Name	ID	Type	Unit	Default	Default (Native)	nplemented/Show	Mode (R/W)	EEPROM	ed or	Group	Description	Notes (why read only)
kCanID	0	uint		0	0	Y	RW	Y	Y	Basic	CAN ID	
kInputMode	1	Input Mode		0	0	Y	R	N	Y	Basic	Input mode, this parameter is read only and the input mode is detected by the firmware automatically, results are %Input Mode%	*This is detected automagically
kMotorType	2	Motor Type		BRUSHLESS	1	Y	RW	Y	Y	Basic	Motor Type, options are %Motor Type%	
kCommAdvance	3	float32	Degrees	0	0	N	RW	Y		Motor Advanced	Electrical degree of offset from the hall sensor edge to motor commutation. This is currently disabled	
kSensorType	4	Sensor Type		HALL_EFFECT	1	Y	RW	Y	Y	Basic	Sensor Type for the encoder port / brushless, options are %Sensor Type%	
kCtrlType	5	Ctrl Type		CTRL_DUTY_CYCLE	0	Y	RW	Y		Closed Loop	Control Type, this is a read only parameter of the currently active control type. Options are %Ctrl Type%	*This is set by calling the correct API
kIdleMode	6	Idle Mode		IDLE_COAST	0	Y	RW	Y	Y	Basic	State of the half bridge when the motor controller commands zero output or is disabled. Options are % Idle Mode%	
kInputDeadband	7	float32	Percent	0.05	0x3d4ccccd	Y	RW	Y	Y	Basic	Percent of the input which results in zero output for PWM mode	
kFeedbackSensorPID0	8	uint		0	0	Y	RW	Y		Closed Loop		
kFeedbackSensorPID1	9	uint		0	0	N	RW	Y		Hidden		
kPolePairs	10	uint		7	7	Y	RW	Y		Brushless Config	Number of pole pairs for the brushless motor. This is the number of poles/2 and can be determined by either counting the number of magents or counting the number of windings and dividing by 3. This is an important term for speed regulation to properly calculate the speed.	
kCurrentChop	11	float32	Amps	115	0x42e60000	Y	RW	Y		Current Limits	If the half bridge detects this current limit, it will disable the motor driver for a fixed amount of time set by kCurrentChopCycles. This is a low sophistication 'current control'. The max value is 125.	0 = disabled
kCurrentChopCycles	12	uint		0	0	Y	RW	Y		Current Limits	Number of PWM Cycles for the h-bridge to be off in the case that the current limit is set. Min = 1, multiples of PWM period (50us). During this time the current will be recircuilating through the low side MOSFETs, so instead of 'freewheeling' the diodes, the bridge will be in brake mode during this time.	0 = disabled
kP_0	13	float32		0	0	Y	RW	Y		PIDF Slot 0	Perportional gain constant for gain slot 0.	
kI_0	14	float32		0	0	Y	RW	Y		PIDF Slot 0	Integral gain constant for gain slot 0.	
kD_0	15	float32		0	0	Y	RW	Y		PIDF Slot 0	Derivative gain constant for gain slot 0.	
kF_0	16	float32		0	0	Y	RW	Y		PIDF Slot 0	Feed Forward gain constant for gain slot 0.	
kIZone_0	17	float32		0	0	Y	RW	Y		PIDF Slot 0	Integrator zone constant for gain slot 0. The PIDF loop integrator will only accumulate while the setpoint is within IZone of the target.	
kDFilter_0	18	float32		0	0	Y	RW	Y		PIDF Slot 0	PIDF derivative filter constant for gain slot 0.	
kOutputMin_0	19	float32		-1	0	Y	RW	Y		PIDF Slot 0	Max output constant for gain slot 0. This is the max output of the controller.	
kOutputMax_0	20	float32		1	0	Y	RW	Y		PIDF Slot 0	Min output constant for gain slot 0. This is the min output of the controller.	
kP_1	21	float32		0	0	Y	RW	Y		PIDF Slot 1	Perportional gain constant for gain slot 1.	
kI_1	22	float32		0	0	Y	RW	Y		PIDF Slot 1	Integral gain constant for gain slot 1.	
kD_1	23	float32		0	0	Y	RW	Y		PIDF Slot 1	Derivative gain constant for gain slot 1.	
kF_1	24	float32		0	0	Y	RW	Y		PIDF Slot 1	Feed Forward gain constant for gain slot 1.	
