

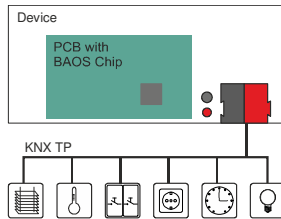
Data sheet

KNX BAOS 83x Chip

(Art. # 5241)

Serial Interface and ObjectServer for KNX Bus

Photo of the chip on a PCB



Typical application

Application area

“KNX on Chip” is an alternative to KNX modules for the development of KNX devices. The chip can be integrated together with a KNX UART transceiver in a PCB design.

The preprogrammed firmware is identical to the modules KNX BAOS 830/832/838 and includes a certified KNX stack as well as the BAOS protocol server.

More information about the firmware you find in the KNX BAOS User Guide on www.weinzierl.de. For a quick start into application development a KNX BAOS Starter Kit including KNX BAOS Modules is available. For the integration of the BAOS protocol into the application software a free demo code is included.

Hardware details of the chip are available in the datasheet from Atmel.

Technical Specification**Chip type**

- Manufacturer: Atmel
- Type: ATSAMD20E18A-MU

Environmental requirements

- Operation temperature: - 40 ... + 85 °C

Mechanical data

- Package: QFN32, 5x5 mm
- Delivery on trays

Power Supply / Clock

- Power supply voltage: 3.3 V (provided by KNX transceiver)
- Crystal frequency: 14.7456 MHz

Host Interface

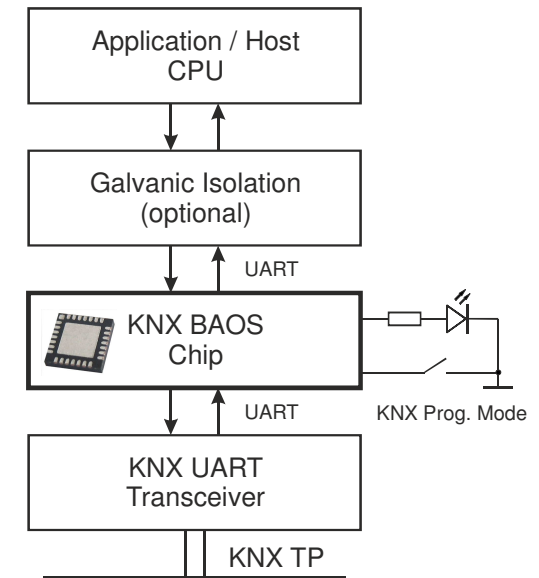
- Baud rate 19.2 / 115 kBit/s, 8e1
- Serial frame format FT1.2
- KNX telegram format: common EMI (cEMI)
- BAOS Protocol V2

KNX Interface

- KNX UART Protocol
- Baud rate 19.2 kBit/s, 8e1

KNX

- Certified KNX Stack (System B)
- Long frames, max. APDU length 55
- Up to 1000 group objects
- Up to 70 kByte parameter space

Principle circuit diagram

The KNX BAOS Chip does the communication with the KNX bus via a KNX UART transceiver (e.g. Elmos E981.03).

For the host interface a second UART is provided. Galvanic isolation is required if the application has additional (non-isolated) connections. For the KNX programming mode a LED and a key can be connected to the BAOS chip.

For a detailed schematic please contact Weinzierl.

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