BASIC-Tiger™

High Speed Multitasking Computers

Data Sheet

High speed industrial multitasking computers integrated in a compact module. BASIC Tigers get used in virually 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 features

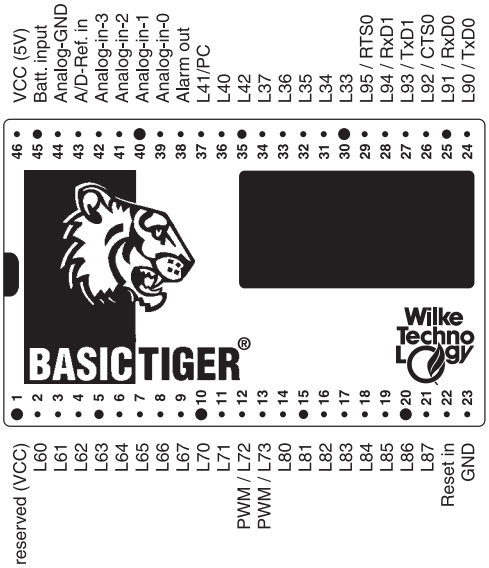
For further information, detailed literature and manuals in printed or downloadable formats visit:

www.wilke.de

or

www.wilke-technology.com

640 kB to 6 MB FLASH + SRAM



ANN-1/4, ACI-4/4, AXI-8/4, ACI-8/32, ...

• 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: Industrial: Expanded:	 0°C to +70°C -20°C to +85°C 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

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- 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
- 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 kΩ
L40 ... L41	pull-up	50 ... 150 kΩ
L42	pull-down	50 ... 150 kΩ
L60 ... L67	pull-up	50 ... 150 kΩ
L70...L73	pull-up	50 ... 150 kΩ
L80...L87	pull-up	50 ... 150 kΩ
L90...L95	pull-up	50 ... 150 kΩ

- 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 kΩ 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.
  Linearization 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
  +/-3 ppm divergence per year
  software calibaration for RTC available

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

- Battery Backup Input

2.7...4.5V, I_{Batt} = 50 ... 300 µA typ.

- Serial channels:

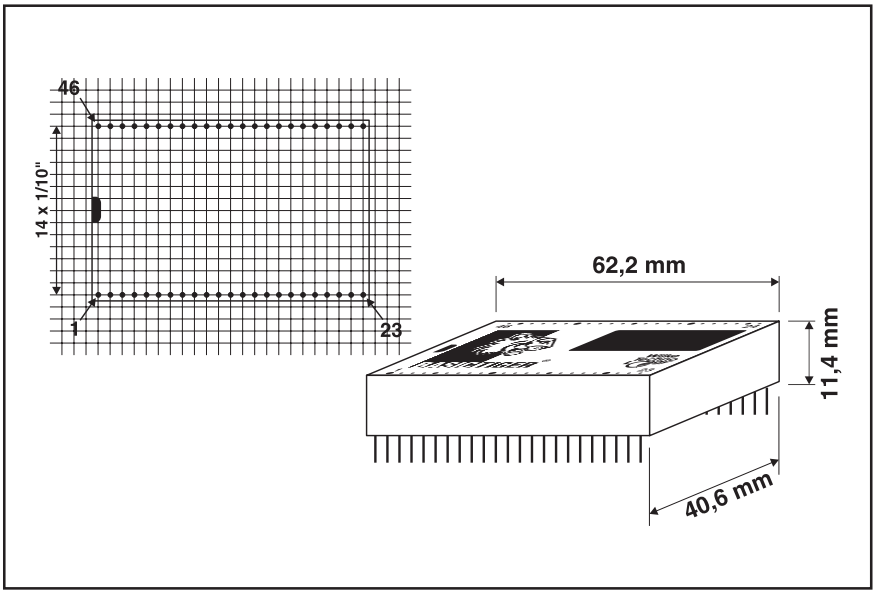
2 buffered UART channels:
CH-0: RxD, TxD, RTS, DTR
Baudrates: 300,600,1200, 2400, 4800, 9600, 19200, 38400, 76800, 153600, 614400,
Data/Parity: 7N, 7E, 7O, 8N, 8E, 8O, 9N
Buffer sizes: 256, 512, 1024, 2048, 4096 Bytes
CH-1: as above, RxD and TxD lines

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	-
ACN-1/4	128 KByte	512 KByte	5V	RTC
AXN-1/4	128 KByte	512 KByte	RS-232	RTC
ACI-4/4	512 KByte	512 KByte	5V	RTC
AXI-4/4	512 KByte	512 KByte	RS-232	RTC
ACI-8/4	1 MByte	512 KByte	5V	RTC
AXI-8/4	1 MByte	512 KByte	RS-232	RTC
ACI-8/32	1 MByte	4 MByte	5V	RTC
ACI-16/32	2 MByte	4 MByte	5V	RTC

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