

# TIP302 Multiprotocol Communication IP based on MC68302

### Application Information

The TIP302 is an IndustryPack® compatible module with a serial communication I/O interface using the Motorola MC68302 Multiprotocol Communication Processor running at 25 MHz.

The MC68302 contains a 68K core processor, a micro coded RISC communication processor, 6 serial DMA channels, 3 timers, an interrupt controller, 3 independent full-duplex serial communication controllers (SCCs) and 1152 bytes of on-chip RAM.

The TIP302 provides TTL level interface for all 3 SCC's of the MC68302 at the IP I/O connector. A variety of physical layer standards, such as RS232, RS422, RS485 or ISDN can be supported by the use of custom transition modules.

Internal microcode in the MC68302 supports a variety of protocols, such as BISYNC, HDLC, SDLC, UART, DDCMP, V.110, ISDN (2B+D) and transparent modes.



The TIP302 provides 1 Mbytes of static RAM (SRAM) as dual-port memory for both, MC68302 code and user data. The code is downloaded to the SRAM by the IP host CPU prior to removing the MC68302 reset signal by writing to a control register. Once the MC68302 reset signal is removed, the MC68302 starts fetching code from the SRAM.

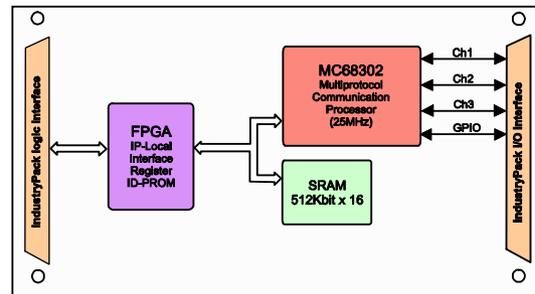
The SRAM, the MC68302 registers and the MC68302 on-chip RAM are accessible by the MC68302 and the IP host CPU by arbitration. The local bus arbitration is transparent to the IP host CPU.

Both the IP host CPU and the MC68302 are capable of generating interrupts to each other.

For First-Time-Buyers the Engineering Documentation TIP302-ED is recommended. The Engineering Documentation includes TIP302-DOC, schematics and data sheets.

### Technical Information

- Interface according to IndustryPack specification
- Identification-PROM supports auto-configuration
- Single Size IndustryPack
- 1 Mbytes of Dual-Port SRAM, organized as 512K x 16 for program and data
- MC68302 Multiprotocol Communication Processor (25 MHz)
- Interface: TTL level interface for all 3 SCC's
- Operating temperature: 0°C to +70°



### Order Information

#### RoHS Compliant

**TIP302-12R** Multiprotocol Communication IP

#### None RoHS Compliant

**TIP302-12** None RoHS compliant version of TIP302-12R

#### Documentation

**TIP302-DOC** User Manual

**TIP302-ED** Engineering Documentation, includes TIP302-DOC

#### Software

For Software Support please contact TEWS