ Dedicated modules (NEO-6T) for precise timing (up to 15ns)
- ✓ Backward pin compatibility
- ✓ Extremely small GPS+Glonass modules with built in antenna (UC530M)

SuperSense® technology delivers a seamless GPS experience in challenging environments where GPS signals are extremely weak and even if there is no direct sky view, using reflected signals.

In-band jamming immunity - the best on the market



New!
UC530M

NEO

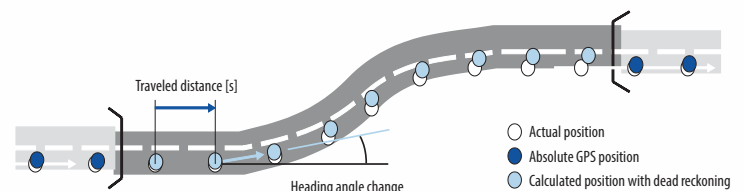
MAX

Fast, sensitive, power and cost optimized swiss made u-blox7 modules.

We offer Swiss made receivers, produced by a well-known u-blox company, to ensure superb technical parameters, the highest reliability, but also additional features and market leading technologies.

All modules are qualified for in-vehicle use (ISO16750)

Dead Reckoning - using Gyroscope and Tachometer or differential wheel speed information allows full coverage even without GPS signal (tunnels, car parks) as well as effectively eliminates the impact of multipath effects in urban canyon environments.



Enhanced Anti-Jamming
u-blox7 withstands very strong interferer (50dB stronger than GPS signal), it's the market leading technology.

Multi GNSS support – u-blox7 products work with several navigation systems (GPS, Glonass, QZS) and are ready to work with BeiDou (Compass) and Galileo. It increases availability, brings redundancy and avoids dependence on any single system.

Jammer detection - indicates the presence of suspected GPS jammer.

Assisted GPS (A-GPS) - using data from the u-blox server to make the TTFF shorter, or to be able to calculate a position despite weak signals and a harsh environment. Available as Online, Offline (up to 14 days ahead) and Autonomous (calculated internally by the module, without access to external server).

Precise Point Positioning
u-blox' PPP algorithm provides extremely high position under good sky visibility conditions.

GPS/GLONASS MODULES AND TOOLS

Development and Reliability

u-blox, continuously introducing new products, takes special care of their existing customers. New families of the modules are designed to keep pin compatibility with the previous ones (as u-blox6, u-blox5), which anyway will remain in production for a long time.

Quality

u-blox places extraordinary emphasis on delivering high-quality products. The company's internal quality control process extends to all its manufacturing partners who comply to strict processes imposed by standards, such as ISO/TS16949. GPS and wireless products are designed and tested to operate in a wide variety of applications, including in vehicle usage.

GPS/Glonass/QZSS modules suggested for new designs:

Series	Size l x w x h [mm]	Voltage range [V]	Lowest Power DC/DC	GPS	GLONASS, QZSS	GALILEO, COMPASS ready	Crystal / TCXO	Anti-jamming	Data Logger	UART	USB	DDC (I2C)	RAW data	Assisted GPS (A-GPS) Online, Offline, Autonomous	Precise Point Positioning	Dead Reckoning	Precision Timing	External Interrupt/Wakeup	Antenna supply, short detection & protection	Antenna power control	Extra front end LNA, SAW
MAX-7C	10.1x9.7x2.5	1.65-3.6	○	○	○	○	C	○		○		○		○				○	O	P	
MAX-7Q	10.1x9.7x2.5	2.7-3.6	○	○	○	○	T	○		○		○		○				○	O	P	
MAX-7W	10.1x9.7x2.5	2.7-3.6		○	○	○	T	○		○		○		○				○	○	○	
NEO-7M	16x12.2x2.4	1.65-3.6	○	○	○	○	C	○		○	○	○		○				○	O	P	
NEO-7N	16x12.2x2.4	2.7-3.6	○	○	○	○	T	○	○	○	○	○		○				○	O	P	○
LEA-7N	22.4x17x2.4	2.7-3.6	○	○	○	○	T	○	○	○	○	○		○				○	○	○	○
NEO-6P	16x12.2x2.4	2.7-3.6		○		○	C	○		○	○	○	○	○	○			○	O	P	
NEO-6T	16x12.2x2.4	2.7-3.6		○		○	T	○		○	○	○	○	○			○	○	O	P	
NEO-6V	16x12.2x2.4	2.7-3.6		○		○	C	○		○	○	○		○		○		○	O	P	
LEA-6R	22.4x17x2.4	2.7-3.6		○		○	C	○		○	○			○		○		○	○	○	