kIZone_1	25	float32		0	0	Y	RW	Y		PIDF Slot 1	Integrator zone constant for gain slot 1. The PIDF loop integrator will only accumulate while the setpoint is within IZone of the target.	
kDFilter_1	26	float32		0	0	Y	RW	Y		PIDF Slot 1	PIDF derivative filter constant for gain slot 1.	
kOutputMin_1	27	float32		-1	0	Y	RW	Y		PIDF Slot 1	Max output constant for gain slot 1. This is the max output of the controller.	
kOutputMax_1	28	float32		1	0	Y	RW	Y		PIDF Slot 1	Min output constant for gain slot 1. This is the min output of the controller.	
kP_2	29	float32		0	0	Y	RW	Y		PIDF Slot 2	Perportional gain constant for gain slot 3.	*In future cascade control mode, constant 2 and 3 are 0 and 1 for the outer loop
kI_2	30	float32		0	0	Y	RW	Y		PIDF Slot 2	Integral gain constant for gain slot 3.	
kD_2	31	float32		0	0	Y	RW	Y		PIDF Slot 2	Derivative gain constant for gain slot 3.	
kF_2	32	float32		0	0	Y	RW	Y		PIDF Slot 2	Feed Forward gain constant for gain slot 3.	
kIZone_2	33	float32		0	0	Y	RW	Y		PIDF Slot 2	Integrator zone constant for gain slot 3. The PIDF loop integrator will only accumulate while the setpoint is within IZone of the target.	
kDFilter_2	34	float32		0	0	Y	RW	Y		PIDF Slot 2	PIDF derivative filter constant for gain slot 3.	
kOutputMin_2	35	float32		-1	_FLOAT_NEG_1	Y	RW	Y		PIDF Slot 2	Max output constant for gain slot 3. This is the max output of the controller.	
kOutputMax_2	36	float32		1	_FLOAT_1	Y	RW	Y		PIDF Slot 2	Min output constant for gain slot 3. This is the min output of the controller.	
kP_3	37	float32		0	0	Y	RW	Y		PIDF Slot 3	Perportional gain constant for gain slot 4.	*In future cascade control mode, constant 2 and 3 are 0 and 1 for the outer loop
kI_3	38	float32		0	0	Y	RW	Y		PIDF Slot 3	Integral gain constant for gain slot 4.	
kD_3	39	float32		0	0	Y	RW	Y		PIDF Slot 3	Derivative gain constant for gain slot 4.	
kF_3	40	float32		0	0	Y	RW	Y		PIDF Slot 3	Feed Forward gain constant for gain slot 4.	

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kIZone_3	41	float32		0	0	Y	RW	Y		PIDF Slot 3	Integrator zone constant for gain slot 4. The PIDF loop integrator will only accumulate while the setpoint is within IZone of the target.	
kDFilter_3	42	float32		0	0	Y	RW	Y		PIDF Slot 3	PIDF derivative filter constant for gain slot 4.	
kOutputMin_3	43	float32		-1	0	Y	RW	Y		PIDF Slot 3	Max output constant for gain slot 4. This is the max output of the controller.	
kOutputMax_3	44	float32		1	0	Y	RW	Y		PIDF Slot 3	Min output constant for gain slot 4. This is the min output of the controller.	
