

High Speed Multitasking Computers

High speed industrial multitasking computers in small modules. BASIC Tigers get used in virtually all kinds of instruments and projects:

- ♦ medical equipment
- ♦ GPS systems
- ♦ GSM systems
- ♦ communication equipment
- ♦ industrial control
- ♦ alarm systems
- ♦ container tracking
- ♦ quality control systems ...

BASIC Tigers offer an exceptional value in terms of

- ♦ short development cycles
- ♦ highest product reliability
- ♦ low cost
- ♦ innovative, additional features

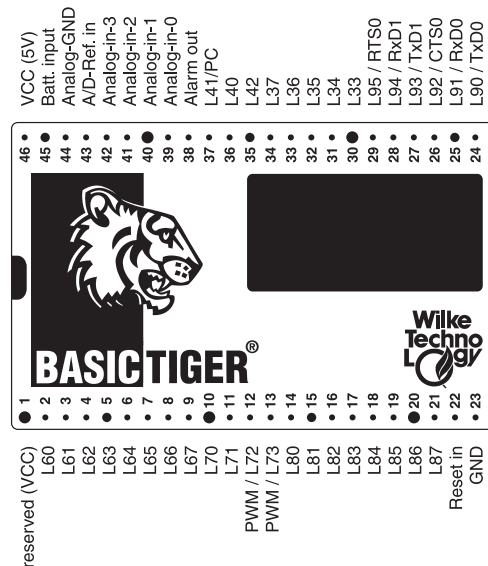
For further information, detailed literature and manuals in printed or downloadable formats visit:

www.wilke.de

or

www.wilke-technology.com

640 kB to 6 MB FLASH + SRAM



ANN-1/4, AXI-4/4, ACI-4/4, AXI-4/16, ...

- ♦ Dimensions:
 - approx. 40.6 x 62.2 x 11.4 mm / 1.6 x 2.5 x 0.5"
 - 46-pin DIP type case
 - pin to pin clearance 2.54 mm / 0.1", row distance 35.56 mm / 1.4"
 - square pins 0.64 x 0.64 mm / 0.025 x 0.025"
- ♦ Weight:
 - approx. 48g / 1.7 ounce
- ♦ Operating temperature:
 - Standard: 0°C to +70°C
 - Industrial: -20°C to +85°C
 - Expanded: expanded ranges up to -55°C to 105°C on request
- ♦ Power supply:
 - 4.6V - 5.5V / 45-60mA typ.
- ♦ System timebase accuracy:
 - +/-50 ppm base tolerance,
 - +/-30 ppm over temp. range -20°C to +70°C
 - +/-5 ppm per year max. aging
 - Other specifications available optional
- ♦ Reset:
 - Power-ON reset internal, active @Vcc = 4.5V +/- 0.1V
 - Reset input: LOW-active, internal pull-up R = 10 KΩ typ.
- ♦ I/O pins:
 - 38 universal I/O-pins
- ♦ Max current for digital outputs:
 - 1.6 mA / pin (low, U=0.45V max)
 - 0.4 mA / pin (high, U=2.4V min)
 - Max. darlington driver current: -3,5 mA (U=1.5V), max 8 pins

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- ◆ Rising time / falling time: 15 ns typ. (10%, 90%)
- ◆ Impedance digital Inputs: High-Impedance or additional pull-up / pull-down resistor:
 - L33 ... L37 pull-up 50 ... 150 k Ω
 - L40 ... L41 pull-up 50 ... 150 k Ω
 - L42 pull-down 50 ... 150 k Ω
 - L60 ... L67 pull-up 50 ... 150 k Ω
 - L70...L73 pull-up 50 ... 150 k Ω
 - L80...L87 pull-up 50 ... 150 k Ω
 - L90...L95 pull-up 50 ... 150 k Ω
- ◆ Digital Inputs: Input voltage „high“: 0.7 * Vcc min
Input voltage „low“: 0.8V max
- ◆ Analog input: 4 channels
- ◆ Input range Vref: Vcc-1.5V ... Vcc
- ◆ Vref input current: 0.5 mA typ, 1.5 mA max
- ◆ Impedance analog inputs: 20 k Ω typ., note: low impedance in power down state
- ◆ Analog input range: 0...Vref
- ◆ Analog input resolution: 10 bit internal hardware resolution,
12 bit through moving window integration.
Linearisation and calibration through software function LIN_APPROX and flash calibration tables.
- ◆ Analog input accuracy: +/- 0.5 LSB quantize error
+/- 1.5 LSB typ, +/- 4 LSB max at normal speed (-20°C ... 70°C)
+/- 4.0 LSB typ, +/- 8 LSB max in high speed (-20°C ... 70°C)
- ◆ Analog sampling rate: up to 50.000 samples / sec
- ◆ Analog sampling buffer: up to 30 kByte
- ◆ PWM: 2 PWM output channels:
 - 6-bit resolution, 5 / 20 / 80 kHz
 - 7-bit resolution, 4 / 10 / 40 kHz
 - 8-bit resolution, 1.2 / 2.5 / 5 kHz
- ◆ Memory internal: 128 KB ... 2 MB Static RAM
512 KB ... 4 MB FLASH
- ◆ Realtime clock +/-20 ppm base tolerance
-0,04 ppm/°C temp. coefficient
+/-3ppm aging per year
software calibration for rtc available