O- requires external components

P- pin to control active antenna supply

Hardware and software **evaluation kits**, tools and reference designs were created by u-blox to make evaluation and design efforts as simple as possible



EVK-7N u-blox7 evaluation kit



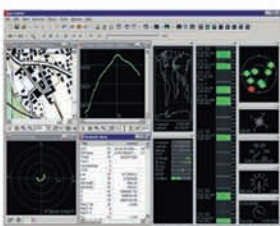
UC530M only 9.6x10.4mm

Smart antenna - the new family of Multi GNSS modules with integrated antenna (like UC530M on the picture) simplifies design of the small units, where the usual problem was to integrate very small GPS antenna keeping good performance. UC530M is extremely small smart antenna module (9.6x10.4x1.95mm). Offers high sensitivity and navigation using GPS and Glonass in parallel mode to enhance the position availability in harsh GNSS satellite visibility conditions.



Reference design

u-blox offers Reference Designs - ready projects with complete information (including PCB design file in Gerber) to be used in different applications. The example in the picture demonstrates the integration of a MAX GNSS receiver with an 18 x 18 x 4 mm ceramic patch antenna and UART serial interface.



u-center GPS evaluation software provides a powerful tool for testing, performance analysis and configuration of u-blox GPS receivers. U-blox GPS receivers can be configured using the u-center evaluation software with a highly flexible platform to also test GPS products and visualize the collected GPS data. It supports NMEA as well as a u-blox UBX binary protocol, calibrated map files and data recording with a u-center mobile. Debugging of a target application is also possible.

GPS/GLONASS ANTENNAS

External

ME431MP

- ✓ GPS 1575.42 MHz
- ✓ Gain 26 dBi/3 V, 27 dBi/5 V
- ✓ magnetic version, sticker option
- ✓ RG174 cable with the type of connector upon request

- ✓ size 41 mm x 34 mm x 13.7 mm
- ✓ operating temperature -40°C... +85°C



ME435MP

- ✓ GPS 1575.42 MHz
- ✓ Gain 26 dBi/3 V, 27 dBi/5 V
- ✓ RG174 cable with the type of connector upon request

- ✓ size 21.2 mm x 28.2 mm x 13.2 mm
- ✓ operating temperature -40°C... +85°C
- ✓ **Mini GPS Antenna**



M1575HCT-P

- ✓ GPS 1575.42 MHz
- ✓ gain 2.5 dBi
- ✓ **passive omnidirectional GPS antenna**
- ✓ SMA connector

- ✓ Efficiency 60%
- ✓ size 48 mm x 18.4 mm
- ✓ operating temperature -40°C... +85°C



ME433G

- ✓ GPS/GLONASS 1592-1610 MHz
- ✓ GLONASS gain 26 dB/3 V, 27 dB/5 V
- ✓ magnetic version, patch mount

- ✓ RG174 cable with the type of connector upon request
- ✓ size 38.6 mm x 34.1 mm x 14.1 mm
- ✓ operating temperature -40°C... +85°C



Combo GPS+GSM

ME660B/ME664B

- ✓ AMPS/GSM/Bluetooth-Wifi 2.4 GHz / GPS 1575.42 MHz
- ✓ available as Combo, or just GSM
- ✓ GNSS gain: 26 dBi/3 V, 27 dBi/5 V, GSM: 2.2 dBi max
- ✓ mounting in a hole with the screw

- ✓ vswr: < 2:1 for GSM, < 1.2:1 for GPS
- ✓ two cables RG174 with the type of connector upon request
- ✓ size 75 mm x 17.5 mm
- ✓ operating temperature -40°C... +85°C
- ✓ aluminium base



ME860B

- ✓ AMPS/900/1800/1900/2100 MHz / Bluetooth-Wifi 2.4 GHz / GPS /Glonass
- ✓ GNSS gain: 26 dBi/3 V, 27 dBi/5 V, GSM: 2.2 dBi max
- ✓ mounting in a hole with the screw
- ✓ vswr: < 2:1 for GSM, < 1.2:1 for GPS

- ✓ two cables RG174 with the type of connector upon request
- ✓ size 98 mm x 59.5 mm x 64 mm
- ✓ operating temperature -40°C... +85°C



