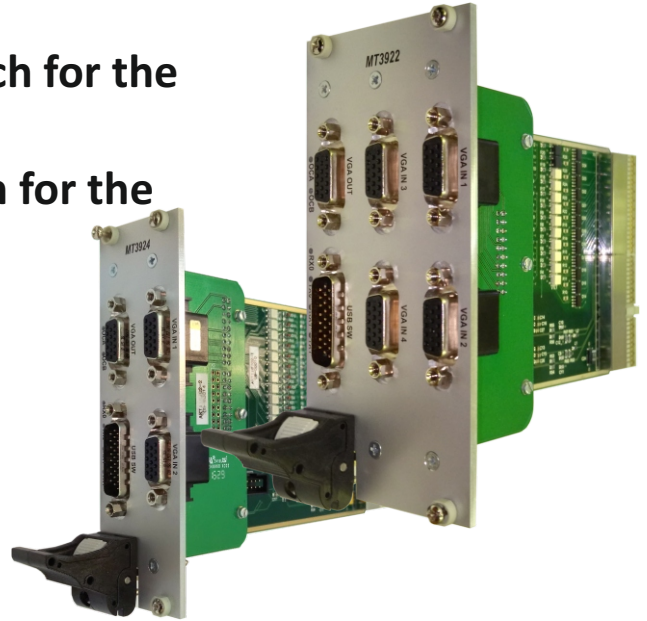


# MT3922/3924

## 3U up to 4 to 1 VGA/USB switch with digital I/O

- 12 HP 3U 4 to 1 VGA/USB switch for the MT3922
- 8 HP 3U 2 to 1 VGA/USB switch for the MT3924
- 12 digital inputs/outputs (24V)
- 8 digital inputs/outputs (TTL)
- 2 USB 2.0



The MT3922/3924 is standard 3U 8HP/12HP module gives the convenience of sharing up to 4 VGA/USB sources with one device. It is designed for very low cross-talk, low bit-to-bit skew, high channel-to-channel noise isolation and low I/O capacitance.

The VGA/USB available on DSUB connectors at front panel.

The MT3922/3924 has 12 24V digital inputs isolated from the computer system by optocoupler galvanically. The inputs are also potential free to each other in groups of four inputs. A high performance of input circuit ensures a defined switching point and polarization protection against confusing the pole. All inputs have a common electronic debounce circuit with a debounce time freely programmable.

The MT3922/3924 has 12 digital high side switches with galvanic isolation from the computer system by optocoupler.

The outputs are also isolated against each other in groups of four outputs. All outputs are protected against shortcircuit and thermal overload. The output drivers are capable of driving 0.5A per channel continuous. A hardware watchdog clears all outputs in case of trigger fail.

The MT3922/3924 has 8 digital TTL inputs/outputs.

Two USB 2.0 are placed on the board in addition.

All I/O and two USB available on the J2 rear I/O connector.

**Embedded  
Solutions**

**SKYTOP ELECTRONICS Ltd**

# Technical Data

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## I/O

- **VGA**
  - DSUB connectors at front panel
  - RON: 5.5  $\Omega$ (typ)
  - ESD human body model HBM Voltage:  $\pm 2$ KV for all I/Os
  - Channel ON capacitance: 6pF (typ)
  - Switching speed: 9ns
  - Crosstalk: -32dB at 825MHz
- **USB**
  - Two USB to UART converters FT230
  - Two USB 2.0 ports on the J2 rear I/O connector
  - Five USB 2.0 switchable ports on DSUB connector at front panel
  - Two USB 2.0 ports on the J2 rear I/O connector
- **24 V signal voltage on the J2 rear I/O connector**
  - 12 digital inputs/outputs
  - Optocoupler for galvanic isolation
  - All inputs isolated to each other in groups of four inputs
  - Programmable electronic debounce circuit (7us to 440ms)
  - Current per output 0.5A
  - Outputs are short-circuit protected
  - Outputs are isolated to each other in groups of four outputs
  - Outputs protected against thermal overload
- **TTL-level signal voltage on the J2 rear I/O connector**
  - 8 digital input/output

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## MCU

- **ATmega128**
  - 8-bit AVR
  - Operating Frequency: 16 MHz
  - Flash: 128 Kbytes

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## Miscellaneous

- CompactPCI<sup>®</sup> J1 connector are assembled for power supply
- CompactPCI<sup>®</sup> J2 rear I/O connector for digital I/O

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## Electrical Specifications

- **Supply voltage/power consumption:**
  - +5V (-3%/+5%), 8.5mA max.
  - +3.3V (-3%/+5%), 250 mA max.

