Product Change Notification
SRG004
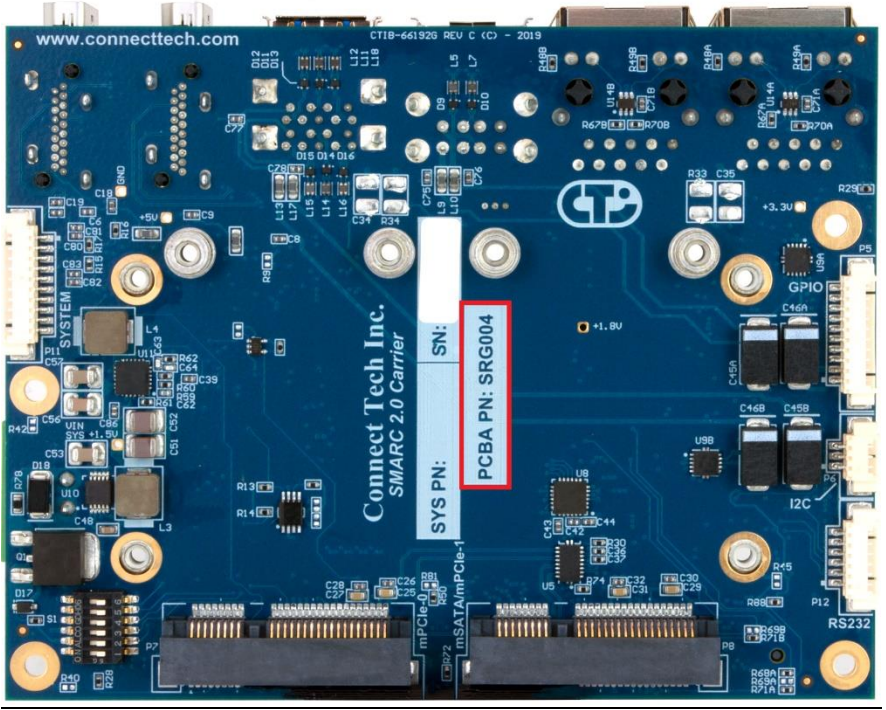
PCN Number:	CTIU-00028
Revision:	0.01
Issue Date:	2020-11-05
Effective Date:	2020-06-24
Authors:	CN
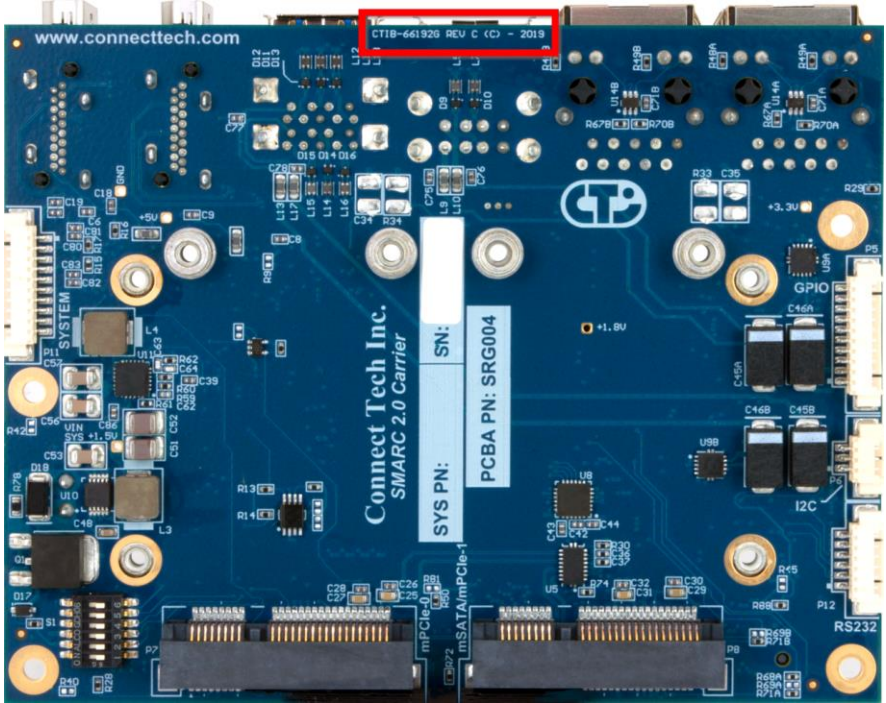
1   Product Identification

1.1   Product Data

	Previous Version	New Version
Product Name	SMARC 2.0 Carrier	SMARC 2.0 Carrier
CTI Part Numbers	SRG004	SRG004
Hardware Revision	Revision C and older	D