Internal

ME4050S

- ✓ GPS 1575.42 MHz
- ✓ Gain 16 dB/5 V
- ✓ size 25x25x8.1 mm
- ✓ Current consumption 3 mA (1.8 V), 7 mA (3.3 V), 12mA (5V)

- ✓ to be mounted in the customers casing
- ✓ cable and connector to be arranged
- ✓ small size version also available: 18.5x18.5x4.7 mm (MEM015)



Microstrip GPS patch type antennas are offered by the American company Maxtena in several sizes, to fit almost any application. Starting from 10mm x 10mm destined for very small GPS receivers and ending with 25mm x 25mm. Engineering kits (tuning kits) contain the antennas with different resonance frequencies (with a 2MHz interval) which allows a selection of an antenna tuned to a particular environment (housing and other components have a major impact on the efficiency of GPS antennas).

MAXTENA



GSM COMMUNICATION

u-blox wireless transceiver modules like Leon and Lisa are based on the UMTS/HSPA+ and GSM/GPRS mobile communication standards. The modules are optimized for low-cost, mass market location-based applications requiring mobile connectivity such as mobile internet and VoIP routing, in-car multimedia systems, asset tracking, fleet management, road pricing, vehicle recovery and mobile emergency services such as eCall. They are also ideal as stand-alone embedded wireless communication solutions for M2M applications such as Automatic Meter Reading (AMR) and RMAC.

All modules are qualified according to ISO16750 for „in vehicle use“.



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



NEW SARA, LEON

Form factor

Size lwx [mm]

	Form factor	Size lwx [mm]	UART	DDC (I2C) to GNSS module	GPIO	Analog / Digital audio	File system	DTMF support	Antenna detection	Jamming detection	Low power idle mode	Embedded TCP/IP, UDP	FTP, HTTP, SMTP	RIL	Assisted GPS client	CellLocate	Smart temperature supervisor	in-band modem for eCall	FW update over AT (FOAT)	FW update over the air (FOTA)
SARA-G300/310	LGA	26.0x16.0	2								0			○					○	
SARA-G350	LGA	26.0x16.0	2	1	4	1/1	○	○	○	○	○	○	○	○	○	○	○		○	A
SARA-G350 eCall	LGA	26.0x16.0	2	1	4	1/1	○	○	○	○	○	○	○	○	○	○	○		○	A
LEON-G100	LCC	29.5x18.9	1	1	4	2/1	○	○	○	○	○	○	○	○	○	○	○		○	
LEON-G100 eCall	LCC	29.5x18.9	1	1	4	2/1	○	○	○	○	○	○	○	○	○	○	○		○	

O- requires external 32kHz xtal, A- available on request

SARA, LEON and LISA - selected features

Modules optimized for low power consumption, small size and cost saving

CellLocate - localization using signals from BTS, not as accurate as GPS, but very helpful and supplementary (i.e. in a car park, where a GPS signal is unavailable). The GSM module becomes a very important supporting component for GPS systems

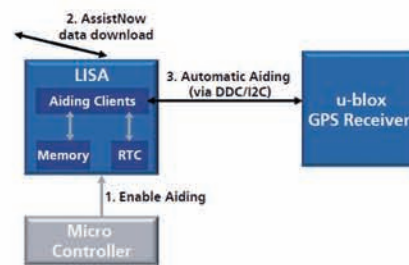
in-band Modem - embedded modem for communication within eCall - the European security system, and Era Glonass (Russian system)



pin compatibility between UMTS and GSM modules

- common concept of SARA, LEON (GSM) and LISA (UMTS) makes it possible to prepare a PCB that allows to mount either of them, accordingly to the required parameters

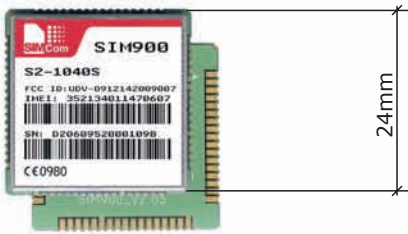
cooperation between u-blox GPS modules and GSM/UMTS modules
using a dedicated I2C line. No direct connection between GPS module and microcontroller necessary.



