



Release Notes

MC55110 version 1.5

Document last updated: 7/24/2005

Product names: MC55110
Source control archive name: mc55110 version 1.5
Device Checksum: 551100015.bin 0xFD2672F6
Date of build: 7/14/2005

Description:

The MC55110 is a motion control processor for stepper motors and provides one axis of motion. This document details bug fixes and changes for this release.

Known Issues:

none

Incompatibilities with previous version:

none

Known Bugs:

Refer to current Magellan bug list located at
http://www.pmdcorp.com/support/release_notes.cfm

Changes/Fixes:

Command Changes

90141	Executing SetEncoderSource 0 for axis>1 after a power on or reset corrupts the actual position. Fixed.
90138	Breakpoint motor off behaves differently to SetMotorMode Off. Fixed.
90134	SetMotorMode On can result in a motion error if the position error limit has been exceeded during open loop operation. Fixed.
90130	SetStepRange only works if motor type is step. Fixed.
90129	Multiple checksum reads produce unexpected results for "Set" commands. Fixed.
90119	"Set" command error – same as bug#90129

Communication Changes

90139	A good serial response incorrectly clears the HostIOError register. Fixed
90136	In serial multi-drop mode the chip response latency scales with baud rate. Fixed.
90135	In serial idle-line multi-drop mode there is occasional bad communication. Fixed.
90127	If SetCANMode is issued while the processor is in serial multi-drop mode the chip will stop responding. Fixed.
90109	Serial communication to the processor is lost if a command is sent with the incorrect (too many) number of bytes. Fixed.

Trajectory Generation Changes

90131	Incorrect position data could be used when switching to electronic gearing mode. Fixed.
90122	S-curve starting position symmetry. Fixed.
90114	In trapezoidal profile mode, if the trajectory velocity is set to below the value of the StartVelocity once a trajectory is running, the trajectory should stop. Fixed.
90113	In trapezoidal mode, if the trajectory velocity has been set to zero (SetVelocity 0) and the StartVelocity is > 0 issuing an update results in the trajectory jumping to -1. Fixed.
90112	StopMode has no effect if StartVelocity is greater than zero. Fixed.

Step Signal Output Changes

	none
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Registers and Signals Changes

90128	When in S-curve profile mode the maximum velocity flag located in the activity status register is not reliable. Fixed.
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Miscellaneous Changes

90132	The motor type should not be read during startup. Fixed.
90137	GetActualVelocity is not cleared for step motor type when the axis stops moving. Fixed.
90116	The ParallelEnable signal is not checked at device startup. Fixed.
90115	If a trigger based trace stop is programmed, the trace stops prior to the final sample being stored. Fixed.
90108	A limit switch event does not clear the position error. Fixed.

Version 1.4

Known Issues:

none

Incompatibilities with previous version:

Format of CAN command response packet has changed. See below.

Known Bugs:

none

Changes/Fixes:

Command Changes

Fixed a problem with the SetEncoderToStepRatio command.
Fixed a problem with the SetActualPositon command.

Communication Changes

Corrected a problem in CAN communication that resulted in a command with the wrong number of data words returning the wrong error code.
Changed the placement of the error code returned via CAN. Previously the error code was contained in the first byte of the returned packet. Now the first byte is always zero and the second byte contains the error code, or zero if no error occurred.
Corrected a problem in SetSignalSense that could result in the encoder position being reset.

Trajectory Generation Changes

Corrected a problem in s-curve profile mode when the fractional time for motion in segment 4 is less than 1.0 cycles.
Corrected a problem in s-curve profile mode for moves that start and end at a large negative position.
Corrected problems in velocity contouring profile mode for moves that have very large velocities or acceleration.
Corrected a problem in trapezoidal profile mode for long negative moves with large velocities.
Corrected a problem in trapezoidal profile mode for moves with low velocities but high acceleration/deceleration.
Corrected a problem in trapezoidal profile mode for very fast moves that resulted in corrupted values for the final commanded velocity and acceleration.
Corrected a problem in trapezoidal profile mode when start velocity was not zero.
Corrected a problem in trapezoidal profile mode when using a high start velocity.
Corrected a problem in trapezoidal profile mode for moves with high velocity and acceleration that resulted in overshoot at the end of the move.
Corrected a problem in trapezoidal profile mode for moves where the move was greater than half of full scale.

Step Signal Output Changes

Corrected a problem where no steps would be output if the velocity was set to a value less than 1 step per chip cycle.
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Registers and Signal Changes

Corrected a problem in SrlEnable line when using multi-drop mode. Following a reset this signal will go low. Previously it was high which prevented the chip from communicating.
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Corrected a problem in SrlEnable line when using multi-drop mode. Following a SetSerialPortMode command that selects multi-drop mode this signal will go low. Previously it was high which prevented the chip from communicating.

Miscellaneous Changes

none