kInverted	45	bool		0	0	N	RW	Y		Basic	Reserved	
kOutputRatio	46	float32		1	1	N	RW	Y		Basic	Simple scalar for all units in all closed loop control modes to scale units to native. Use this to scale the output to things like gear ratios or unit conversions. Unit for this is 'distance per encoder tick'	*Simple scalar for all units in all closed loop control modes to scale units to native
kSerialNumberLow	47	uint		0	0	N	R	N		Hidden	Low 32-bits of unique 96-bit serial number	*Low 32 bits of 96 bit unique serial number
kSerialNumberMid	48	uint		0	0	N	R	N		Hidden	Middle 32-bits of unique 96-bit serial number	*Mid 32 bits of 96 bit unique serial number
kSerialNumberHigh	49	uint		0	0	N	R	N		Hidden	High 32-bits of unique 96-bit serial number	*Top 32 bits of 96 bit unique serial number
kLimitSwitchFwdPolarity	50	bool		0	0	Y	RW	Y		Limits	Limit switch polarity. Default is Normally Open (0), and can be set to Normally Closed (1)	
kLimitSwitchRevPolarity	51	bool		0	0	Y	RW	Y		Limits	Limit switch polarity. Default is Normally Open (0), and can be set to Normally Closed (1)	
kHardLimitFwdEn	52	bool		1	1	Y	RW	Y		Limits	Limit switch enable, enabled by default	
kHardLimitRevEn	53	bool		1	1	Y	RW	Y		Limits	Limit switch enable, enabled by default	
kSoftLimitFwdEn	54	bool		0	0	N	RW	Y		Limits	Soft limit enable, disabled by default	
kSoftLimitRevEn	55	bool		0	0	N	RW	Y		Limits	Soft limit enable, disabled by default	
kRampRate	56	float32	DC/sec	0	0	Y	RW	Y		Basic	Voltage ramp rate active for all control modes in % output per second, a value of 0 disables this feature. All APIs take the reciprocol to make the unit 'time from 0 to full'.	0 = Disabled
kFollowerID	57	uint		0	0	Y	R	Y		Follower	CAN EXTID of the message with data to follow	0 = Disabled
kFollowerConfig	58	uint		0	0	Y	R	Y		Follower	Special configuration register for setting up to follow on a repeating message (follower mode). CFG[0] to CFG [3] where CFG[0] is the motor output start bit (LSB), CFG[1] is the motor output stop bit (MSB). CFG[0] - CFG[1] determines edieness. CFG[2] bits determine sign mode and inverted, CFG[3] sets a preconfigured controller (0x1A = REV, 0x1B = Talon/Victor style as of 2018 season)	0 = Disabled
kSmartCurrentStallLimit	59	uint	A	80	80	Y	RW	Y		Current Limits	Smart Current Limit at stall, or any RPM less than kSmartCurrentConfig RPM.	0 = Disabled
kSmartCurrentFreeLimit	60	uint	A	20	20	Y	RW	Y		Current Limits	Smart current limit at free speed	
kSmartCurrentConfig	61	uint		10000	10000	Y	RW	Y		Current Limits	Smart current limit RPM value to start linear reduction of current limit. Set this > free speed to disable.	0 = Default value
kSmartCurrentReserved	62	uint	ms	0	0	N	RW	Y		Hidden		
kMotorKv	63	uint	RPM/V	480	480	N	RW	Y		Motor Advanced	Kv in RPM/V	
kMotorR	64	uint	uohm	35000	35000	N	RW	Y		Motor Advanced	Motor ph-ph resistance	
kMotorL	65	uint	nH	3800	3800	N	RW	Y		Motor Advanced	Motor ph-ph inductance	
kMotorRsvd1	66	uint		0	0	N	RW	Y		Hidden		
kMotorRsvd2	67	uint		0	0	N	RW	Y		Hidden		
kMotorRsvd3	68	uint		0	0	N	RW	Y		Hidden		
kEncoderCountsPerRev	69	uint		4096	4096	Y	RW	Y		Encoder Port Sensor	Number of encoder counts in a single revolution, counting every edge on the A and B lines of a quadrature encoder. (Note: This is different than the CPR spec of the encoder which is 'Cycles per revolution'. This value is 4 * CPR.	
kEncoderAverageDepth	70	uint		64	64	Y	RW	Y		Encoder Port Sensor	Number of samples to average for velocity data based on quadrature encoder input. This value can be between 1 and 64.	
kEncoderSampleDelta	71	uint	per 500u	200	200	Y	RW	Y		Encoder Port Sensor	Delta time value for encoder velocity measurement in 500us increments. The velocity calculation will take delta the current sample, and the sample x * 500us behind, and divide by this the sample delta time. Can be any number between 1 and 255	
kEncoderInverted	72	bool		0	0	N	RW	Y		Encoder Port Sensor		
kEncoderRsvd1	73	uint		0	0	N	RW	Y		Hidden		
kClosedLoopVoltageMode	74	uint		0	0	N	RW	Y		Closed Loop	0 = Disabled 1 = Control loop voltage output mode 2 = Voltage compensation mode	
kCompensatedNominalVoltage	75	float32		0	0	Y	RW	Y		Closed Loop	In voltage compensation mode mode, this is the max scaled voltage.	
