## 0.0.1 Definition

Full duplex, 2MHz.

Tiva	Datatype
Velocity/PWM	9 bit signed
$\mathbf{FPGA}$	
Position	12 bit signed
Velocity	12 bit signed
Amps	12 bit unsigned
Index	12 bit unsigned

 Table 1: Datatypes

Table 2: Package format - Tiva

0	1	2	3	4	5	6	7	8	9	10	11
	Velocity M0 - 9bits						R	R	R		
			Р	V	A						
									0	0	0
Velocity M1 - 9bits				R	R	R					
									Р	V	A
									1	1	1
R	R	R		R	eser	ved	for i	futu	re u	se	
I	Μ	Μ									
	0	1									

Table 3: Shorthand

RPX	Request position from motor X
RVX	Request velocity from motor X
RAX	Request amps from motor X
RMX	Reset position of motor X
RI	Request index values from homing sensors

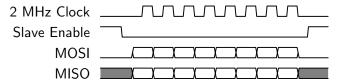


 Table 4: Package format - FPGA

 $\begin{array}{c} {\rm Request0-0\ to\ 36\ bits} \\ {\rm Request1-0\ to\ 36\ bits} \\ {\rm Request\ Hall\ index\ sensors-0\ to\ 12\ bits} \end{array}$