LISA
22.4x33.2mm

	GSM/GPRS/EDGE quad-band	3G 900/2100MHz	3G 850/1900MHz	3G 800/1700MHz	Downlink (Mb/s)	Uplink (Mb/s)	GPIO	UART	USB (HighSpeed)	SPI (HighSpeed 26Mb/s)	DDC(I2C) to connect GNSS module	Digital audio	Antenna detection	Jamming detection	Assisted GPS client	CellLocate	SSL	Embedded TCP/IP, UDP	FTP, HTTP, SMTP	in-band modem for eCall	
LISA-U200	○	○	○	○	7.2	5.76	14	1	1	1	1	2	○	○	○	○	○	○	○	○	A
LISA-U230	○	○	○	○	21.2	5.76	14	1	1	1	1	2	○	○	○	○	○	○	○	○	
LISA-U260	○		○		7.2	5.76	14	1	1	1	1	2	○	○	○	○	○	○	○	○	
LISA-U270	○	○			7.2	5.76	14	1	1	1	1	2	○	○	○	○	○	○	○	○	A

A- in-band modem available in eCall versions



Actual Size

SIM900

The newest product of the renown Chinese manufacturer. The small size allows to use it in devices with limited PCB space.

- ✓ **Dimensions: 24 x 24 x 3 mm**
- ✓ 850 / 900 / 1800 / 1900 MHz
- ✓ GPRS class 10
- ✓ Power supply: 3.4... 4.5 V
- ✓ Low power consumption
- ✓ SMT mounted



SIM900D

After 5 years of success, a modernized architecture of one of the most popular SIMCOM modules - SIM300D. SIM900D is a compatible device with a design based on currently available technical solutions, including AMR926EJ-S core.

- ✓ **Pin compatible with SIM3x0D**
- ✓ Dimensions: 33 x 33 x 3 mm
- ✓ 850 / 900 / 1800 / 1900 MHz
- ✓ GPRS class 10
- ✓ Power supply: 3.4... 4.5 V
- ✓ Work temperature: -30... +80°C
- ✓ Low power consumption
- ✓ SMT mounted



↕ *Compatible*



SIM908

A module that combines the elements of two technologies - GSM and GPS. Combo in a whole new package, with the GSM architecture from SIM900 series.

- ✓ Quad-band
- ✓ 850/ 900/ 1800/ 1900 MHz
- ✓ Dimensions: 30 x 30 x 3.2 mm
- ✓ **42-channel GPS receiver**
- ✓ Tracking sensitivity: -160dBm
- ✓ Work temperature: -40... +80°C
- ✓ SMT mounted

SIM5320E

UMTS module in a small SMT package. Pin compatible with SIM908, which allows customers to design their applications once for the two technologies and benefit from great development time-saving.

- ✓ Dual-band UMTS 900/2100 MHz
- ✓ Quad-band GSM
- ✓ 850/ 900/ 1800/ 1900 MHz
- ✓ Dimensions: 30 x 30 x 2.9 mm
- ✓ HSDPA up to 3.6Mbps
- ✓ SMT mounted
- ✓ **FOTA, eCall ready, FW update over USB**



SIM521x family

UMTS module family for the use in applications where large amounts of data need to be transferred. The SIM521x devices are fitted with a unified board-to-board connector, making all modules in the family pin compatible.

- ✓ **HSDPA up to 7.2 Mbps (SIM5218)**
- ✓ **HSUPA up to 5.76 Mbps (SIM5218)**
- ✓ Dimensions:
 - 58 x 26 x 4.5 mm (SIM5218)
 - 36 x 26 x 4.7 mm (SIM5216, SIM5215)
- ✓ Work temperature: -30... +75°C
- ✓ **FOTA, FW update over USB**

GSM TOOLS



The **EVK-G20/G35** evaluation kit provides a simple, flexible and ready to use environment for evaluating u-blox' LEON and SARA wireless modules, as well as for designing and testing of wireless and GPS applications (GPS module on board). The kit is very user-friendly, and has both USB and RS232 interfaces for development, testing and tracing.

The **EVK-U20 and EVK-U23** evaluation kits provide simple, flexible and ready to use environments for evaluating u-blox' LISA 3.75G wireless modules, as well as for designing and testing of wireless and GPS applications (GPS module on board). The kits are very user-friendly, and have both USB and RS232 interfaces for development, testing and tracing.