kSmartMotionMaxVelocity_0	76	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionMaxAccel_0	77	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionMinVelOutput_0	78	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionAllowedClosedLo	79	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionAccelStrategy_0	80	float32		0	0	Y	RW	Y		Smart Motion		

Name	ID	Type	Unit	Default	Default (Native)	nplemented/Show	Mode (R/W)	EEPROM	ed or	Group	Description	Notes (why read only)
kSmartMotionMaxVelocity_1	81	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionMaxAccel_1	82	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionMinVelOutput_1	83	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionAllowedClosedLo	84	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionAccelStrategy_1	85	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionMaxVelocity_2	86	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionMaxAccel_2	87	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionMinVelOutput_2	88	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionAllowedClosedLo	89	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionAccelStrategy_2	90	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionMaxVelocity_3	91	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionMaxAccel_3	92	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionMinVelOutput_3	93	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionAllowedClosedLo	94	float32		0	0	Y	RW	Y		Smart Motion		
kSmartMotionAccelStrategy_3	95	float32		0	0	Y	RW	Y		Smart Motion		
kIMaxAccum_0	96	float32		0	0	Y	RW	Y		Smart Motion		
kSlot3Placeholder1_0	97	float32		0	0	Y	RW	Y		Hidden		
kSlot3Placeholder2_0	98	float32		0	0	Y	RW	Y		Hidden		
kSlot3Placeholder3_0	99	float32		0	0	Y	RW	Y		Hidden		
kIMaxAccum_1	100	float32		0	0	Y	RW	Y		Smart Motion		
kSlot3Placeholder1_1	101	float32		0	0	Y	RW	Y		Hidden		
kSlot3Placeholder2_1	102	float32		0	0	Y	RW	Y		Hidden		
kSlot3Placeholder3_1	103	float32		0	0	Y	RW	Y		Hidden		
kIMaxAccum_2	104	float32		0	0	Y	RW	Y		Smart Motion		
kSlot3Placeholder1_2	105	float32		0	0	Y	RW	Y		Hidden		
kSlot3Placeholder2_2	106	float32		0	0	Y	RW	Y		Hidden		
kSlot3Placeholder3_2	107	float32		0	0	Y	RW	Y		Hidden		
kIMaxAccum_3	108	float32		0	0	Y	RW	Y		Smart Motion		
kSlot3Placeholder1_3	109	float32		0	0	Y	RW	Y		Hidden		
kSlot3Placeholder2_3	110	float32		0	0	Y	RW	Y		Hidden		
kSlot3Placeholder3_3	111	float32		0	0	Y	RW	Y		Hidden		
kPositionConversionFactor	112	float32		1	_FLOAT_1	Y	RW	Y		Encoder Port Sensor		
kVelocityConversionFactor	113	float32		1	_FLOAT_1	Y	RW	Y		Encoder Port Sensor		
kClosedLoopRampRate	114	float32	DC/sec	0	0	Y	RW	Y		Encoder Port Sensor		
kSoftLimitFwd	115	float32		0	0	Y	RW	Y		Limits	Soft limit forward value	
kSoftLimitRev	116	float32		0	0	Y	RW	Y		Limits	Soft limit reverse value	
kSoftLimitRsvd0	117	uint		0	0	Y	RW	Y		Hidden	Reserved	
kSoftLimitRsvd1	118	uint		0	0	Y	RW	Y		Hidden	Reserved	
kAnalogPositionConversion	119	float32	rev/volt	1	_FLOAT_1	Y	RW	Y		Analog Sensor	Conversion factor for position from analog sensor. This value is multiplied by the voltage to give an output value.	
kAnalogVelocityConversion	120	float32	vel/v/s	1	_FLOAT_1	Y	RW	Y		Analog Sensor	Conversion factor for velocity from analog sensor. This value is multiplied by the voltage to give an output value.	
kAnalogAverageDepth	121	uint		0	0	Y	RW	Y		Analog Sensor	Number of samples in moving average of velocity	
kAnalogSensorMode	122	uint		0	0	Y	RW	Y		Analog Sensor	0 Absolute: In this mode the sensor position is always read as voltage * conversion factor and reads the absolute position of the sensor. In this mode setPosition() does not have an effect 1 Relative: In this mode the voltage difference is summed to calculate a relative position.	
kAnalogInverted	123	bool		0	0	Y	RW	Y		Analog Sensor	When inverted, the voltage is calculated as (ADC Full Scale - ADC Reading). This means that for absolute mode, the sensor value is 3.3V - voltage. In relative mode the direction is reveresed.	
