The success of microSYST for over 30 years is our pioneering spirit and the fact that our eyes are firmly fixed on the future.

Managing owner Harald Kilian
Real pioneering spirit in the LED technology

“Luminous” know-how for more than 30 years
Convinced of the idea, microSYST is developing, manufacturing and selling high-quality LED display systems since its foundation in 1985. In-house ideas and product developments helped the light-emitting diodes (in short: LED) to become more and more important and built at the same time the basis for the comprehensive technical know-how in the LED technology.

LED stands for an environmentally conscious future
Until today that pioneer and innovation spirit is deeply rooted in the company. With a future-oriented thinking and environmental awareness, microSYST still utilises the clear benefits of LEDs: today, energy efficiency and sustainability are more important than ever and will ensure the future success of the LED technology.

Passion for technology - for the best solutions
Due to the interest in technical details and the flexibility regarding individual requirements combined with convincing technology, design and quality, microSYST is able to supply high-quality LED display and order picking systems for almost all customer-specific requirements.

Certified quality management
Whether customer-specific production or the delivery of standard components – quality is the top priority for microSYST. Resulting from the own quality requirements and for the benefit of satisfied customers.
Due to the high quality standards, the integrated quality management system has been certified according to DIN EN ISO 9001 in 2014. Since then this standard is regularly checked by independent institutions and its effectiveness is confirmed.
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Large Format LED Displays

A modern LED display concept with intelligent activation

With regard to the new display generation called migra and miline, the focus of microSYST is the brilliant LED display with seven display colours and intelligent control electronics.
Modular, flexible and extendable

The main features of the display systems of the migra and miline series are user-friendliness and flexibility. The internal bus system enables a modular system structure. Therefore, with regard to the range of features, numerous additional components can be added. To be able to enlarge the features free programming interfaces are available which guarantee a direct adaption to your own requirements.

Intelligent control electronics

The integrated control board is designed for independent calculations, reportings and the output of data and measured values. The „logic“ of this display system can be factory-set or is programmable on site. Typical applications are, for example, programmable reactions to states and events with direct output to the display or to an interface.

Easy data transfer regarding field bus interfaces

Our display systems can evaluate all data - individually according to your wishes.

Flexible adjustment of telegrams and configurable data processing

The structure of the system is extremely user-friendly and intuitive, but nevertheless complex tasks can be solved easily by subsequent programming. The system can be easily and quickly adjusted to existing telegrams or to telegrams which cannot be changed by the customer – this happens by the possibility of direct assignment, evaluation and implementation of individual commands and values in the relevant data telegrams.
miline - Line-oriented LED Displays

A modern LED display concept with a slim system structure – The main features of the new miline series are user-friendliness and flexibility. The line-based structure guarantees endless applications.

Display and features

The system enables the combination of different elements and interfaces to meet your requirements perfectly. Your required range of features will be planned with our configuration software „MKS“.

Visualisation of numbers, texts, values and variables

- Fixed, scrolling, flashing texts
- Animated / moving presentations
- Text attributes such as tabulators, colour switching and flashing of text parts
- Freely writable or with predefined variables, e. g. for text fields
- Unicode capable

Visualisation of pictures and graphics

- BMP, PNG or JPEG files depending on the type
- Lines, rectangles, triangles, circles, bargraphs
- QR code

Visualisation of stored texts and graphics

- Integrated memory for retrieving stored data
- Display of different changing images (texts, pictures or graphics)
- Layer by layer - flexible insertion of text layers and image layers
The benefits of the miline series

☑ Optimised design and permanently ready for use

Due to the lightweight and compact construction you can install your miline display almost anywhere – and operate it permanently, 24 hours/7 days a week, also in the industrial sector!

☑ miline display - line by line – 7 display colours

Present any information on your LED display - line by line, with up to 7 display colours! You would like to display some more details? Then just put several miline displays one below the other.

☑ Microcontroller system upgradeable by additional components

In addition to Profibus or Profinet we offer standardised units for different field bus systems. Configure your system – with one software for all units!

Interfaces and additional components

- A-D converter
- Digital I/O BCD
- Ethernet TCP/IP or WLAN
- Pulse input
- PROFIBUS PROFINET
- Real Time Clock
- Serial RS232/RS485
- Relay
- Sound module
- other fieldbus
Possible applications

- Process progress with graphical representation
- Display of accident-free days
- Compact sizes for displaying short information, e.g. as pictogram
- Visualisation of measured values
- Combined display current states with plain text and graphics
- Display of time, date and other general information (fixed or alternating)
**Characteristics**

**Display**

Seven-colour dot matrix display with high contrast and wide radiation angle for perfect readability at any distance.

