



# KAITEC

Ingenieurleistungen für  
Nachrichten- und Übertragungstechnik



## TETRA BASE STATION BIC 2040

- Economical
- Efficient
- Compact

## SMALL AND SMART

The BIC 2040 is used for radio coverage in small and medium-sized objects, e.g. for the radio communication of emergency personnel with German authorities and organisations with security tasks. It is based on a highly integrated hardware platform with few system modules. A unique feature is the flexibility for implementing customer-specific solutions. The BIC 2040 offers a separate encapsulated area on the digital section, which allows space for own applications with access to TETRA data via the API interface. Therefore, it can also be only a TETRA base station.

## DESIGN - SIMPLY INGENIOUS

Unlike conventional base stations, the design of the BIC 2040 focuses on small and medium sized communication solutions. Thus, process within the digital section can be significantly optimised and accelerated. In addition, the concept is retained in the 19" sub-rack (3 HE) with the "Plug and Play" background. The result is a full TETRA base station consisting of 4 system components. The BIC 2040 requires only 12 V power supply for operation with a power consumption of less than 4 amps (1 watt RF transmission power) and is powered on for use in a short time. Variable redundancy concepts at the module level up to full redundancy round off the functionality of the BIC 2040.



## ON-BOARD OPERATING AND DISPLAY UNIT

Basic configurations and status messages can be made directly on the touch display (11 x 6.5 cm). This means that basic operating states can be recognised or configured directly on the BIC 2040 without having to use tools such as a laptop on site. Extended configuration options are available for commissioning via the integrated Ethernet interface.



## PERFORMANCE FEATURES AT A GLANCE

- Cost-optimised solution
- Mobile operational capability with 12 Volt power supply
- Dynamic configuration of participants and groups
- Power consumption of less than 50 watts at 1 watt RF transmission power
- Flexible solution for implementing customer-focused application
- Implementation of own applications as part of the KAITEC Solution Partner Program



On the one hand, various interfaces such as GPIO's, UART, USB or Ethernet ensure the high flexibility of the base station. On the other hand, it is possible to install user applications on the central processing unit, which users can also implement as part of the KAITEC Solution Partner Program.

Thus, the base station, fully programmed in C ++, offers extensive possibilities to optimally address the requirements of the end users and thus to cope with every application.

### Various applications characterise the BIC 2040, here is an example:

When used as an object radio system, there is a switchover to the UPS supply in case of power failure. The message is sent via the GPIO interface to the BIC 2040 and transmitted via SDS or predefined speech recordings to dedicated radio subscribers or even groups.

Different types of information for radio communication can be generated in the future on this basis, including:

- Monitoring of the radio subscriber for availability in use
- Interference in the radio channel



## TECHNICAL DATA

<b>Power supply:</b>	12 V DC
<b>Power consumption:</b>	50 Watt
<b>Frequency ranges:</b>	380 – 385 MHz / 390 – 395 MHz 415 – 420 MHz / 425 – 430 MHz
<b>Frequency Offset:</b>	-6.25 kHz / 0 kHz / 6.25 kHz / 12.5 kHz
<b>Channel spacing:</b>	25 kHz
<b>Channel access:</b>	$\pi/4$ DQPSK
<b>Sensitivity, static:</b>	-118 dBm on 3.5% BER
<b>RF output power:</b>	+ 30 dBm
<b>Receiver class:</b>	Class B – static / TU50
<b>Maximum input signals:</b>	0 dBm at BER 0%
<b>Temperature range:</b>	Normal: +15°C to +35°C Extrem: -20°C to +55°C
<b>System dimensions:</b>	483 mm x 134 mm x 250 mm (WxHxD) with 3 height adjustments
<b>Weight:</b>	5 kg
<b>Specifications:</b>	EN 300 392-2 v3.4.1



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