

TPMC685 16 x 8 Bit Digital Inputs/Outputs (5V TTL)

Application Information

The TPMC685 is a standard single-width 32 bit PMC module offering up to 128 bit of TTL I/O arranged in 16 x 8 bit ports. Direction of the I/O lines is software programmable for each of the ports. Each port is built up using a TTL bus transceiver. Each line is protected against ESD and overvoltage.

Software selectable Pullup / Pulldown Resistors are available on all I/O lines.

Each input can generate an interrupt. Signal edge handling is programmable to interrupt on rising and/or falling edge of the input signal. Interrupts can be enabled and disabled for each bit. For interrupt source detection the status of each bit can be read from the interrupt status register.



To eliminate spikes and glitches, keeping interrupts to a minimum, each port has its own user configurable input filter.

All outputs drive 5V TTL levels with up to 24mA.

It is possible to read or write synchronously all 128 lines.

The first 64 bits of TTL I/O are accessible via the front panel HD68 SCSI-3 type connector and the second 64 bits of TTL I/O via rear panel P14.

TPMC685-11 provides 8 additional ground contacts on the P14 connector. These grounds reduce the number of Back-I/O lines to 56, but improve the signal integrity.

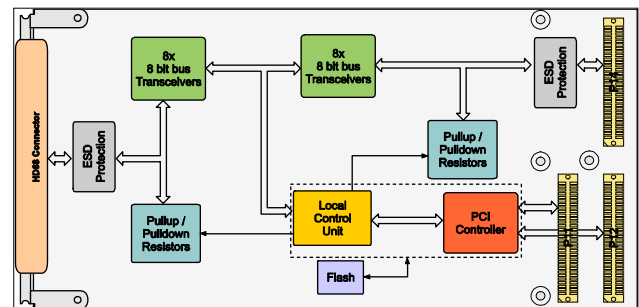
To deal with software faults, the TPMC685 provides a user configurable Watchdog timer. It can set all outputs in a user defined (save) state when the watchdog expires.

Two Timers are included in the TPMC685 for easy implementation of equidistant input sampling or output setting. For First Time Users the Engineering Documentation TPMC685-ED is recommended.

Software Support for different operating systems is available.

Technical Information

- Standard single-width 32 bit PMC module conforming to IEEE P1386.1
- PCI 3.0 compliant interface
- 3.3V and 5V PCI Signaling Voltage tolerant
- Board size: 149 mm x 74 mm
- Interrupt generating digital I/O lines
 - TTL I/O's arranged in 16 x 8 bit ports
 - Direction programmable per port
 - TTL signaling voltage (maximum current: $\pm 24\text{mA}$)
 - software selectable Pullup / Pulldown per port
- ESD and overvoltage protection for each I/O line
- I/O access:
 - 64 I/O lines on HD68 front connector
 - 64 I/O lines without ground on rear connector P14; changeable to 56 I/O lines [55:0] plus system ground
- Temperature range: -40°C to $+85^{\circ}\text{C}$
- MTBF: 617000 h



Order Information

RoHS Compliant

TPMC685-10R 16 x 8 Bit Digital Inputs/Outputs
(5V TTL)

TPMC685-11R 15 x 8 Bit Digital Inputs/Outputs
(5V TTL) + 8 Ground

Documentation

TPMC685-DOC User Manual

TPMC685-ED Engineering Documentation, includes
TPMC685-DOC

Software

TPMC685-SW-25 Integrity Software Support

TPMC685-SW-42 VxWorks Software Support (Legacy
and VxBus Software Support)

TPMC685-SW-65 Windows XP/XPE/2000 Software
Support

TPMC685-SW-72 LynxOS Software Support

TPMC685-SW-82 Linux Software Support

TPMC685-SW-95 QNX 6 Software Support

Related Products

TA304 Cable Kit for modules with HD68
connector

TPIM002 PIM I/O Module with HD68 SCSI-3
type connector