Micromega Corporation

Release Notes

uM-FPU64 Firmware Release 405

Changes in Release 405

New Features and Changes

- RTC: the date/time number format has been changed to be the number of seconds since 2000-01-01 00:00:00. Subtracting one date/time number from another now yields elapsed time in seconds, allowing for easier date/time calculations.
- RTC: NUM_TO_STR action now allows for storing a DATE_TIME string, DATE string, or TIME string
- RTC: STR_TO_NUM action now allows for converting a DATE_TIME string, DATE string, or TIME string
- RTC: NUM_TO_DATE action has been added to convert a date_time number to values stored in consecutive registers (second, minute, hour, day, month, year, weekday).
- RTC: DATE_TO_NUM action has been added to convert values stored in consecutive registers (second, minute, hour, day, month, year, weekday) to a date_time number.
- TIMESET: sets time in seconds for seconds, millisecond, and microsecond timer
- TICKLONG: if register A is a 32-bit register, the number of milliseconds is returned
- TICKLONG: if register A is a 64-bit register, the the number of microseconds is returned
- DEVIO,FIFOn: fixed problem with wrong event bit being set
- DEVIO,I2C: added option to START_WRITE to load device address from register 0
- DEVIO,I2C: added START_READ action to provide support for multiple reads as a single I²C transaction.
- DEVIO,LCD: the RS pin direction is always set before use allowing the pin to be shared.
- DIGIO: fixed problem with READ_BITP when using pins D0-D4
- a one second timeout has been added when waiting for bytes to be received in the instruction buffer. This prevents the FPU from hanging when too few bytes are sent for an instruction.
- debug monitor: added WI instruction to allow the IDE to write data into the instruction buffer. See the new Interactive Compile window in uM-FPU64 IDE r407.
- debug monitor: added $R instruction to allow the IDE to reset the FPU.