The kits come with a built-in u-blox GPS receiver module, giving designers the flexibility to either test GSM/GPRS functionality alone or to integrate it together with u-blox GPS technology. For evaluating Assisted-GPS (A-GPS) a u-blox A-GPS client is embedded in the firmware stack, providing users with the option of integrating and testing our license-free A-GPS solutions.

Reference designs from u-blox are a proposal of ready and polished solutions. We offer a complete PCB design (Gerber format) and the electric schematic which can be both used by our customers.



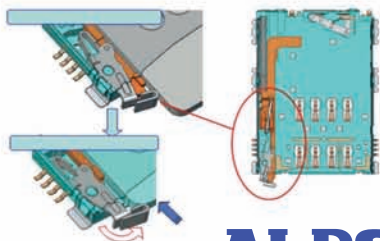
The **m-center** wireless module evaluation software from u-blox provides a powerful platform for evaluation, configuration and testing of u-blox' LEON & SARA family of GSM/GPRS and LISA UMTS/HSDPA products.

m-center is PC-compatible, and provides an intuitive, easy to understand and use graphical interface. The application is provided free-of-charge.

Evaluation kits of SIMCom modules are tools that significantly facilitate familiarization with capabilities of modules which are in the offer of this manufacturer. They allow an easy and fast way to test functions that will be used in a design-in application.



SIM-HOLDERS



ALPS

GCT
Global Connector Technology

Push-push SIM-Holder with a blockade

The SCGC1B03 SIM-Holder from Alps Electric is a one of a kind solution for connecting SIM Cards in applications with severe vibrations (i.e. automotive and mobile). The blockade does not allow the SIM Card to drop out from the connector, even under harsh conditions. Another advantage of the SCGC1B03 connector is its low profile - only 1.55mm. This unique solution is based on one of the most popular SIM-Holders in the portfolio of Alps Electric - the SCGC1B1, allowing a seamless upgrade.

Global Connector Technology portfolio includes Push-push SIM-holders, Low-profile SIM holders, Combo SIM/ microSD memory card holders, Dual SIM holders and also many standard SIM holders.



GSM ANTENNAS



ME500L

- ✓ 433 MHz, 824~894 MHz, GSM 900 / 1800, PCN 1.9 GHz, UMTS 2.1 GHz Bluetooth 2.4 GHz
- ✓ gain: 2.2 dBi
- ✓ vswr < 2:1
- ✓ to be mounted on flat surfaces (eg. glass)
- ✓ RG174 cable with the type of connector upon request
- ✓ dimensions: 22 mm x 126.5 mm
- ✓ operating temperature: -40°C... +85°C

ME301M

- ✓ 824~894 MHz, GSM 900 / 1800 MHz, PCN 1.9 GHz, UMTS 2.1 GHz
- ✓ gain: 2.2 dBi
- ✓ max power: 30 W
- ✓ vswr < 2:1
- ✓ magnetic, mounting on metal surface
- ✓ RG174 cable with the type of connector upon request
- ✓ dimensions: 71.95 mm x 30.85 mm
- ✓ operating temperature: -40°C... +85°C

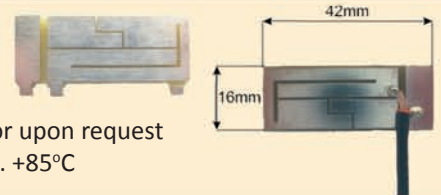


ME030 / ME040

- ✓ 868 MHz, GSM / PCN / UMTS, Bluetooth 2.4 GHz
- ✓ Gain: 2.2 dBi Max
- ✓ possible broadband version or tuned to specific frequencies
- ✓ SMA, FME connector in straight or angle version
- ✓ operating temperature: -40°C... +85°C

MEMAS01/MEMAS01A

- ✓ 824-894 MHz, GSM 900 / 1800 MHz, PCN 1.9 GHz, UMTS 2.1 GHz, Bluetooth 2.4 GHz
- ✓ gain 0.0 dBi
- ✓ max power: 25 W
- ✓ vswr < 2.5:1
- ✓ cable and the type of connector upon request
- ✓ operating temperature: -40°C... +85°C



ME664B

- ✓ 824-894 MHz, GSM 900 / 1800 MHz, PCN 1.9 GHz, UMTS 2.1 GHz, Bluetooth-Wifi 2.4 GHz
- ✓ gain 2.2 dBi
- ✓ mounting in a hole with the screw
- ✓ vswr: < 2:1 for GSM
- ✓ RG174 cable with the type of connector upon request
- ✓ dimensions: 70 mm x 15 mm
- ✓ operating temperature: -40°C... +85°C



