

# Legacy Support

Hardware is forward compatible and applications are easily recompiled for SHIMMER2 vs. SHIMMER1. The table below lists feature changes, and suggested migration/support strategy

Platform Feature	Shimmer 2	Shimmer 1	Mitigation
<b>Orange LED</b>	Not present	Present	<ul style="list-style-type: none"> <li>• Use previously compiled applications with proper <code>_S1</code> or <code>_S2</code> suffix</li> <li>• comment out or remap orange LED calls in application code.</li> </ul>
<b>Pin 20, internal expansion Connector</b>	PV_REG 2.75-4.7V raw board power (battery or USB)	Regulated 1.8V	<ul style="list-style-type: none"> <li>• No known expansion boards use the 1.8V pin.</li> <li>• Future expansion boards that use PV_REG will be designated "Not for use with SHIMMER1"</li> <li>• Some boards may include a jumper to select SHIMMER1 or SHIMMER2 mode per documentation</li> </ul>
<b>Pin 11, internal expansion Connector</b>	GPIO_INTERNA L1	PV_CHG	<ul style="list-style-type: none"> <li>• SHIMMER2 only expansion boards have access to an additional GPIO pin with a 100k pull-up.</li> <li>• No commercial expansion boards us PV_CHG on the internal expansion connector.</li> <li>• Future expansion boards that use PV_CHG will be</li> </ul>

			<p>designated "For use with SHIMMER1 only"</p> <ul style="list-style-type: none"> <li>• Applications that use GPIO_Internal1 will need to be modified for use with SHIMMER1</li> </ul>
<b>CPU Pin-out Changes</b>	Yes	Yes	<ul style="list-style-type: none"> <li>• Use previously compiled applications with proper _S1 or _S2 suffix</li> <li>• Compile for target platform</li> </ul>
<b>Tilt/Vibration Sensor</b>	Yes	No	<ul style="list-style-type: none"> <li>• SHIMMER1 applications can't use the tilt/vibration sensor.</li> <li>• Legacy support per Application on a case-by-case basis</li> </ul>
<b>Bluetooth power Switch</b>	Yes	No	<ul style="list-style-type: none"> <li>• SHIMMER1 applications can't use the Bluetooth power switch feature in the Bluetooth driver--</li> <li>• Bluetooth while in reset but switched on adds over 100uA of power consumption</li> </ul>
<b>MicroSD power Switch</b>	Yes	No	<ul style="list-style-type: none"> <li>• SHIMMER1 applications can't use the SD power switch feature in the SD driver.</li> <li>• SHIMMER1 cannot support SD data bypass</li> <li>• MicroSD cards that are inserted but unused will add to platform power</li> </ul>

			consumption and should be removed.
<b>Dock Signal and MicroSD Data bypass</b>	Yes	No	<ul style="list-style-type: none"> <li>• SHIMMER1 applications will not have access to a "Dock" signal.</li> <li>• SHIMMER2 applications must consider the behavior of the Dock signal and MicroSD card data bypass-- see JustFAT application for a programming example</li> <li>• SHIMMER2 developers can set Dock as an output and drive high to emulate SHIMMER1 MicroSD functionality (obviously the MicroSD data bypass is disabled).</li> <li>• The following SHIMMER2 signals are not available when docked: <ul style="list-style-type: none"> <li>○ ADC7</li> <li>○ ADC0</li> <li>○ SERO_RTS</li> </ul> </li> </ul>
<b>Power-on Control</b>	Yes	No	<ul style="list-style-type: none"> <li>• SHIMMER1 can't be switched off</li> <li>• SHIMMER1 does not have a hardware low-battery protection-- Developers must provide SW battery monitoring.</li> <li>• SHIMMER2 can only be programmed or charged when switched on</li> </ul>

<b>Bluetooth/SD Concurrency Bug</b>	No	Yes	
			<ul style="list-style-type: none"> <li>• SHIMMER2 applications that use both Bluetooth and MicroSD or an expansion board with SPI0 may not work on SHIMMER1. Upgrade to SHIMMER2 is recommended</li> <li>• SHIMMER1 has a hardware concurrency bug that prevents use of Bluetooth and an SPI0 device without a hardware fix (removal of R18).</li> <li>• SHIMMER1 devices that have been fixed no longer route SPI0 clock to the internal expansion connector</li> <li>• If the application can handle the performance penalty of holding the Bluetooth module in reset between SPI0 bus transactions there is no need to perform the HW fix.</li> </ul>