

High Speed Multitasking Computers

Tiny, high speed multitasking computers in the size of a component. ECONO Tigers™ are universal, full featured control computers used in numerous projects and series products as:

- ♦ GPS systems + traffic control
- ♦ Medical instruments
- ♦ Security applications + access control
- ♦ Vending machines
- ♦ Communication equipment
- ♦ Industrial control
- ♦ Point of sales applications
- ♦ Power plants ... and many more

ECONO Tigers™ offer

- ♦ Shortest development cycles
- ♦ Highest product reliability
- ♦ Low cost
- ♦ Innovative, additional features

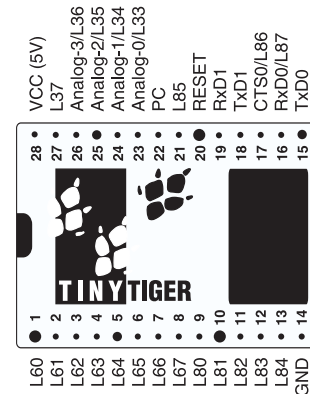
For further information, detailed literature and manuals in printed or downloadable formats visit:

www.wilke.de

or

www.wilke-technology.com

544 kB to 1 MB FLASH + SRAM



ENN-R/4, ENN-1/4, ENN-4/4

Sheet

Data

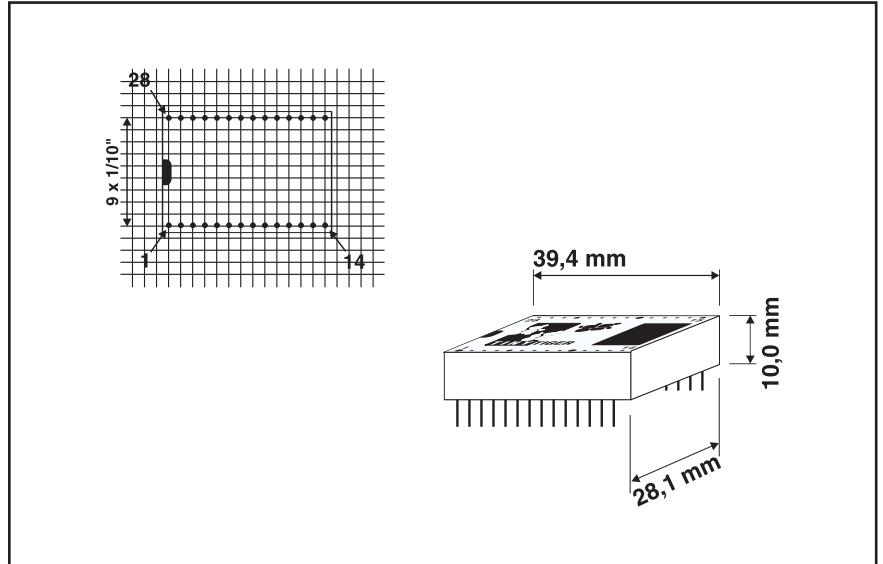
- ♦ Dimensions: approx. 28.1 x 39.4 x 10.0 mm / 1.11 x 1.55 x 0.39"
28-pin DIP type case
pin to pin clearance 2.54 mm / 0.1", row distance 22.86 mm / 0.9"
square pins 0.64 x 0.64 mm / 0.025 x 0.025"
- ♦ Weight: approx. 20g / 0.7 ounces
- ♦ Operating temperature: Standard: 0°C to +70°C
Expanded: expanded temperature ranges on request
- ♦ Power supply: 4.6V - 5.5V / 45-60 mA 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 K Ω typ.
- ♦ I/O pins: 24 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 resistor:
L33 ... L37 pull-up 50 ... 150 k Ω
L41 pull-up 50 ... 150 k Ω
L60 ... L67 pull-up 50 ... 150 k Ω
L80...L87 pull-up 50 ... 150 k Ω
L90...L94 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
- ♦ Vref analog inputs: Vcc internal
- ♦ Impedance analog inputs: 20 k Ω typ., note: low impedance in power down state
- ♦ Analog input range: 0...Vcc
- ♦ 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
- ♦ Memory internal: 32 KB ... 512 KB Static RAM
512 KB FLASH
- ♦ Serial channels: 2 buffered UART channels:
CH-0: RxD, TxD, CTS
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 TTL 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 μ s



ECONO Tiger™ Computer Modules:

| Type | SRAM | FLASH | Serial | Realtime Clock |
|---------|-----------|-----------|--------|----------------|
| ENN-R/4 | 32 KByte | 512 KByte | 5V | - |
| ENN-1/4 | 128 KByte | 512 KByte | 5V | - |
| ENN-4/4 | 512 KByte | 512 KByte | 5V | - |