kAnalogSampleDelta	124	uint		0	0	Y	RW	Y		Analog Sensor	Delta time between samples for velocity measurement	
kAnalogRsvd0	125	uint		0	0	N	RW	Y		Hidden	Reserved	
kAnalogRsvd1	126	uint		0	0	N	RW	Y		Hidden	Reserved	
kDataPortConfig	127	uint		0	0	N	RW	Y	Y	Alternate Encoder	0: Default configuration using limit switches 1: Alternate encoder mode, limit switches are disabled and alternate encoder is enabled.	
kAltEncoderCountsPerRev	128	uint		4096	4096	N	RW	Y		Alternate Encoder	Number of encoder counts in a single revolution, counting every edge on the A and B lines of a quadrature encoder. (Note: This is different than the CPR spec of the encoder which is 'Cycles per revolution'. This value is 4 * CPR.	
kAltEncoderAverageDepth	129	uint		64	64	N	RW	Y		Alternate Encoder	Number of samples to average for velocity data based on quadrature encoder input. This value can be between 1 and 64.	

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kAltEncoderSampleDelta	130	uint		200	200	N	RW	Y		Alternate Encoder	Delta time value for encoder velocity measurement in 500µs increments. The velocity calculation will take delta the current sample, and the sample x * 500µs behind, and divide by this the sample delta time. Can be any number between 1 and 255			
kAltEncoderInverted	131	bool		0	0	N	RW	Y		Alternate Encoder	Invert the phase of the encoder sensor. This is useful when the motor direction is opposite of the motor direction.			
kAltEncoderPositionFactor	132	float32		1	_FLOAT_1	Y	RW	Y		Alternate Encoder	Value multiplied by the native units (rotations) of the encoder for position.			
kAltEncoderVelocityFactor	133	float32		1	_FLOAT_1	Y	RW	Y		Alternate Encoder	Value multiplied by the native units (rotations) of the encoder for velocity.			
kAltEncoderRsvd0	134	uint		0	0	N	RW	Y		Hidden	Reserved			
kAltEncoderRsvd1	135	uint		0	0	N	RW	Y		Hidden	Reserved			
kHallSensorSampleRate	136	float32	sec	0.03125	0x3ea00000	Y	RW	Y		Encoder Port Sensor	Sample rate for hall sensor velocity decoding. e.g. 1 sample every 0.03125 seconds			
kHallSensorAverageDepth	137	uint		3	3	Y	RW	Y		Encoder Port Sensor	Average depth bits for hall sensor velocity decoding.			
kNumParameters	138	uint		(Num parameters)	136	N	R	Y		Hidden	Number of parameters. Used when updating firmware.			
kDutyCyclePositionFactor	139	float32		1	_FLOAT_1	Y	RW	Y		Duty Cycle Sensor	Value multiplied by the native units (rotations) of the duty cycle sensor for position.			
kDutyCycleVelocityFactor	140	float32		1	_FLOAT_1	Y	RW	Y		Duty Cycle Sensor	Value multiplied by the native units (rotations) of the duty cycle sensor for velocity.			
kDutyCycleInverted	141	bool		0	0	Y	RW	Y		Duty Cycle Sensor	Invert the duty cycle sensor. This will make the counts go reverse. This will also set the absolute sensor reverse, i.e. 1-(non-inverted)			
kDutyCycleSensorMode	142	uint		0	0	Y	RW	Y		Duty Cycle Sensor	0 Absolute: In this mode the sensor position is always read as duty cycle * conversion factor and reads the absolute position of the sensor. In this mode, setPosition() does not have an effect. 1 Relative: In this mode the duty cycle sensor includes rollovers			
kDutyCycleAverageDepth	143	uint		7	7	Y	RW	Y		Duty Cycle Sensor	Duty cycle velocity measurement uses a moving average filter. The result is averaged using this many samples. This is a bit size, and should be presented to the user as a selection from 1-64. Options are 0-7 (corresponding to 1, 2, 4, 8, 16, 32, 64).			
kDutyCycleOffsetv1p6p2	145	float32		0	0	Y	RW	Y		Hidden	Absolute offset to apply to the sensor. This is a value between [0,1] and does _not_ take in account the position factor. To create an API which _does_ take that into account, read the position factor first, or use the offset API which takes the duty cycle measurement and sets that as the offset.			