**Display size**

Housing profile with a height of 160 mm, the length is modular extendable.

**Character heights and display view**

With a character height of 120 mm readable from up to 50 meters, Standard single-sided view.

**Housing**

Slim aluminium housing, designed for industrial use and free of maintenance due to fanless operation.

**Installation**

Flexible fixing elements for an easy wall or ceiling installation.

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**Technical data**

**miline**

- **Display** LED dot matrix display - standard resolution 64 x 16 pixel, 128 x 16 pixel or 128 x 32 pixel / other resolutions upon request - pixel pitch 4 mm or 8 mm
- **Display surface** approx. 520 x 130 mm, approx. 490 x 120 mm or approx. 980 x 120 mm
- **Character height** from 50 mm to 120 mm and more
- **Display colour** seven coloured (red, green, blue, yellow, magenta, cyan, white) or three coloured (red, green and mixed colour yellowish)
- **Applications** indoor (IP40)
- **Operating temperature** 0 ... +50 °C
- **Interfaces** Profinet-DP, Profinet I/O RT, Ethernet TCP/IP, WLAN, A-D-converter, digital inputs, pulse input, quartz clock, serial RS485 or RS232 (further data inputs upon request)

* possible combinations on request
The new migra series combines both the latest display technology and an intelligent compact control system. The modular structure enables individual LED displays for your required application.

Display and features

The system enables the combination of different elements and interfaces to meet your requirements perfectly. Your required range of features will be planned with our configuration software „MKS“.

Visualisation of numbers, texts, values and variables

◆ Fixed, scrolling, flashing texts
◆ Animated / moving presentations
◆ Text attributes such as tabulators, colour switching and flashing of text parts
◆ Freely writable or with predefined variables, e. g. for text fields
◆ Unicode capable

Visualisation of pictures and graphics

◆ BMP, PNG or JPEG files depending on the type
◆ Lines, rectangles, triangles, circles, bargraphs
◆ QR code

Visualisation of stored texts and graphics

◆ Integrated memory for retrieving stored data
◆ Display of different changing images (texts, pictures or graphics)
◆ Layer by layer - flexible insertion of text layers and image layers
Suitable for industrial use indoor and outdoor - up to 7 display colours

The migra large format LED displays are especially designed for industrial use and have high protection classes. Whether indoors or outdoors - with your migra you will be able to display your information, with up to 7 display colours!

A modular system structure for customised LED displays

Modular software platform, additional components and various LED modules – we produce our LED display according to your requirements - with a suitable software and the perfect size!

Something special - additional equipment for your migra

Whether special housings, a fixed labelling on the display or an equipment for special applications - we offer the appropriate equipment for your display!

Interfaces and additional components

- A-D converter
- Digital I/O
- BCD
- Ethernet
- TCP/IP or WLAN
- Pulse input
- PROFIBUS
- PROFINET
- Real Time Clock
- Serial RS232/RS485
- Relay
- Sound module
- other fieldbuses
Possible applications

- Truck call-up for visually guided steering at the goods receipt and issue
- Flexible combination of text and symbols for quick status assessment
- Communication in all languages due to unicode
- Visualisation of measured values
- Visualisation of stored texts and graphics
- Multi-page display for use in assembly or assembly applications production islands
**Characteristics**

**Display**

Multi-colour LED dot matrix display up to 7 colours, high contrast and wide radiation angle for perfect readability

**Display size**

Modular structure, wide range of dimensions possible

**Character heights and display view**

With 250 mm character height readable from up to 100 meters and more, multi-sided view possible

**Housing**

Robust aluminium housing, designed for industrial use and free of maintenance due to fanless operation

**Installation**

Flexible fixing elements for wall or ceiling installation as well as flush or mast mounting

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**Technical data**

**Display**

LED dot matrix display - resolution per module
- P4 indoor 64 x 16 pixel
- P8 indoor / outdoor per module 32 x 16 pixel
- P12 and P16 outdoor per module 16 x 16 pixel
- pixel pitch 4 mm, 8 mm, 12 mm or 16 mm

**Display surface**

- per module with 4 mm pixel pitch 260 x 65 mm (indoor)
- per module with 8 mm pixel pitch 490 x 122 mm (indoor)
- per module with 8 mm pixel pitch 244 x 122 mm (indoor / outdoor)
- per module with 12 mm pixel pitch 187 x 187 mm (outdoor)
- per module with 16 mm pixel pitch 284 x 264 mm (outdoor)

