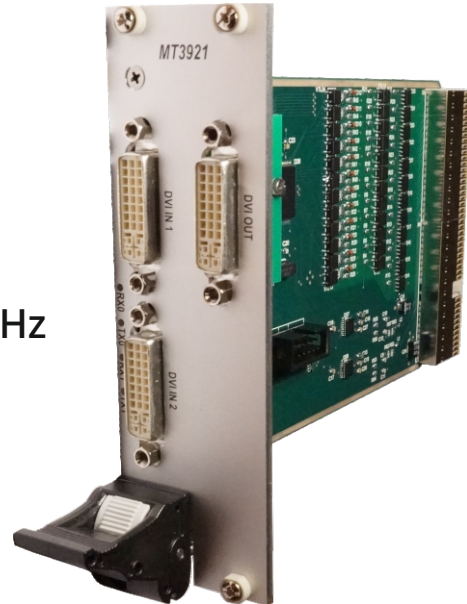


3U 2 to 1 DVI switch with digital I/O

- 8 HP 3U 2 to 1 DVI switch
- Compatible with HDMI v1.2, DVI v1.0 digital interfaces
- Single-link DVI-D data rates to 165 MHz
- 12 digital inputs/outputs (24V)
- 8 digital inputs/outputs (TTL)
- 2 USB 2.0



The MT3921 is standard 3U single-width (4HP) module gives the convenience of sharing 2 DVI source devices with one display. The DVI-D interface supporting 165MHz speed operation all video formats up to 1080p and SXGA (1280 x 1024 at 75Hz). 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 DVI-D available on two connectors at front panel.

The MT3921 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 MT3921 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 MT3921 has 8 digital TTL inputs/outputs. Two USB 2.0 are placed on the board in addition. All I/O available on the J2 rear I/O connector.

Technical Data

I/O

- **DVI**
 - Two DVI-D connectors at front panel
 - Compatible with HDMI v1.2, DVI v1.0
 - 165MHz speed operation supports all video formats up to 1080p and SXGA (1280 x 1024 at 75Hz)
 - Data rate per channel for UXGA: 1.65Gbps
 - RON: 5.5 Ω (typ)
 - ESD human body model HBM Voltage: ± 2 KV for all I/Os
 - Channel ON capacitance: 6pF (typ)
 - Switching speed: 9ns
 - Crosstalk: -32dB at 825MHz
- **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
- **USB**
 - Two USB to UART converters FT230
 - Two USB 2.0 ports on the J2 rear I/O connector

MCU

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

Miscellaneous

- CompactPCI[®] J1 connector are assembled for power supply
- CompactPCI[®] J2 rear I/O connector for digital I/O

Electrical Specifications

- **Supply voltage/power consumption:**
 - +5V (-3%/+5%), 8.5mA max.
 - +3.3V (-3%/+5%), 200 mA max.

Technical Data

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**

MTBF

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

Software Support

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

Pin Assignment - I/O Connector

in the process of development

Order Information

MT3921

- **3U 4HP Compact PCI module**

MT3921S

- **3U 4HP Compact PCI Serial module**

Contact Information

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