kDutyCycleRsvd0	146	uint		0	0	N	RW	Y		Hidden				
kDutyCycleRsvd1	147	uint		0	0	N	RW	Y		Hidden				
kDutyCycleRsvd2	148	uint		0	0	N	RW	Y		Hidden				
kPositionPIDWrapEnable	149	bool		0	0	Y	RW	Y		Closed Loop	Enable wrapping between min and max PID input values. Realistically, this just acts on the input range, and matches the implementation as WPILib does it for their 'enable continuous'.			
kPositionPIDMinInput	150	float32		0	0	Y	RW	Y		Closed Loop	Min input expected to be sent to the controller. This is in the units after any conversions using the position conversion factor for the selected PID feedback sensor.			
kPositionPIDMaxInput	151	float32		0	0	Y	RW	Y		Closed Loop	Max input expected to be sent to the controller. This is in the units after any conversions using the position conversion factor for the selected PID feedback sensor.			
kDutyCycleZeroCentered	152	bool		0	0	N	RW	Y		Duty Cycle Sensor	When true, the 'center' of the range (e.g. 50% duty cycle) is the zero point. The value range is from [-1, 1]. Conversion factors still apply. For example, to have the position range [-pi, pi], set this to true, then set the conversion factor to pi. This offset uses the value read back from the sensor, not including scale factor, but including inversion. This parameter is deprecated. Moving forward use parameter number 154. This parameter will still work as originally defined, but will update parameter 154.			

Name	ID	Type	Unit	Default	Default (Native)	nplemented/Show	Mode (R/W)	EEPROM	ed or	Group	Description	Notes (why read only)		
kDutyCyclePrescalar	153	bool		7	7	N	RW	Y		Duty Cycle Sensor	Allow the user to directly set the timer prescalar. This allows fine tuning of what sensors can go into the port. Don't show this to the user unless there is already good documentation. This calculator calculations can be used, note that the value the user sets is 1 minus the value in the spreadsheet. So if the user puts in 8 in the spreadsheet, they should put '7' for this parameter. https://docs.google.com/spreadsheets/d/1fCaXAipyrg6TeL9GWRZGCd1MJc95EOTnDkvIzYv85jM/edit#gid=0 Valid values are in the range [0, 71]			
kDutyCycleOffset	154	float32		0	0	Y	RW	Y		Duty Cycle Sensor	Absolute offset to apply to the sensor. This is a value between [0,1] and does _not_ take in account the position factor. To create an API which _does_ take that into account, read the position factor first, or use the offset API which takes the duty cycle measurement and sets that as the offset. This offset is based purely on the unscaled, uninverted direct pulse width measurement from the sensor.			
kExtFFGain0		float32		0	0	Y	RW	Y		Extended FF	Extended FF Gain Slot 0			
kExtFFGain1		float32		0	0	Y	RW	Y		Extended FF	Extended FF Gain Slot 1			
kExtFFGain2		float32		0	0	Y	RW	Y		Extended FF	Extended FF Gain Slot 2			
kExtFFGain3		float32		0	0	Y	RW	Y		Extended FF	Extended FF Gain Slot 3			
kExtFFReserved0		float32		0	0	N	RW	Y		Hidden	Reserved			
kExtFFReserved1		float32		0	0	N	RW	Y		Hidden	Reserved			
kPulseInRsvd0														
kPulseInRsvd1														
kPulseInRsvd2														
kPulseInRsvd3														
kPulseInRsvd4														
kPulseInRsvd5														
kDataPortAltCfgRsvd0														
kDataPortAltCfgRsvd1														
kDataPortAltCfgRsvd2														
kDataPortAltCfgRsvd3														
kDataPortAltCfgRsvd4														
kDataPortAltCfgRsvd5														
kDataPortAltCfgRsvd6														
kTemperaturePGain														
kTemperatureThrottleStart														
kTemperatureThrottleCutoff														
kTemperatureProtectionEnable														

Name	ID	Type	Unit	Default	Default (Native)	nplemented/Show	Mode (R/W)	EEPROM	ed or	Group	Description	Notes (why read only)		
										}				

Name	ID	Type	Unit	Default	Default (Native)	nplemented/Show	Mode (R/W)	EEPROM	ed or	Group	Description	Notes (why read only)		

Name	ID	Type	Unit	Default	Default (Native)	nplemented/Show	Mode (R/W)	EEPROM	ed or	Group	Description	Notes (why read only)		

Name	ID	Type	Unit	Default	Default (Native)	nplemented/Show	Mode (R/W)	EEPROM	ed or	Group	Description	Notes (why read only)		

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