SimpleFormsCS

Added example code of flashing firmware that works for both KFLOP and Kogna. Called from Flash Firmware button.

KMotionCNC

GViewer Setup Screen now supports mm and inch modes

Added capability in KFLOP to KMotionCNC InputBox functionality for the dropdown values to be specified if separated by ';' characters after the label prompt.

New commands to disable controls. One will disable all the Jog Buttons and such regardless of the Job running state. The two others will allow enabling/disabling a list of controls that are not otherwise controlled. The new commands are:

```
#define PC_COMM_FORCE_DISABLE_JOG_KEYS 116  // Disable Jog Buttons regardless if Job is
Running or not

// Enable Dialog Controls Persist+1 = gather buffer offset (32-bit words) List of
Controls to Enable, defined in resource.h
#define PC_COMM_ENABLE_CONTROLS 117   // Persist+1=gather offset to null terminated list
of int ControlIDs

// Disable Dialog Controls Persist+1 = gather buffer offset (32-bit words) List of
Controls to Disable, defined in resource.h
#define PC_COMM_DISABLE_CONTROLS 118  // Persist+1=gather offset to null terminated list
of int ControlIDs
```

KMotion

C Programs Auto Complete Enhanced to support Kogna Functions.

Fix issue with changing Options from KFLOP <> Kogna when no board is selected.

KMotionServer

When searching for Ethernet Adapters to broadcast multicast packets to try to find Kognas, and no Ethernet Adapters are available, KMotionServer ends up in a tight loop searching for adapters using significant CPU usage. A 250ms Sleep in the search loop, when no adapters are available, has been added.

C Examples

Added 'M100 Tool Height Rev3.c' example for probing tool length and updating Tool Table.

Added 'SimulatePosNegLimits.c' to simulate separate Positive and Negative Limits when a common input from both ends is used.

Added 'HaltKMotionCNC.c' example Halting KMotionCNC.

Added 'HaltKMotionCNCConditionally.c' example of what can be configured as the Cycle Start Action as a check before running a Job.

Added StackLight.c example to set outputs based on Feedhold, running, idle

Added Kogna 'STEP_DIR_TO_DIFF.c' example to mux any of the first 8 Step/Dir Generators to Kogna's Differential Outputs

Added TestInputDropdown.c to test specifying drop down values separated by ';' for InputBox function.

Added DisableButtons.c example for enable/disabling dialog controls.

Added ChangeButtonColor example using screen script to change a button color

GCode Examples

Added "box20 M48 M49.ngc" showing example of FRO SSO enable disable

Kogna

Script Command "InputChan0" has been changed to allow input channel numbers up to 27 which is required to access Kogna encoder inputs when SnapAmps are present.

SnapAmp PWMC (brushless Current mode) now supports Output Offset which is helpful in systems with constant force offset ie gravity

GCodeInterpreter

Add G48/G49 Pxx To enable/disable (FRO) Feed Rate Override and (SSO) Spindle Speed Override.
- G48 enables both FRO and SSO
- G49 disables both FRO and SSO
- G49 P1 disables FRO and enables SSO
- G49 P2 enables FRO and disables SSO

When reading GCode Parameters (Variables) if variable 5220 has an invalid fixture number of 0 change to valid value of 1 (G54).

.NET Libraries

Fix bug with KM_IO.SetAnalogValue(int value)

Expose Interpreter.SaveVars to save the GCode Interpreter Variables to disk which include fixture and global offsets.

Expose CoordMotion.RapidParamsDirty to force refresh of Rapid axis parameters from KFLOP/Kogna

Expose DoRapidsAsFeeds which breaks down Rapids into small segments which is necessary for non-linear kinematics so that Rapids follow a straight line in CAD Space (which is curved in actuator space).

Fix Issues with KM_Axis and KM_AxisGroup:

1. Velocity and Acceleration will be in 'Units' (inches or mm) and represent the values for Independent motions, Jogging, and G0 Rapids.
2. Jerk will be added to be complete and will be in 'Units' as well.
3. When set these values will be written to KFLOP/Kogna multiplied by the CPU (Counts/per unit)
4. 2 new Parameters CoordVelocity and CoordAccel will be added for Coordinated Motion and be in 'Units'
5. Changed KM_AxisGroup property name from Velocity to FeedRate
6. A new Boolean, CPU_is_mm will be added to indicate if Units are mm, otherwise Units are Inches, which will be used within EnableGroup to set the MotionParameters in inches appropriately

Interpreter.ChangeFixtureNumber(int fixture) now returns 0 for success or non-zero error code