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## Mechanical Specifications

- **Dimensions:** conforming to CompactPCI<sup>®</sup> specification for 3U 8HP/12HP boards
- **Weight:** 200g

# Technical Data

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## Environmental Specifications

- Temperature range (operation): -40..+85°C
- Temperature range (storage): -40..+85°C
- Relative humidity (operation): max. 95% non-condensing
- Relative humidity (storage): max. 95% non-condensing
- Altitude: -300m to + 3,000m
- Shock: 15g/11ms
- Bump: 10g/16ms
- Vibration (sinusoidal): 2g/10..200Hz
- Conformal coating on request

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## MTBF

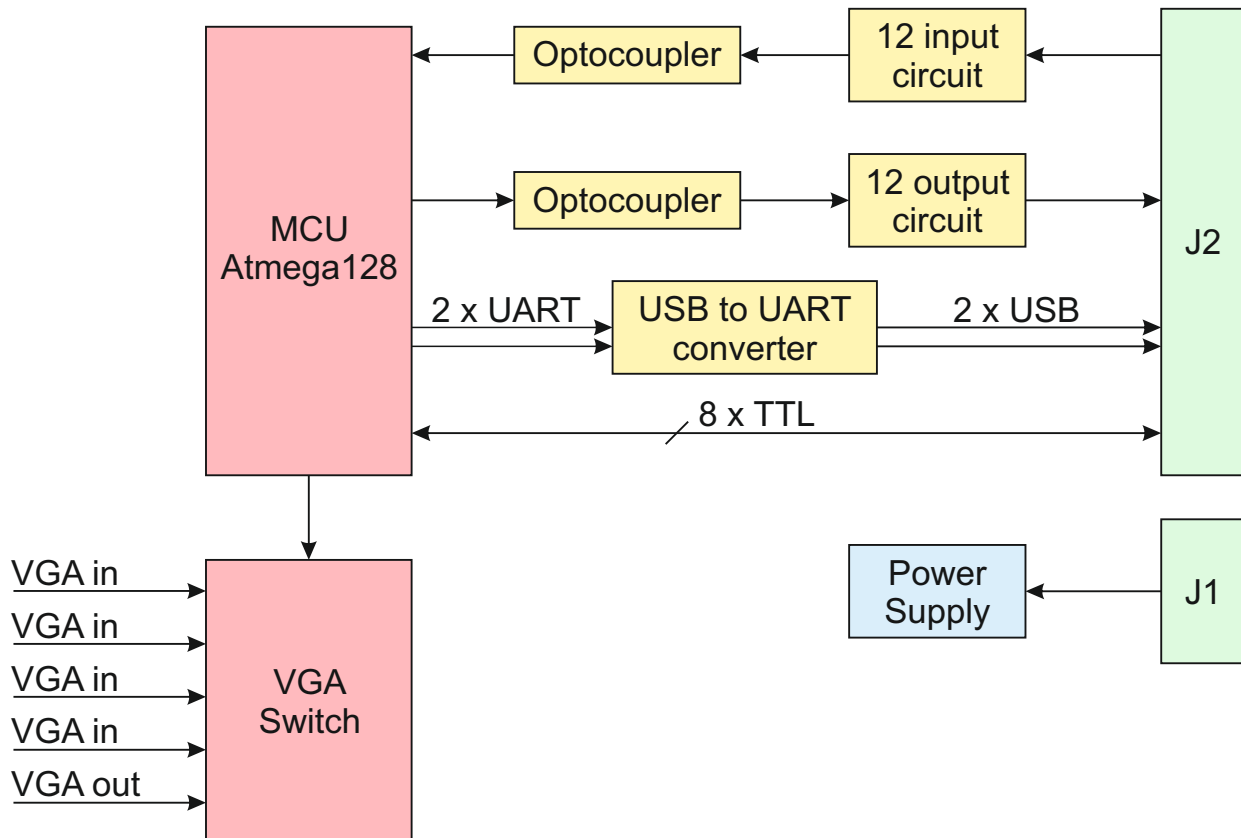
- 300 000 h @ 40°C (derived from MIL-HDBK-217F)