Alarm function:
Alarm pin low = active,
Alarm pin high = waiting for alarm or no alarm job at all.
Buffered through battery backup input

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- ◆ Battery Backup Input
- ◆ Serial channels:

2.7...4.5V, $I_{Batt} = 50 \dots 300 \mu A$ typ.

2 buffered UART channels:

CH-0: RxD, TxD, RTS, DTR

Baudrates: 300,600,1200, 2400, 4800, 9600, 19200, 38400, 76800,
153600, 614400,

Data/Parity: 7N, 7E, 7O, 8N, 8E, 8O, 9N

Buffer sizes: 256, 512, 1024, 2048, 4096 Bytes

CH-1: as above, RxD and TxD lines

Level systems: 5V or RS-232 I/O-levels

Up to 8 additional serial I/O channels through software driver SER2.TDD.

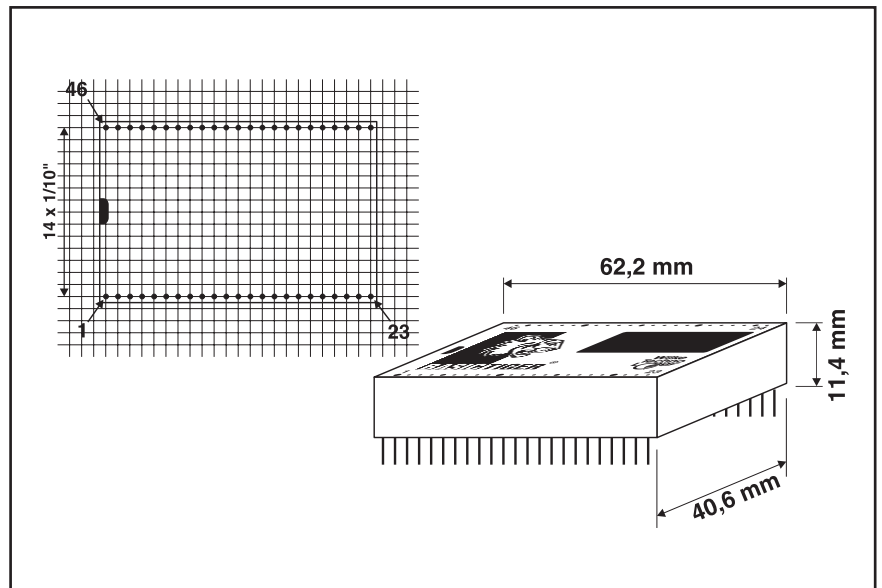
Selectable: RxD, TxD or RxD + TxD per channel

Max baudrate (1 channel): 9600 Bd TxD, 4800 Bd RxD

Max baudrate multi channel: -> divided by no of channels

- ◆ Pulses

Resolutions: 0.4 / 1.6 / 6.4 / 50 μs



BASIC Tiger Computer Modules:

Type	SRAM	FLASH	Serial	Realtime Clock
ANN-1/4	128 KByte	512 KByte	5V	-
ACI-4/4	512 KByte	512 KByte	5V	RTC
AXI-4/4	512 KByte	512 KByte	RS-232	RTC
AXI-8/16	1 MByte	2 MByte	RS-232	RTC
ACI-8/32	1 MByte	4 MByte	5V	RTC
ACI-16/32	2 MByte	4 MByte	5V	RTC