MEE03/MEE04

- ✓ 824-894 MHz, GSM 900 / 1800 MHz, PCN 1.9 GHz, UMTS 2.1 GHz
- ✓ ceramic GSM antenna
- ✓ vswr: < 3.0:1
- ✓ size 24 mm x 5.5 mm x 4.4 mm
- ✓ gain max
- MEE03: AMPS 1.3 dBi / GSM 2.4 dBi / DCS 6.4 dBi / PCS 5.9 dBi / UMTS 4.8 dBi
- MEE04: AMPS 0.7 dBi / GSM 0.7 dBi / DCS 5.7 dBi / PCS 4.8 dBi / UMTS 4.6 dBi
- ✓ operating temperature -35°C... + 85°C



The standard offer contains other types of antennas, connectors and adapters which are not presented here.

Connectors, adapters

MCX(fa),smd	MCX connector, female, angle, SMD, 50 Ohm version
MCX(f),smd	MCX connector, female, straight, SMD, 50 Ohm version
MCX(fa),dil	MCX connector, female, angle, THT, 50 Ohm version
MCX(f),bh	MCX connector, female, with nut, bulk head, 50 Ohm version
MMCX(f),smd	MMCX connector, female, straight, SMD, 50 Ohm version
MMCX(fa),smd	MMCX connector, female, angle, SMD, 50 Ohm version
SMA(fa),dil	SMA connector, female, angle, THT, 50 Ohm version
SMA(f),bh	SMA connector, female, with nut, bulk head, 50 Ohm version
SMA(f),edge,smd	SMA connector, female, SMD edge mount for thick PCB board, 50 Ohm version

RADIO FREQUENCY IDENTIFICATION

We have provided application support for RFID projects for over 10 years. At this time we have gained tremendous experience and developed a range of components that work best on the market. They are both products of primary and cheaper technology, 125 kHz (popular products Unique and EM Marin) and more advanced systems for industrial applications (134.2 kHz) or logistics (13.56 MHz) and electronic billing (Mifare).



RFID systems for low frequency (125 kHz 134.2 kHz)

Products operating in this frequency range show a high resistance to environmental interferences, which makes them ideally suited for industrial applications. However, the cheapest and simplest access control systems are based on Unique / EM Marin products. The wide range of offered transponders gives a great opportunity in the choice of best in their class components.

RFID systems for 13.56 MHz frequency

The advantage of the 13.56 MHz frequency systems is a higher bit rate (particularly useful in ticketing and billing systems) and a reduction in size of the antenna, which enables flexible use of transponders (eg, stickers used in logistics).



An example of industrial RFID application



Paper sticker with transponder 13.56 Mhz



An Example of RFID application in logistics

We also offer readers, both in the form of ready-made equipment and products intended for installation in applications. We provide dedicated circuits for the RFID reader design. The component cost rises dramatically with the reading range, and therefore it is recommended to design and configure a system where the required range is the shortest possible.

A very interesting solution is a universal device, that can operate with both systems: 13.56 MHz and 134.2 kHz.

BLUETOOTH



LONG RANGE

BlueMod+C11

This unique unit allows the transmission of signals over a distance of up to 320m, with the transmission power of 19dBm.



SIMPLICITY

BlueMod+B20

For devices where not coverage, but power consumption is a critical value. Profiles: SPP, GAP, SDAP, HID, HCI, Obex.



SPECIALIST

BlueMod+P24/P25

Equipped with an additional microcontroller, which allows to run specific profiles (i.e. iPhone encryption). Firmware versions: Serial Port Profile (SPP), Human Interface Device Profile (HID), Health Device Profile (HDP) - HDP Firmware with integrated IEEE 11073 (Pulse Oximeter, Blood Pressure Meter, Weighing Scale, Blood Glucose Meter).



LOW ENERGY (BLE)

AMB2620 - Bluetooth v4.0

The combination of the integrated microcontroller and the complete Bluetooth low energy protocol stack makes the AMB2620 a flexible and cost-effective single-mode Bluetooth low energy solution.

RF/ISM COMMUNICATION



Modules and modems that operate in frequency bands 169MHz, 433 MHz, 868 MHz, 2400 MHz and standards such as WiFi, ZigBee and Wireless M-Bus. We offer complete, certified modules, ready to use without extensive knowledge and RF expertise. Emulation of the standard serial interface makes module integration fast and simple. Presented modules are also available in versions with no microprocessor, as transceivers.