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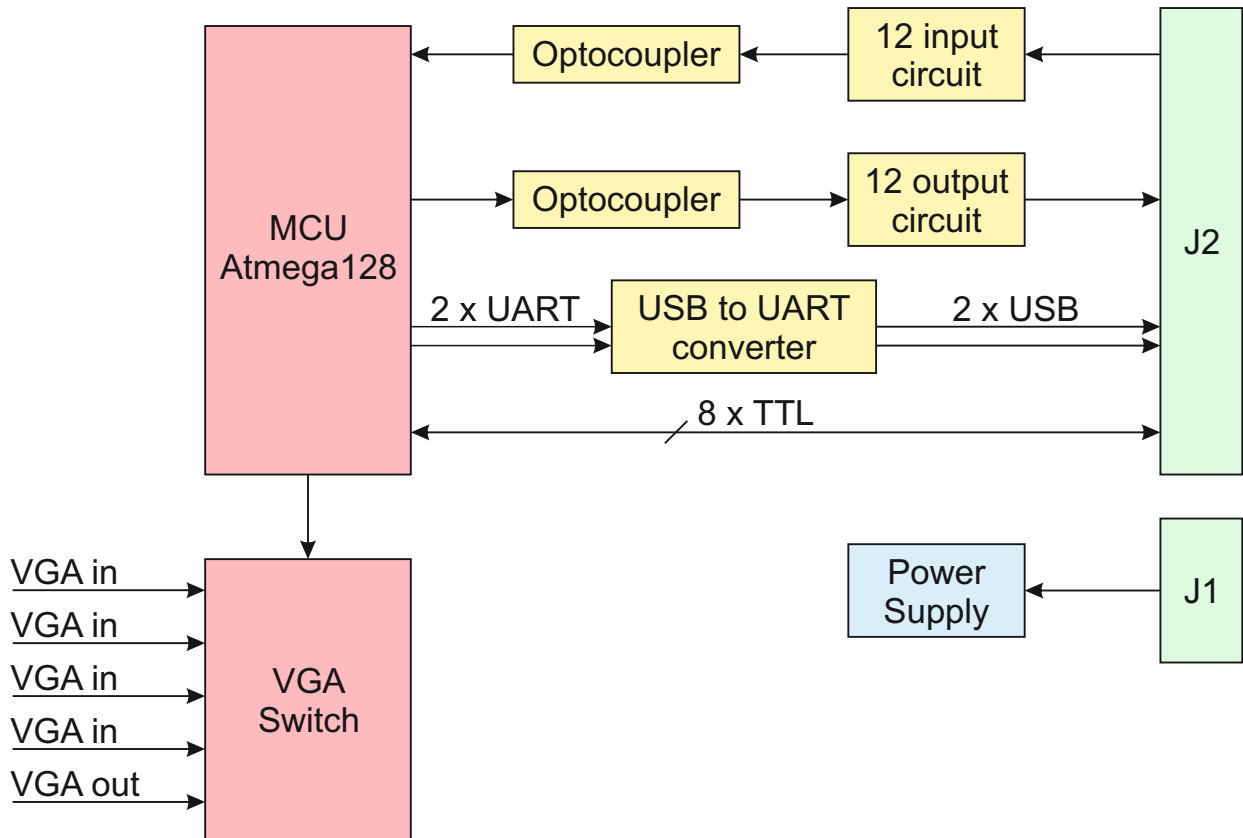
## Software Support

- Windows® (Windows® XP, Windows® 7), Linux

# Block Diagram MT3922



# Block Diagram MT3924



# Contact Information

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## Hong Kong

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