

Key	General	Response	Comments	Validation Results (Linaro)	Linaro comments	Final Results (Linaro)	Validation Test Description
	Name of the board	Dragonboard 410c					
	Email address (primary)						
	Email addresses (secondary)						
	Target Specification	CE v1.0					
	Form Factor	CE v1.0 (standard) - 85 x 54 mm	+/- 0.25mm error margin allowed	Pass	USB host connectors are sliced	Pass	Using 3D templates for the appropriate form-factor
Key	Documentation	Response	Comments	Validation Results (Linaro)	Linaro comments	Final Results (Linaro)	Validation Test Description
	Board Schematic published	Yes		Pass		Pass	
	Board Reference Manual published	Yes	Board reference manual should follow template	Pass		Pass	
	SoC technical reference published	No	SoC TRM published as per guidelines	Fail		Waived	Additional documentation will be published once made available.
Key	Memory and Storage	Response	Comments	Validation Results (Linaro)	Linaro comments	Final Results (Linaro)	Validation Test Description
	Onboard DRAM (GB)	1	CE: >= 0.5GB; EE: >= 1GB or DIMM	Pass		Pass	
	SD Card	microSDHC	CE: Mandatory	Pass		Pass	
	Boot from SD Card?	Yes		Pass		Pass	
	Boot ROM	No	CE: optional, only if SD card is not bootable	Ignored		Ignored	
	Boot ROM size (MB)		CE: 8MB (optional)	Ignored		Ignored	
	Onboard Flash storage	Yes	Optional	Pass		Pass	
	Onboard Flash storage size (GB)	8	Optional	Pass		Pass	
	SATA interface	None	Optional	Ignored		Ignored	
Key	Networking	Response	Comments	Validation Results (Linaro)	Linaro comments	Final Results (Linaro)	Validation Test Description
	Wifi protocol	802.11 g/n/ac		Pass			
	Bluetooth 4.0 LE	Yes		Pass			
Key	Debugging	Response	Comments	Validation Results (Linaro)	Linaro comments	Final Results (Linaro)	Validation Test Description
	UART 1 (LS expansion interface)	Yes	default mandatory UART	Pass		Pass	
	UART 2 (LS expansion interface)	No	CE: optional	Ignored		Ignored	
	4 User LEDs	Yes		Pass		Pass	
	WiFi LED	Yes		Pass	WiFi and BT LEDs are inverted	Pass	
	BT LED	Yes		Pass	WiFi and BT LEDs are inverted	Pass	
	JTAG	No	Optional				
Key	USB	Response	Comments	Validation Results (Linaro)	Linaro comments	Final Results (Linaro)	Validation Test Description
	Port 1 - Host (Protocol)	USB 2.x		Pass		Pass	
	Port 1 - Host (Connector)	Type A		Pass		Pass	
	Port 2 - Host (Protocol)	USB 2.x		Pass		Pass	
	Port 2 - Host (Connector)	Type A		Pass		Pass	
	Port 3 - Slave (Protocol)	USB 2.x		Pass		Pass	
	Port 3 - Slave (Connector)	micro-B (for slave-only)		Pass		Pass	
	Port 4 - Host (Protocol)			Ignored		Ignored	
	Port 4 - Host (Connector)			Ignored		Ignored	
Key	Display	Response	Comments	Validation Results (Linaro)	Linaro comments	Final Results (Linaro)	Validation Test Description
	Display Type	HDMI	CE: Audio support for at least 1 channel is mandatory	Pass			
	Display Connector	Type A (full-size)		Pass			
	MIPI DSI port on HS expansion bus	Yes		Pass			
	MIPI DSI lanes	4		Pass			
Key	Camera	Response	Comments	Validation Results (Linaro)	Linaro comments	Final Results (Linaro)	Validation Test Description

	MIPI CSI-2 ports	2	(Review) CE: Port 1 should be on CSI0 port (1-4 la	Pass			
Key	Audio	Response	Comments	Validation Results (Linaro)	Linaro comments	Final Results (Linaro)	Validation Test Description
	Audio channels (BT)	2	CE: I2S/PCM channel should be provided on LS ex	Pass			
	Audio channels (Display)	2		Pass			
Key	DC Power	Response	Comments	Validation Results (Linaro)	Linaro comments	Final Results (Linaro)	Validation Test Description
	Power source	DC Power Jack (8-18V)		Pass			
Key	Buttons / Switches / Jumpers	Response	Comments	Validation Results (Linaro)	Linaro comments	Final Results (Linaro)	Validation Test Description
	Power on/off	Yes	Mandatory	Pass			
	Hard reset	Yes	Mandatory	Pass			
	Auto power up	Through Switch	Mandatory	Pass			
	USB mode change	NA	Optional, to change mode of the OTG port	Ignored			
Key	Expansion header	Response	Comments	Validation Results (Linaro)	Linaro comments	Final Results (Linaro)	Validation Test Description
	Low-speed expansion header	Yes	Signals to be exposed as per spec	Pass			
	High-speed expansion header	Yes	CE: mandatory	Pass			
Key	Miscellaneous	Response	Comments	Validation Results (Linaro)	Linaro comments	Final Results (Linaro)	Validation Test Description
	External Fan	+5V		Pass		Pass	
Key	Software	Response	Comments	Validation Results (Linaro)	Linaro comments	Final Results (Linaro)	Validation Test Description
	Kernel git tree URL	https://git.linaro.org/landing-teams/working/qualcomm/kernel.git					
	Kernel version	4.4	4.4 kernel	Pass			
	Kernel compliance Level	Level 1	Level definitions as per spec	Pass	Mainline kernel boots at lea	Pass	
	All bootloader bits are recommended to be open source	No	According to the spec, it is recommended for everything after SoC reset to be available as open source	Fail	1st stage bootloader is a pri	Waived - optional	
	Last-stage bootloader git tree URL		e.g. UEFI/EDK2 or u-boot				
	Fastboot protocol support	Yes		Pass		Pass	
	User can update bootloader	Yes		Pass			
	Possibility to unbrick the board w/o special hardware	Yes		Pass	not sure if that is the right answer		
	GPU acceleration	No Linux binary blobs required		Pass			
	Camera ISP	NA					
	DSP	NA					
	Multimedia	No binary blobs required		Pass			
Key	Software Functionality	Response	Comments	Validation Results (Linaro)	Linaro comments	Final Results (Linaro)	Validation Test Description
	Boot to Graphical UI	Yes		Pass			
	Graphics acceleration using SoC GPU	Yes		Pass			
	Standard set of Distribution end user applications	Yes		Pass			
	Video playback support for media files	Yes		Pass			

edia files via A2DP Bluetooth and display audio	Yes		Pass	Checked BT. HDMI audio will follow		
Networking using all onboard interfaces and USB ethernet interfaces	Yes		Pass			
Software power shutdown and reboot options	Yes	shutdown results in reboot	Fail		Waived	Will be addressed in future revision of the production boards.
Appropriate activity LEDs (e.g. Bluetooth, WiFi)	Yes		Fail	BT and WiFi LEDs don't blink	Waived	Software bug tracked
Additional storage is usable: eMMC (if fitted), SD, SATA, USB	Yes		Pass			