



Version 1.2.0 Software Release Notes

Product: Sasquatch

Date: December 11, 2019

Release Number: 1.2.0

Scope: Minor Feature Release

New Feature

- [[SAS-212](#)] - Sensor Range change for Magnetized Lubricators
- [[SAS-251](#)] - Changes to Sasquatch "Confidence Code" and Velocity Reporting

Version 1.1.1 Software Release Notes

Product: Sasquatch

Date: June 15, 2018

Release Number: 1.1.1

Scope: Minor Feature Release

Bug

- [[SAS-237](#)] - Hard and Dangerous Arrival Alarm Isn't Being Set Properly In Vision
- [[SAS-238](#)] - Default Kinetic Energy Threshold Does Not Correspond With Default Velocity Threshold

Improvement

- [[SAS-232](#)] - Fix Kinetic Energy Register Map To Streamline PLC/RTU Integration Processes

Version 1.1.0 Software Release Notes

Product: Sasquatch

Date: March 20, 2018

Release Number: 1.1.0

Scope: Minor Feature Release

New Feature

- [[SAS-134](#)] - Sensor Hardware Reset on a time-based interval
- [[SAS-215](#)] - Add Kinetic Energy statistics
- [[SAS-216](#)] - Add Kinetic Energy Alarms
- [[SAS-217](#)] - Add Kinetic Energy Configuration
- [[SAS-218](#)] - Implement Kinetic Energy Alarms



- [[SAS-219](#)] - Implement Kinetic Energy Statistics

Version 1.0.3 Software Release Notes

Product: Sasquatch

Date: February 2, 2018

Release Number: 1.0.3

Scope: Minor Feature Release

Bug

- [[SAS-211](#)] - It should be safe to continuously write the Start/Stop coils

New Feature

- [[SAS-209](#)] - Implement Start Stop Detect Coils

Version 1.0.2 Software Release Notes

Product: Sasquatch

Date: February 12, 2016

Release Number: 1.0.2

Scope: Bugfix Release

Bug

- [[SAS-181](#)] - Sasquatch tripping briefly after power up
- [[SAS-182](#)] - Sasquatch is tripping when ALiEn controller screen turns on or off
- [[SAS-183](#)] - Magnetic Sensor ENABLE pin is always high during operation

Improvement

- [[SAS-184](#)] - Change System Tick to reduce power consumption

Version 1.0.1 Software Release Notes

Product: Sasquatch

Date: January 13, 2016

Release Number: 1.0.1

Scope: Bugfix Release



Bug

- [[SAS-178](#)] - Cold Start with Low Board Capacitance - ADC Configuration

New Feature

- [[SAS-165](#)] - Allow larger values for reinitialize timer

Version 1.0.0 Software Release Notes

Product: Sasquatch

Date: October 19, 2015

Release Number: 1.0.0

Scope: Product Release

Bug

- [[SAS-161](#)] - Device does not respond to Modbus communication in new Log Arrival mode
- [[SAS-166](#)] - Occasional assert occurring in `magsensorutils.c:start_timer`
- [[SAS-170](#)] - One of the filter out values in arrival log data is wrong

Improvement

- [[SAS-92](#)] - Update GPIO Initialization for Revision F PCBs

New Feature

- [[SAS-134](#)] - Sensor Hardware Reset on a time based interval
- [[SAS-163](#)] - Make Full Debug mode run at 38400 baud by default (barrier mode)
- [[SAS-164](#)] - Remove Download Log mode feature and code related to second sample block
- [[SAS-165](#)] - Allow larger values for reinitialize timer

Version 0.13.0 Software Release Notes

Product: Sasquatch

Date: September 23, 2015

Release Number: 0.13.0

Scope: Field Trial Release

Improvement

- [[SAS-155](#)] - Allow False arrival timer parameter to be disabled



New Feature

- [[SAS-156](#)] - Access arrival captures via modbus
- [[SAS-157](#)] - Increase size of arrival capture window to 1024 samples

Version 0.12.1 Software Release Notes

Product: Sasquatch

Date: September 21, 2015

Release Number: 0.12.1

Scope: Field Trial Release

Bug

- [[SAS-154](#)] - Vision not reliably receiving velocity in full debug/capture mode

Version 0.12.0 Software Release Notes

Product: Sasquatch

Date: August 13, 2015

Release Number: 0.12.0

Scope: Field Trial Release

Bug

- [[SAS-126](#)] - Sensitivity thresholds not being set properly when sensitivity is not set to 25
- [[SAS-130](#)] - Sasquatch Real Time Clock not Accurate
- [[SAS-137](#)] - Dial position not sent in self-test operating mode
- [[SAS-144](#)] - NVM corruption causing asserts and bootloops
- [[SAS-149](#)] - NVM bank activate is throwing assert
- [[SAS-150](#)] - Watchdog timer interrupting a page swap is causing NVM corruption
- [[SAS-152](#)] - Error log format doesn't match documentation