AMB8355

- ✓ Multichannel modem 869 MHz
- ✓ Range: up to 20 km
- ✓ Output power: 500 mW
- ✓ Transfer rate: 2.4 Kbps up to 19.2 Kbps
- ✓ Possible work as a Repeater
- ✓ Routing through addressing



Long Range RF Modem

- ✓ Point-to-point, point-to-multipoint
- ✓ Confirmation of recurrence and ensure delivery of package
- ✓ RS232 interface (option: RS485, USB)
- ✓ Configuration through AMBER ACC
- ✓ Cooperation with AMB8350 / AMB8420

AMB3210

- ✓ 802.11 b/g/n, 2.4 GHz, 1x1 SISO
- ✓ 150 Mbps max data rate
- ✓ 21.5 dB output power
- ✓ Built in chip antenna and U.FL connector options
- ✓ 8 MB FLASH, 32 MB RAM
- ✓ Linux friendly , OpenWRT flash image and source codes are available

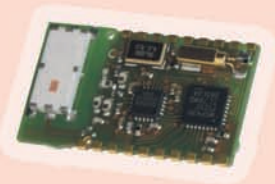


WiFi Module

- ✓ CPU: RT3050, 320 MHz clock speed
- ✓ Small dimensions: 35 x 40 mm
- ✓ Easy to embed
- ✓ 4 green LEDs: Power, Ethernet0, Ethernet1, WLAN
- ✓ 2x20 pins, 2mm spacing
- ✓ Power supply: 3.3V single voltage
- ✓ Max power consumption on heavy duty download: 1.5 W

AMB8420

- ✓ Compact, cost optimized OEM radio module for the 868 MHz ISM band
- ✓ Size: 16 x 27.5 x 3.5 mm
- ✓ Supports applications with low power and WOR (wake-on radio)



Low Cost RF Module 868 MHz

- ✓ An integrated stack with enhanced features
- ✓ Flexible addressing (255 nodes in 255 networks)
- ✓ Available in the form of a USB dongle
- ✓ Integrated ceramic antenna

AMB8567-M

- ✓ RF communication for meters with pulse output
- ✓ Complies with wM-Bus / OMS specification
- ✓ Easy over-the-air setup (e.g. pulse valency, initial meter value)
- ✓ Configuration via PC or PDA
- ✓ Long battery life (> 12 years achievable)



Pulse RF Transmitter

- ✓ Freely configurable data records
- ✓ Prepared for utility meters
- ✓ Encryption using AES-128
- ✓ Internal antenna
- ✓ Pulse input supports both open collector and potential-free pulse outputs

AMB8426-M

- ✓ Cost optimized module for the 868 MHz band
- ✓ Wireless M-Bus integrated compatible with EN13757-4: 2005
- ✓ OMS (Open Metering System)
- ✓ Range: up to 700 m
- ✓ Compact size: 16 x 27 x 3.5 mm



Wireless M-Bus Module

- ✓ Low power features (Wake-On-Radio)
- ✓ Easy switching between modes: S1, S1m, S2, T1, T2, R2
- ✓ Communication / Configuration via UART / SPI
- ✓ AES128 encryption

AMBZ420

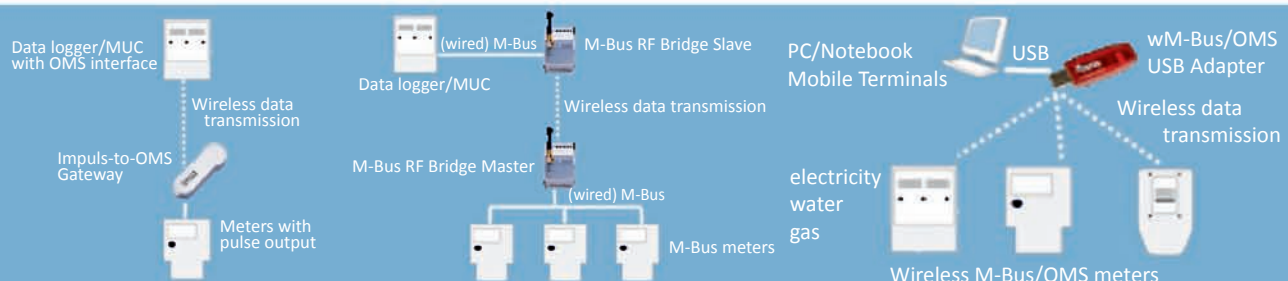
- ✓ 2.4 GHz ISM band module
- ✓ Fully integrated ZigBee PRO stack
- ✓ Small form factor: 17 x 27.5 x 4 mm
- ✓ RX sensitivity up to -97 dBm
- ✓ Programmable output power up to 4,5 dBm
- ✓ Wide supply voltage range of 2 V to 3.6 V
- ✓ High performance 8051 microcontroller core



