

## SF20/C & LW20/C firmware revision history

Firmware version	Change log	Description	Hardware revision	Release date
4.4.5	Fixed: <ul style="list-style-type: none"> <li>Fixed I2C receive buffer length to allow messages longer than 16bytes</li> </ul>	Bug Fix	19.1	17/07/2025
4.4.3	Fixed: <ul style="list-style-type: none"> <li>Fixed incorrect distance values at update rates of 2500 and above</li> </ul>	Bug Fix	19	30/05/2025
4.4.3	Changed: <ul style="list-style-type: none"> <li>Improved temperature compensation algorithms</li> </ul>	Improvements	19.1 (Value in unit 191)	17/03/2025
4.4.1	Fixed: <ul style="list-style-type: none"> <li>I2C auto detect intermittent failure</li> </ul> Changed: <ul style="list-style-type: none"> <li>Added state 3 to GPIO Mode to set ServoA pin output to 0V.</li> <li>Added GPIO Mode 2 for control of ServoB pin. State 0 pin not initialised, State 1 Alarm A on pin, State 2 Alarm B on pin, State 3 output 0V on pin.</li> </ul>	Bug Fix/features added	19	15/10/2024
4.3.1	Default LED state during production was found to be in "OFF" state.	Improvement/features added	19	16/05/2023
4.3.0	<ul style="list-style-type: none"> <li>Limit of 16 bytes on the I2C communication packet length, this has been fixed to accommodate the full lengths required by some data outputs</li> <li>LED state can be changed via the parameters tab in LightWare Studio.</li> <li>#SU,1 and legacy Serial data output requested by sending "d" /"D", the option to remove the space before the distance data.</li> </ul>	Improvement/features added	16, 18, 19	23/04/2023
4.2.0	<ul style="list-style-type: none"> <li>Improved stability at 2.5kHz and 5kHzSame firmware as 4.1.2, but for latest hardware revision</li> </ul>	Improvement/features added	18	15/10/2022
4.1.2	Improved stability at 2.5kHz and 5kHz	Improvement/features added	16	01/10/2022
4.0.0	Brownout detection Higher update rates (up to 5 kHz)Added filters: (configurable) <ul style="list-style-type: none"> <li>Smoothing</li> </ul>	Improvement/features added	16	21/10/2021



	<ul style="list-style-type: none"> <li>Rolling average</li> <li>Median</li> </ul> <p>I2C bus speed selection</p>			
<b>2.3.0</b>	<p>LightWare Studio Compatibility Accuracy table for high calibration units</p> <p>Selection of GPIO on Servo wire (Servo, Alarm A, Alarm B)</p> <p>Fixed Alarm output for lost signals</p>	Improvement/features added	16	03/08/2020
<b>2.0.10</b>	Fixed rare occurrence of "data freeze"	Major	16	18/10/2019
<b>2.0.6</b>	<p>Added customization code:</p> <p>LW20/C BMT1</p>	Improvement/features added	16	26/08/2019
<b>2.0.5</b>	<p>Fixed:</p> <p>TDC timeout value causing spurious signals</p>	Major	16	19/08/2019
<b>2.0.4</b>	Support for 12.8 MHz crystal	Improvement/features added	16	15/08/2019
<b>2.0.3</b>	Added more customisation codes	Improvement/features added	16	29/07/2019
<b>2.0.1</b>	Factory reset does not immediately save parameters	Minor	16	04/09/2019
<b>2.0.0</b>	Initial version for R16 hardware	Initial release	16	04/09/2019
<b>1.9.3</b>	<p>Fixed:</p> <ul style="list-style-type: none"> <li>Measurement rate could be incorrect at start-up</li> </ul>	Minor	11, 12	04/09/2019
<b>1.9.2</b>	<p>Changed:</p> <ul style="list-style-type: none"> <li>Post amp control value to reduce cross talk</li> </ul>	Minor	11, 12	21/09/2019
<b>1.9.1</b>	Added breakdown offset	Improvement/features added	11, 12	29/07/2019
<b>1.9.0</b>	Added GPIO selection for Servo or Alarms	Improvement/features added	12	18/07/2019
<b>1.8.2</b>	Added mode to output closest distance found during a scan sweep	Improvement/features added	11, 12	31/05/2019
<b>1.8.1</b>	Added mode to change lost signal from -1m to 230m	Improvement/features added	11, 12	14/05/2019



<b>1.8.0</b>	Added camera shutter sync mode	Improvement/ features added	11, 12	29/04/2019
<b>1.7.1</b>	Added parameter to enable servo on start-up	Improvement/ features added	11, 12	15/04/2019
<b>1.7.0</b>	Added forced continuous output option	Improvement/ features added	11, 12	26/02/2019
<b>1.6.4</b>	Noise output now takes multiple shots into account	Minor	11, 12	23/01/2019
<b>1.6.3</b>	Servo output disabled when using Pixhawk compatibility mode	Improvement/ features added	11, 12	28/11/2018
<b>1.6.2</b>	Version bump was not correctly done for 1.6.1	Minor	11, 12	26/11/2018
<b>1.6.1</b>	Changed legacy distance output to use median filtered result	Improvement/ features added	11, 12	26/11/2018
<b>1.6.0</b>	Tolerate downgrades without losing parameters	Improvement/ features added	11, 12	09/11/2018
<b>1.5.1</b>	Added com start-up mode 4 - start in serial mode with nopreamble output	Improvement/ features added	11, 12	23/10/2018
<b>1.5.0</b>	Added 20 kHz fast mode	Improvement/ features added	11, 12	17/10/2018
<b>1.4.3</b>	Improved soft start	Improvement/ features added	11, 12	09/10/2018
<b>1.4.2</b>	Slow SPI used byte default	Improvement/ features added	12	08/10/2018