Improvement

- [[SAS-92](#)] - Update GPIO Initialization for Revision F PCBs
- [[SAS-146](#)] - Add in 2 new datapoints to the algorithm

New Feature

- [[SAS-129](#)] - Use a modbus register for barrier mode
- [[SAS-131](#)] - Add modbus coils for start/stop detection
- [[SAS-132](#)] - Add modbus registers to access git hash and extended version fields



- [[SAS-134](#)] - Sensor Hardware Reset on a time based interval
- [[SAS-143](#)] - Disable arrival logs in normal mode
- [[SAS-151](#)] - Algorithm improvements to velocity calculation

Task

- [[SAS-135](#)] - Add Release Bootloader configuration
- [[SAS-136](#)] - Break up JTAG_DEBUG define into seperate defines

Version 0.12.0 Software Release Notes

Product: Sasquatch

Date: August 13, 2015

Release Number: 0.12.0

Scope: Field Trial Release

Bug

- [[SAS-126](#)] - Sensitivity thresholds not being set properly when sensitivity is not set to 25
- [[SAS-130](#)] - Sasquatch Real Time Clock not Accurate
- [[SAS-137](#)] - Dial position not sent in self-test operating mode
- [[SAS-144](#)] - NVM corruption causing asserts and bootloops
- [[SAS-149](#)] - NVM bank activate is throwing assert
- [[SAS-150](#)] - Watchdog timer interrupting a page swap is causing NVM corruption
- [[SAS-152](#)] - Error log format doesn't match documentation

Improvement

- [[SAS-92](#)] - Update GPIO Initialization for Revision F PCBs
- [[SAS-146](#)] - Add in 2 new datapoints to the algorithm

New Feature

- [[SAS-129](#)] - Use a modbus register for barrier mode
- [[SAS-131](#)] - Add modbus coils for start/stop detection
- [[SAS-132](#)] - Add modbus registers to access git hash and extended version fields
- [[SAS-134](#)] - Sensor Hardware Reset on a time based interval
- [[SAS-143](#)] - Disable arrival logs in normal mode
- [[SAS-151](#)] - Algorithm improvements to velocity calculation

Task

- [[SAS-135](#)] - Add Release Bootloader configuration



- [[SAS-136](#)] - Break up JTAG_DEBUG define into separate defines

Version 0.11.0 Software Release Notes

Product: Sasquatch

Date: May 19, 2015

Release Number: 0.11.0

Scope: Field Trial Release

Bug

- [[SAS-117](#)] - Intermittent failure to calculate velocities below 90 m/min
- [[SAS-119](#)] - Velocity not calculated properly when sensor detects lagging waveform first
- [[SAS-124](#)] - Only samples from one sensor are sent during velocity gather in barrier mode

Improvement

- [[SAS-60](#)] - Add in Modbus Registers to read Product type and variant

New Feature

- [[SAS-118](#)] - Send velocity calc code to Vision in full debug mode
- [[SAS-121](#)] - Sasquatch should send sensitivity setting in arrival log
- [[SAS-122](#)] - Add engineering version fields and git hash to firmware image

Version 0.10.3 Software Release Notes

Product: Sasquatch

Date: May 4, 2015

Release Number: 0.10.3

Scope: Field Trial Bugfix Release

Bug

- [[SAS-119](#)] - Velocity not calculated properly when sensor detects lagging waveform first

Version 0.10.2 Software Release Notes

Product: Sasquatch

Date: April 27, 2015

Release Number: 0.10.2

Scope: Field Trial Bugfix Release



Bug

- [[SAS-117](#)] - Intermittent failure to calculate velocities below 90 m/min

New Feature

- [[SAS-118](#)] - Send velocity calc code to Vision in full debug mode

Version 0.10.0 Software Release Notes

Product: Sasquatch

Date: April 20, 2015

Release Number: 0.10.0

Scope: Field Trial Release

Bug

- [[SAS-114](#)] - Data corruption when downloading an arrival log

New Feature

- [[SAS-104](#)] - Add sample logging of sensor output when arrivals are detected
- [[SAS-110](#)] - Allow Raven barrier to be used in full debug and raw sample mode
- [[SAS-111](#)] - Preserve system time when switching to and from bootloader control
- [[SAS-113](#)] - Remove prioritized saving of arrival logs
- [[SAS-115](#)] - Set default units to imperial
- [[SAS-116](#)] - Enable arrival logging in normal mode