Low-cost Zigbee Module

- ✓ Easy to use API via UART or SPI to external MCU
- ✓ 4 software command interfaces
- ✓ AES-128 security module
- ✓ Built-in ceramic antenna, U.FL connector or RF pin
- ✓ Complies with the R&TTE Directive 1999/5/EC
- ✓ Available in tape & reel packaging

Wireless M-Bus meter reading - ready solutions



-  Bulgaria@microdis.net
-  Croatia@microdis.net
-  Czech@microdis.net
-  Estonia@microdis.net
-  Hungary@microdis.net
-  Latvia@microdis.net
-  Lithuania@microdis.net
-  Poland@microdis.net
-  Romania@microdis.net
-  Russia@microdis.net
-  Serbia@microdis.net
-  Slovakia@microdis.net
-  Slovenia@microdis.net
-  Turkey@microdis.net
-  Ukraine@microdis.net
-  microdis.de@microdis.net



U-BLOX
SIMCOM
AMBER WIRELESS
STOLLMANN
AEGID
MAXTENA
AAEON
ASROCK
NEXCOM
IIYAMA
MEDER
GLOBAL CONNECTOR TECHNOLOGY
FISCHER CONNECTORS
JST
LEAR
MEDIKABEL
METZ CONNECT
EPSON
ALPS ELECTRIC
FISCHER ELEKTRONIK
BRIGHTTEK
SEOUL SEMICONDUCTOR
STANLEY ELECTRIC
VISHAY
TAIWAN SEMICONDUCTOR
ISOCOM

GPS/Glonass, GSM, UMTS/HSPA/CDMA modules, antennas
GSM, UMTS modules
RF ISM, Bluetooth, ZigBee modules and transceivers
OEM modules: Bluetooth, ISDN
RFID systems and transponders
GPS, Glonass, Iridium antennas
industrial computers and panels
mini-ITX industrial boards
industrial computers and panels
Large Format Displays
reed switches, sensors and relays
SIM-Holders, memory card connectors, USB connectors
military, medical and industrial connectors
signal connectors
automotive and white goods connectors
UL/CSA/DIN certified, customized industrial cables
terminal block connectors - screw, spring and pins
crystals, oscillators, filters and sensors
switches, encoders, potentiometers and printers
heatsinks, connectors, 19" and case technology
Power, THT and chip LEDs and LED modules
LEDs - power, full color, 230AC
LEDs, LED modules
passive components and semiconductors
semiconductor devices
optocouplers, optoswitches

www.u-blox.com
www.sim.com
www.amber-wireless.de
www.stollmann.de
www.aegid.de
www.maxtena.com
www.aaeon.com
www.asrock.com
www.nexcom.com
www.iiyama.com
www.meder.com
www.globalconnectortechology.com
www.fischerconnectors.com
www.jst.de
www.lear.com
www.medikabel.de
www.metz-connect.com
www.epsontoyocom.co.jp
www.alps.com
www.fischerelektronik.de
www.brighttekeurope.com
www.seoulsemicon.com
www.stanley-components.com
www.vishay.com
www.taiwansemi.com
www.isocom.com

Currently the Microdis Group employs over 100 people, with a large number of electronic engineers, mostly involved in sales and marketing.

As a company with an extensive experience in the distribution of electronic components, and a logistics center in Germany for many years, we are able to offer almost any product from a wide variety of electronic components. We offer also the production of cable harnesses and programming of crystal oscillators for a customised frequency. Cooperation with a catalogue distributor provides fast deliveries (2 days) of a wide range of catalogue products.

We have certificates of quality management DIN EN ISO 9001:2008 for the distribution of electronic components.

EN v.5.1

GSM/UMTS

GPS

LED

Embedded

Passive

Semicon

Electromech