1.2   Means of Distinguishing Changed Products

		Remark
Product Number	☑	Product number on PCB silkscreen

Hardware Revision	☑	See board number and revision on PCB silkscreen.
Lot Code	☐	
Label	☐	
Other	☐	

2   Description and Reason of Change

AVL	☐	Product Improvement	☑
Material	☐	BIOS Release	☐
Assembly Process	☐	Firmware Release	☐
Assembly BOM	☐	Datasheet / Manual	☐
Testing	☐	DFM	☐
Manufacturing Site	☐	Other	☐
Equipment	☐		

All of the below issues have been resolved with an Engineering Change - SRG004 revision D and newer will have the changes detailed below in effect.

2.1   SRG004 conga-MA5 HDMI0 (DP0, Pins P92-P107) Compatibility:
Customers using SRG004 revision C (or older) with a Congatec conga-SA5 module may experience incompatible HDMI DDC voltage levels on display output HDMI0. This incompatibility may cause the conga-SA5 module to not reliability boot with an active display output on HDMI0. To ensure reliable functionality, SRG004 revision D and newer will feature jumper selectable HDMI DDC voltage levels for HDMI0. For customers using the conga-SA5 module, the voltage needs to be set to 3.3V. All other modules (unless explicitly directed by the module vendor) should be set to 1.8V.

If you are pairing an SRG004 revision C or older with a Congatec conga-SA5 module, please contact support@connecttech.com.

2.2   SRG004 External CARRIER_PWR_ON Signal
SRG004 revision C's CARRIER_PWR_ON signal is non-functional. Once power is applied to the board, the carrier's local power supplies will immediately power on. This is corrected in SRG004 revision D.

Function	System Control Connector		
Location	P11		
Type	Molex Right-Angle PicoBlade		
P/N	0532611071		
Pinout	Pin	Description	Purpose
	1	Power Button Input	Active LOW power button input to SMARC 2.0 module.
	2	GND	
	3	Reset Button Input	Active LOW reset button input to SMARC 2.0 module.
	4	GND	
	5	FORCE RECOV Input	Active LOW force recovery button input to SMARC 2.0 module.
	6	GND	
	7	GND	
	8	CARRIER_STBY#	Output from the SMARC 2.0 module to place the carrier in stand-by mode.
	9	CARRIER_PWR_ON	Output from the SMARC 2.0 module to enable the carrier power supplies.
	10	RESET_OUT#	Output from the SMARC 2.0 module to trigger a reset to the system.
	All signals use +1.8V CMOS		

2.3 **USB0 host mode for ARM-based SMARC modules**
USB 2.0 port 0 on SRG004 revision C (and older) will only function as a client port with ARM-based SMARC modules. SRG004 revision D and newer include the option for USB 2.0 port 0 to function in both host and client mode.

The below details apply to SRG004 revision C boards. Some revision C boards may be eligible for repair to resolve these issues. Please contact support@connecttech.com **to determine if your board is affected by the below issues.**

Note: all of the below issues have also been resolved with an Engineering Change on SRG004 revision D.

2.4 **USB0 host mode for ARM-based SMARC modules**
USB 2.0 port 0 on SRG004 revision C (and older) will only function as a client port with ARM-based SMARC modules. SRG004 revision C boards can be modified to force USB2.0 port 0 to be a host mode only port.

2.5 **SRG004 HDMI1 (HDMI, Pins S93-S106) reliability:**
In certain conditions, SRG004 revision C (exclusively) does not reliably support display output on HDMI1, causing the module to boot without an active display.

2.6 **SRG004 HDMI0 (DP0, Pins P92-P107) backdrive protection:**
SRG004 revision C (and older) do not have adequate protection against backdrive on HDMI0.

2.7 **GPIO and I2C**
SRG004 revision C (exclusively) has non-functioning I2C on the P6 header, and non-functioning GPIO on the P5 header. This issue has been resolved with an Engineering Change on SRG004 revision D.

3 Impact of change (positive or negative) on fit, form, function & reliability

3.1 Quality and Reliability

The changes listed in Section 2 will improve the features and reliability of the SRG004.

3.2 Software Compatibility

N/A

3.3 Hardware Compatibility

Customers using the SRG004 revision C or older will have no compatibility challenges moving to the new hardware revision.

3.4 Mechanical Compatibility

N/A

4 Product / Revision Discontinuation

The above listed changes are immediately in effect for SRG004 revision D and subsequent revisions.

5 Contact Information

Phone	+1-519-836-1291
Email	sales@connecttech.com