Version 0.9.0 Software Release Notes

Product: Sasquatch

Date: March 13, 2015

Release Number: 0.9.0

Scope: Engineering Release

Bug

- [[SAS-84](#)] - Baseline append rate causes Sasquatch to miss plunger
- [[SAS-85](#)] - Constant Valve Close at lower threshold settings
- [[SAS-86](#)] - Change Port 6 Pin 7 GPIO configuration
- [[SAS-97](#)] - DMA Transmit buffer in and out indices go out of sync
- [[SAS-102](#)] - Sig_Out Pin
- [[SAS-105](#)] - Vision displays a spike on trace A during a plunger trigger



- [[SAS-106](#)] - Sasquatch sends a baseline value for every sample value sent
- [[SAS-107](#)] - Vision glitch seen on arrival

Improvement

- [[SAS-83](#)] - Add state machine state to engineering debug section of modbus register map
- [[SAS-101](#)] - New XTAL frequency

New Feature

- [[SAS-87](#)] - Configure Supply Voltage Supervisor for detecting low voltage conditions
- [[SAS-95](#)] - Implement software method to enter and remain in bootloader
- [[SAS-104](#)] - Add sample logging of sensor output when arrivals are detected

Version 0.9.0 Software Release Notes

Product: Sasquatch

Date: March 13, 2015

Release Number: 0.9.0

Scope: Engineering Release

Bug

- [[SAS-84](#)] - Baseline append rate causes Sasquatch to miss plunger
- [[SAS-85](#)] - Constant Valve Close at lower threshold settings
- [[SAS-86](#)] - Change Port 6 Pin 7 GPIO configuration
- [[SAS-97](#)] - DMA Transmit buffer in and out indices go out of sync
- [[SAS-102](#)] - Sig_Out Pin
- [[SAS-105](#)] - Vision displays a spike on trace A during a plunger trigger
- [[SAS-106](#)] - Sasquatch sends a baseline value for every sample value sent
- [[SAS-107](#)] - Vision glitch seen on arrival

Improvement

- [[SAS-83](#)] - Add state machine state to engineering debug section of modbus register map
- [[SAS-101](#)] - New XTAL frequency

New Feature

- [[SAS-87](#)] - Configure Supply Voltage Supervisor for detecting low voltage conditions
- [[SAS-95](#)] - Implement software method to enter and remain in bootloader
- [[SAS-104](#)] - Add sample logging of sensor output when arrivals are detected



Version 0.8.0 Software Release Notes

Product: Sasquatch **Date:** July 21, 2014 **Release Number:** 0.8.0 **Scope:** Engineering Release

Critical Notes

- Compatible with Rev C hardware and newer ONLY.

New Features

- [[SAS-67](#)] - Change debug mode behavior (Sensitivity Switch and Digital Switch msgs)
- [[SAS-68](#)] - Add in discrete Modbus coil to indicate new plunger velocity / arrival since last poll
- [[SAS-73](#)] - Add 'error' flag to velocity readings
- [[SAS-75](#)] - Implement new plunger arrival detection and data point collection from algorithm simulator
- [[SAS-79](#)] - Add Com Port configurations for new baud rates
- [[SAS-80](#)] - New ADC configuration in Self-Test mode

Improvements

- [[SAS-76](#)] - Adjust the Modbus interface for debug information from new algorithm
- [[SAS-77](#)] - Implement new multiple point velocity calculation algorithm
- [[SAS-78](#)] - False Arrival does not restart plunger detection process

Bug Fixes

- [[SAS-72](#)] - NVM bank size too small for all data

Outstanding Issues

- None

Outstanding Features

- None

Version 0.7.0 Software Release Notes

Product: Sasquatch **Date:** April 2, 2014 **Release Number:** 0.7.0 **Scope:** Engineering Release



Critical Notes

- Compatible with Rev C hardware ONLY.

New Features

- [[SAS-37](#)] - Implement Raw Sensor Data Mode
- [[SAS-38](#)] - Implement Full Debug Mode
- [[SAS-45](#)] - Add modbus registers to read velocity algorithm debug information
- [[SAS-62](#)] - Implement Daily Summary Log
- [[SAS-63](#)] - Implement lifetime stats log
- [[SAS-65](#)] - Implement the modbus interface error log
- [[SAS-66](#)] - Implement Self Test mode

Improvements

- [[SAS-55](#)] - Error handling when calculating velocity
- [[SAS-56](#)] - Change Switch output behavior in Velocity based Output mode
- [[SAS-58](#)] - Bootstrap magnetic sensors on startup and after every plunger detection
- [[SAS-59](#)] - Add Modbus Registers to read Sensitivity level and Switch position
- [[SAS-61](#)] - Update default sensor settings and names to match documentation

Bug Fixes

- [[SAS-64](#)] - Modbus communication unresponsive when querying Sasquatch
- [[SAS-69](#)] - Sasquatch stops sending data when in Raw Samples mode

Outstanding Issues

- None

Outstanding Features

- None

Version 0.6.0 Software Release Notes

Product: Sasquatch **Date:** January 17, 2014 **Release Number:** 0.6.0 **Scope:** Engineering Release

Critical Notes

- Compatible with Rev C hardware ONLY.



