



Document Name <b>M10 Version Notes</b>	System M10	Developed for General Distribution
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### 10/24/2007 FPGA 8.1.10 PIC 3.1B

Problem	Module	Description
Initial release.		

### 12/19/2007 FPGA 8.1.11 PIC 3.1D

Problem	Module	Description
Weak pull-ups should be removed from port B.	PIC	Weak pull ups have been removed.
The pulse train needs to be faster.	PIC	The pulse train period and high time are now specified in units of 12.5ns. The high time is computed as $HT * 12.5$ , and the period as $(PERIOD + 1) * 12.5$ .
The MULL register was not being properly protected during the high priority interrupt.	PIC	Fixed. This probably had no effect on the operation of prior versions.

### 1/3/2008 FPGA 8.1.11 PIC 3.1E

Problem	Module	Description
The "beacon message" bug needs to be applied to this version.	PIC	The fix has been applied to prevent unpredictable results that might be caused by the bug.

### 1/7/2008 FPGA 8.1.11 PIC 3.1F

Problem	Module	Description
The communication lock-up fix reported for the I200 needs to be applied.	PIC	This has been traced to a communications state-machine problem which caused the device's communications to lock up under some circumstances. This problem has been fixed by clearing the interrupt flag immediately after a message is read out of the FPGA buffer by the PIC.

### 5/9/2008 FPGA 8.1.18 PIC 3.1F

Problem	Module	Description
??	FPGA	

### 5/9/2008 FPGA 8.1.18/8.1.21 PIC 3.1G

Problem	Module	Description
Support needs to be added for the M10C gating.	PIC FPGA	This has been added.

### 7/24/2008 FPGA 8.1.18/8.1.21 PIC 3.1H



#### 1400 Version Notes

Problem	Module	Description
Messages are occasionally lost when running in fast message mode.	PIC	This has been traced to a problem with the PIC code which was erroneously asserting the FPGA transmit line when it thought a buffer lockup condition had occurred. Upon analysis and testing the buffer lockup code was found to be unnecessary and has been removed.

#### 09/08/2008 FPGA 8.1.18/8.1.25 PIC 3.11

Problem	Module	Description
Averaging is needed with the fast messages.	PIC FPGA	A new fast message has been added that gives the accumulated ADC data since the last read. Also returned is the number of samples contributing to the integral so that the average ADC value over the time interval can be computed.
M10C gate support	PIC FPGA	This version includes M10C gate support making this version compatible with both the M10 and the M10C.

#### 09/15/2008 FPGA 8.1.18/8.1.25 PIC 4.0A

Problem	Module	Description
TriggerPoints, Initiate, and Abort commands need to be added to make the M10 compatible with the new A500 data acquisition.	PIC	These messages have been added. The M10 now implements the new standard for all devices.

#### 10/30/2008 FPGA 8.1.18/8.1.26 PIC 4.0C

Problem	Module	Description
The offset was not being properly applied for the V8.1.18 version.	PIC	Fixed.
When changed, the pulsing parameters was not being applied immediately	PIC	Fixed.
Unipolar mode does not work.	FPGA	Fixed.