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## On the football field with an integrated hotspot

# Sports application: outdoor LED display with new all-in-one circuit board

Windischeschenbach, 24.07.2024

Sometimes it's the "little" things that make life easier and still hold a few challenges when it comes to realisation ... This was also the case on the sports field in Kohlberg, Bavaria. A digital display for the footballers' scores and match times was needed. Microsyst chose a miline full-matrix display as the base for the realisation. In addition to the score display, it also offers the option of customised advertising. An integrated hotspot for easier connection and intuitive web configuration were implemented by Microsyst using a new all-in-one board.

### Everything inside: New circuit board provides numerous technical options

Exposed to wind and weather all year round, Microsyst of course opted for the outdoor version of the display. Despite the weatherproof design, the slim 80 mm installation depth allows installation even in difficult spaces. The engineers combined the P8 RGB outdoor modules with a new control board. This ensures even more user-friendly operation - an absolute necessity in the case of the sports field due to the lack of digital infrastructure. Thanks to the new control system, there is no need to lay cables or have an internet connection to commission, configure and operate the LED display. Instead, the control board sets up its own WLAN hotspot, which replaces the network infrastructure that would otherwise be required. To ensure that the web-based configuration functions smoothly, a dedicated web server runs on the display. Microsyst stores the customised input software directly on the display. The user can access the LED display interface conveniently at any time via a website using an end device of their choice - notebook, tablet or smartphone - and an internet browser. Intuitive: The current display content is visualised with pixel accuracy via the website. Even during operation, the configuration can be adjusted at any time without restarting the system. The visualisation then appears on the LED display with up to 8-bit colour depth per pixel; converted, this corresponds to a spectrum of 16.7 million colours. In addition to the high contrast and brightness of the LEDs, the size of the display ensures good visibility across the entire field of play and the spectator area: 1024 x 640 mm display area and 380 mm high characters for the score and 200 mm for the match time. This is enough to create suitable reading conditions at all times, from sunshine to rainy weather. Before and after the game and during the half-time break, the display can switch to full-format display for advertising placements. The necessary power - only an average of 271 to 462 watts thanks to the efficiency of the LEDs - can even

be supplied by a photovoltaic system in addition to the power grid, usually at 230 V, transformed to 24 V in Kohlberg.

Back to the supposedly small things that make life easier: In the case of the Kohlberg sports club, Microsyst solved the challenges with a customised solution - from consulting to hardware and software. The end result is an illuminated LED display for the score, match time and a sequence of advertising images - intuitive to operate and easy to read. Or from the technician's point of view: with the new possibilities of the all-in-one circuit board, simply well thought out.

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#### **About microSYST Systemelectronic GmbH**

*Founded in 1985, the company based in Weiden i. d. Opf. has been developing, manufacturing and selling LED display systems for over 30 years. The comprehensive know-how in LED technology goes back to the early in-house developments. This pronounced pioneering spirit is still deeply rooted in the company today. With future-oriented thinking and environmental awareness, Microsyst will continue to dedicate itself to LED technology in the future under the following principles*

- Know-how right from the start*
- Individual development and production*
- Adapted systems with unique optics*
- Regionally sustainable and efficient*