New Features

- [\[SAS-50\]](#) - Update source and project settings for new chipset and crystal

Improvements

- [\[SAS-53\]](#) - Change method of determining which sensor detects plunger first

Bug Fixes

- None

Outstanding Issues

- None

Outstanding Features

- None

Version 0.5.0 Software Release Notes

Product: Sasquatch **Date:** December 19, 2013 **Release Number:** 0.5.0 **Scope:** Engineering Release

Critical Notes

- None

New Features

- [\[SAS-46\]](#) - Add Modbus Registers to read HW Revision and Serial Number
- [\[SAS-47\]](#) - Add Modbus registers for the timers used in the Sensor state machine

Improvements

- [\[SAS-34\]](#) - Increase Depth of Velocity Log
- [\[SAS-35\]](#) - Incorporate Plunger Departure detection into all the output modes
- [\[SAS-36\]](#) - Configure UART A1 to switch between Modbus and ETC Vision Debug Data

Bug Fixes

- None



Outstanding Issues

- None

Outstanding Features

- None

Version 0.4.0 Software Release Notes

Product: Sasquatch **Date:** November 26, 2013 **Release Number:** 0.4.0 **Scope:** Engineering Release

Critical Notes

- None

New Features

- [[SAS-23](#)] - Add NVM feature
- [[SAS-26](#)] - Implement Modbus Slave
- [[SAS-28](#)] - Implement Plunger Velocity algorithm
- [[SAS-29](#)] - Implement Switch output modes and Modbus Registers to edit parameters
- [[SAS-39](#)] - Implement Modbus registers for debugging information
- [[SAS-40](#)] - Turn on Watchdog Task

Improvements

- [[SAS-24](#)] - Implement Error logging
- [[SAS-25](#)] - Move System Tick to Timer B block
- [[SAS-27](#)] - Create Device Parameters dataset for storing Device Parameters
- [[SAS-30](#)] - Implement Velocity Log
- [[SAS-31](#)] - Switch Modbus feature to use USCI A1 HW module
- [[SAS-32](#)] - Read and modify Modbus Settings via Modbus
- [[SAS-33](#)] - Add support for programming device information

Bug Fixes

- None

Outstanding Issues

- None



Outstanding Features

- None

Version 0.3.0 Software Release Notes

Product: Sasquatch **Date:** October 21, 2013 **Release Number:** 0.3.0 **Scope:** Engineering Release

Critical Notes

- None

New Features

- None

Improvements

- [[SAS-17](#)] - Implement filtering on magnetic sensor readings
- [[SAS-18](#)] - Implement baseline algorithm on magnetic sensor readings
- [[SAS-19](#)] - Add plunger arrival detection
- [[SAS-20](#)] - Move bootloader entry to Magnetic Sensor tasks

Bug Fixes

- None

Outstanding Issues

- None

Outstanding Features

- None

Version 0.2.0 Software Release Notes

Product: Sasquatch **Date:** October 15, 2013 **Release Number:** 0.2.0 **Scope:** Engineering Release



Critical Notes

- None

New Features

- [[SAS-13](#)] - Convert FW architecture to task based

Improvements

- [[SAS-14](#)] - Implement switching to Bootloader

Bug Fixes

- None

Outstanding Issues

- None

Outstanding Features

- None

Version 0.1.0 Software Release Notes

Product: Sasquatch **Date:** September 18, 2013 **Release Number:** 0.1.0 **Scope:** Initial Release

Critical Notes

- None

New Features

- [[SAS-5](#)] - Implement GPIO initialization on startup
- [[SAS-7](#)] - Adding GPIO toggling debug functions
- [[SAS-11](#)] - Update Bootloader to work with Sasquatch

Improvements

- [[SAS-9](#)] - Switch signal should not be driven for HW Rev 0 boards
- [[SAS-10](#)] - Change reading of Magnetic sensor samples to within the interrupt context



Bug Fixes

- [[SAS-4](#)] - Jitter in the ADC 1 and ADC 2 START signals

Outstanding Issues

- None

Outstanding Features

- None