**Character height**

- from 30 mm (indoor)
- from 50 mm (outdoor)

**Display colour**

- seven coloured (red, green, blue, yellow, magenta, cyan, white)
- three coloured (red, green and mixed colour yellowish)

**Applications**

- indoor / outdoor (IP54, IP65)

**Operating temperature**

- indoor 0 ... +50 °C
- outdoor -20 ... +50 °C
- optional -25 ... +50 °C (with heating)

**Interfaces**

- Profibus-DP, Profinet I/O RT, Ethernet TCP/IP, WLAN, A-D converter, digital input, pulse input, quartz clock, serial, Modbus TCP, Modbus RTU, Ethernet I/P, EtherCAT, CANopen, DeviceNet, InterBus, USB, BCD, DVI
Special equipment

Stainless steel housing

Customised fixed labelling

Real glass

Vibration protection

Equipment for extreme hot and cold environmental temperatures

Display equipment according to customer's requirements!

We develop and produce your customised migra display according to your requirements!

Please contact us!
sales@microsyst.de
TFT - Industry Monitors

Brilliant colours and a high resolution – TFT industry monitors are perfect for presenting a wide range of information on a large display in true colour.

Display and features

Visualisation of texts and images
- Freely configurable on the monitor surface
- Various image files possible (e.g. BMP, PNG or JPG files)

Visualisation of changing information and videos
- Individual recording and order of contents
- Changing display of different image contents (texts, pictures, graphics or videos)
The benefits of the TFT industry monitors

- A high-resolution LCD display with a high contrast
  Whether texts, images, graphics or videos - use the versatile display options of your TFT monitor!

- Easy activation via PC
  Activate your TFT monitor via your PC or via an integrated PC in the monitor - for the display of large illustrations!

- For industrial use and in different sizes
  From IP20 to IP65, from a diagonal of 32" up to 86" - the TFT monitors are made for any possible application!

Interfaces and additional components

- HDMI
- DVI
- Displayport
- Ethernet
- WLAN
- Serial (RS232)
- integrated PC (USB, Ethernet TCP/IP)
Possible applications

- Occupational safety display in the production area
- Call-up display in a vehicle registration office with information video
- Visualisation of target-actual data by using diagrams

The system

The system integrates various interfaces such as HDMI, DVI, Displayport, Ethernet, WLAN, Serial (RS232), and provides an integrated PC (USB, Ethernet TCP/IP).
**Characteristics**

**Display**
- Full-colour, high-resolution LCD display

**Display size**
- Different monitor sizes up to a diagonal of 86"

**Character heights and view**
- Variable character heights,
  - Standard single-sided display view

**Housing**
- Robust monitor housing

**Mounting**
- Easy wall or ceiling mounting

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### Technical data

#### TFT

- **Display** LCD monitor surface – resolution up to 4K
- **Display surface** depending on the diagonal up to 86"
- **Character height** variable
- **Display colour** full-colour
- **Applications** indoor / outdoor depending on the model (IP20, IP54, IP65)
- **Operating temperature** Standard 0 ... +45 °C
  - optional -30 ... +50 °C
- **Interfaces** WLAN, DVI, HDMI, displayport, serial (RS232), integrated PC (USB, Ethernet TCP/IP)
mipan - Numeric Panel-Mount LED displays

The panel-mount LED displays of the „mipan“ series are especially designed for the industrial use. Depending on the model, digits, measured values and codes can be displayed compactly and purposefully. The displays are equipped with a high-contrast display with red LEDs.

Display and features

- Visualisation of numbers, key figures and codes
  - Fixed, flashing texts
  - Display brightness can be controlled via dialogue

The system
The benefits of the mipan series

- **Compact panel-mount LED display with a luminous numeric LED display**
  A variety of information can be displayed on the compact display, such as numbers and key figures or any codes - luminously and with high contrast with red LEDs.

- **Easy system connection via various interfaces**
  Depending on the model, the mipan models are equipped with an A-D converter, a serial interface or fieldbus interface - for an easy activation by a current / voltage value or by a telegram.

- **For industrial use and in various sizes**
  The front side of the mipan panel-mount LED displays is classified according to IP65 – the displays are dust- and splash-proofed!

