# mfh\_ICM Firmware Properties

FPGA: Xilinx XC7S25-2FTGB196I

FLASH (ISSI, SPIx1x4, 128 Mbit): IS25WP128-JKLE

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| **Revision** | **Name** | **Short Description** |
| 008 | mfh\_icm\_008 | for ICM\_1 only !!!  comm. @ 2MBd via micro USB conn. “ICM”, 96V power on by cable plugging (short DSUB9-pins\_1,6), J7: both jumper must be set (names are rotated by 90° !!!), Rx/Tx buffer: 32KB each |
| 010 | mfh\_icm\_010 | can be used for ICM\_1 and ICM\_2 (with R81, R82 being removed !!!)  improved comm. ADC waveform to ser. decoder |
| 011 | mfh\_icm\_011 | chassis- LEDs : WP0\_TX, WP0\_RX, WP1\_TX, WP1\_RX active now. Min. 500ms on, if TX\_Fifo-read or RX-Fifo-write takes place. |
| 012 | mfh\_icm\_012 | USB-UART rts/cts flow control implemented, rx/tx fifo prog\_full flags used (30720 bytes = 32k-2k )  UART config.: uart = serial.Serial(COMPORT, baudrate=3000000, bytesize=8, parity='N', stopbits=1, timeout=1, xonxoff=0, rtscts=1) |
| 014 | mfh\_icm\_014 | for cable <50m only ! comm. threshold is fixed at 0.8V, rev.012 usb\_rts-bug fixed (rts synchronized now) |
| 015 | mfh\_icm\_015 | max. cable length=3000m or gen1 3.5km-filterbox, comm. threshold is fixed at 0.1V |
| 016 | mfh\_icm\_016 | max. cable length=3000m or gen1 3.5km-filterbox, **AFE-friendly trapezoidal waveform** |
| 019 | mfh\_icm\_019 | Full flow control, when using together with icm\_019, uart-mode=RTS/CTS must be configured on both ends !  Data are sent in chunks of max. 1KB, the buffer size is 32KB, flow control is active when buffer is filled with 30KB |