**Interfaces and additional components**

- A-D converter
- Serial
- PROFIBUS
- PROFINET
Possible applications

- Display of results (in total, average, per day)
- Display of the system status (error, error code)
- Visualisation of measured values
Characteristics

Display

Single-colour LED display with a red display colour

Display size

Various DIN housing sizes depending on the model

Character heights and display view

Various character heights depending on the model

Housing

Robust DIN panel-mount housing

Mounting

Space-saving flush mounting

Technical data

mipan

- Display LED 7-segment
- Characters 3 to 6 digits depending on the model; character height variable depending on the model (13, 20 mm)
- Display colour red
- Application indoor (front panel IP65)
- Interfaces A-D converter, serial, Profibus, Profinet
- Housing minimum 96 x 24 x 60 mm - maximum 144 x 48 x 60 mm
mitex - Alphanumeric Panel-Mount Displays

As well as the numeric models, the alphanumeric panel-mount displays of the “mitex” series are especially designed for industrial use. Texts and any information can be displayed compactly and purposefully. In addition to the LED technology also VFC and TFT displays are used.

Display and features

Visualisation of texts and information
- Fixed, flashing texts
- Display brightness can be controlled via dialogue

The system
The benefits of the mitex series

- Compact panel-mount display with a luminous alphanumerical display
  Much information can be displayed in a small space - whether texts, codes, messages or further information.

- Easy system connection via different interfaces
  Depending on the model, the mitex displays are equipped with a serial interface or fieldbus interface or are activated via Ethernet or USB.

- For industrial use and in various sizes
  The front side of the mitex panel-mount displays is classified according to IP65 – the displays are dust- and splash-proofed!

Interfaces and additional components

- Ethernet
- PROFIBUS
- Serial
- USB
Possible applications

- Display of the system status as plain text information
- Operator guidance for control cabinets
- Display of measured values
**Characteristics**

**Display**
Various display colours depending on the model

**Display size**
Various DIN housing sizes depending on the model

**Character heights and display view**
Various character heights depending on the model

**Housing**
Robust DIN panel-mount housing

**Mounting**
Space-saving flush mounting

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**Technical data**

**mitex**

- **Display** alphanumeric LED dot matrix display
- **Characters** 17 mm, 30 mm, 8 digits, one line
- **Display colour** red
- **Application** indoor (front Panel IP65)
- **Interfaces** serial, Profibus
- **Housing** minimum 168 x 24 x 62 mm, maximum 264 x 48 x 40 mm

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- **Display** TFT-Display
- **Characters** variable character height (e.g. 1.4 mm up to 6.4 mm), 5 up to 27 lines per character height
- **Display colour** up to 7 display colours (blue, green, light blue, red, lila, yellow, white)
- **Application** indoor (front Panel IP65)
- **Interfaces** serial, Ethernet, USB
- **Housing** 124,9 x 90,4 x 38,8 mm

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- **Display** alphanumeric VFC dot matrix display
- **Characters** 5.05 mm, 10.5 mm, 20 digits, 40 digits, two lines
- **Display colour** green
- **Application** indoor (front Panel IP65)
- **Interfaces** serial, Profibus
- **Housing** minimum 216 x 96 x 22 mm, maximum 264 x 48 x 40 mm
Display systems by microSYST
successstories

miline - Customer-specific requirements

◆ Reinstallation of displays to warn against e.g. radioactivity
◆ Visualisation of variable warnings in text form with the help of graphic symbols with up to seven colours
◆ Installation of the displays above test room entrance doors for a good visibility from long distances

miline - Implementation according to customer’s requirements

◆ Planning, development, production, installation and commissioning of the warning displays at the customer’s site
◆ Design and drawing of symbols according to customer’s requirements
◆ Large format LED display „miline“ with luminous, seven-colour LEDs for indoor use
◆ Display of graphics and text information
◆ Connection to the already existing network infrastructure of the customer

miline - Benefits for the customer

◆ Display of different warnings for an easy distinction of risks
◆ Display of the current date with time should there be no warning
◆ High comprehensibility due to pictograms
**migra - Customer-specific requirements**

- System with 17 machines for the production of injection-moulded parts
- Visualisation of up to 17 fault messages in case of machine breakdowns
- Standard display of production data, time / date and general text messages and information in a trouble-free operation
- Reading distance of maximum 20 meters
- User-friendly activation for an easy input of message texts and an automatic assignment of system faults

**migra - Implementation according to customer’s requirements**

- Project planning, display construction and production as well as programming of the software
- Usage of a large seven-colour LED display „migra“ for the colourful display of priorities and any other information for employees
- System integration of the data transfer into already existing infrastructures (central PLC of the customer)
- Factory-set project planning of the production- and system-specific data as well as of all relevant fault messages for an easy commissioning and operation by the user

**migra - Benefits for the customer**

- Higher machine availability due to reduced downtimes
- Central and clear display of any production-relevant information
- Minimisation of downtimes in downstream production processes
- On schedule deliveries