	General	Response	Comments	Validation Results (Linaro)	Linaro comments	Final Results (Linaro)	Validation Test Description
	Name of the board	*Bubblegum96*					
	Email address (primary)	*luhang@ucrobotics.com*					
	Email addresses (secondary)	*yvonne.wang@actions-semi.com*					
	Target Specification	*CE v1.0*					
	Form Factor	*CE v1.0 (standard) - 85 x 54 mm*	+/- 0.25mm error margin allowed				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					
	Board Reference Manual published	Yes	Board reference manual should follow template				
	SoC technical reference published	Yes	SoC TRM published as per guidelines	Fail	Technical reference manual is spa	Pass	
Key	**Memory and Storage**	**Response**	**Comments**	**Validation Results (Linaro)**	**Linaro comments**	**Final Results (Linaro)**	**Validation Test Description**
	Onboard DRAM (GB)	2	CE: >= 0.5GB; EE: >= 1GB or DIMM				
	Additional memory		EE: Mandatory if no onboard DRAM				
	SD Card	microSDHC	CE: Mandatory				
	Boot from SD Card?	Yes			#VALUE!		
	Boot ROM	No	CE: optional, only if SD card is not bootable; EE: mandatory		#VALUE!		
	Boot ROM size (MB)		CE: 8MB (optional), EE: 64 MB (mandatory)				
	Onboard Flash storage	Yes	Optional				
	Onboard Flash storage size (GB)	8	Optional				
	SATA interface	None	Optional				
Key	**Networking**	**Response**	**Comments**	**Validation Results (Linaro)**	**Linaro comments**	**Final Results (Linaro)**	**Validation Test Description**
	WiFi protocol	802.11 g/n					
	Bluetooth 4.0 LE	Yes					
	Ethernet	No	EE: mandatory				
Key	**Debugging**	**Response**	**Comments**	**Validation Results (Linaro)**	**Linaro comments**	**Final Results (Linaro)**	**Validation Test Description**
	UART 0	No	EE: micro-B USB in specified location				
	UART 1 (LS expansion interface)	Yes	default mandatory UART				
	UART 2 (LS expansion interface)	Yes	CE: optional; EE: NA				
	4 User LEDs	Yes					
	WiFi LED	No					
	BT LED						
	JTAG	Yes	Optional				
Key	**USB**	**Response**	**Comments**	**Validation Results (Linaro)**	**Linaro comments**	**Final Results (Linaro)**	**Validation Test Description**
	Port 1 - Host (Protocol)	USB 3.x	EE: Host Port 1 & 2 are stacked connectors				
	Port 1 - Host (Connector)	Type A					
	Port 2 - Host (Protocol)	USB 2.x	EE: Host Port 1 & 2 are stacked connectors				
	Port 2 - Host (Connector)	Type A					
	Port 3 - Slave (Protocol)	USB 2.x					
	Port 3 - Slave (Connector)	micro-AB (for OTG)					
	Port 4 - Host (Protocol)	USB 2.x					
	Port 4 - Host (Connector)	Other					
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				
	Display Connector	Type A (full-size)					
	MIPI DSI port on HS expansion bus	Yes					
	MIPI DSI lanes	4					
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 lanes). CSI1 port supports 1-2 lanes				
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 expansion interface				
	Audio channels (Display)	2					
Key	**DC Power**	**Response**	**Comments**	**Validation Results (Linaro)**	**Linaro comments**	**Final Results (Linaro)**	**Validation Test Description**
	Power source	DC Power Jack (8-18V)					
Key	**Buttons / Switches / Jumpers**	**Response**	**Comments**	**Validation Results (Linaro)**	**Linaro comments**	**Final Results (Linaro)**	**Validation Test Description**
	Power on/off	Yes	Mandatory				
	Hard reset	Yes	Mandatory				
	Auto power up	Through Switch	Mandatory				
	USB mode change	NA	Optional, to change mode of the OTG port				
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				
	High-speed expansion header	Yes	CE: mandatory; EE: NA, Signals to be exposed as per spec				
Key	**Miscellaneous**	**Response**	**Comments**	**Validation Results (Linaro)**	**Linaro comments**	**Final Results (Linaro)**	**Validation Test Description**
	External Fan						
	PCIe	None	EE: location specified but optional				
Key	**Software**	**Response**	**Comments**	**Validation Results (Linaro)**	**Linaro comments**	**Final Results (Linaro)**	**Validation Test Description**
	Kernel git tree URL	git://git.linaro.org/people/paul.liu/vendor-kernel.git					
	Kernel version	v3.10					
	Kernel compliance Level	Other	Level definitions as per spec	Fail	3.10 doesn't correspond to the las		
	All bootloader bits are open source	No	According to the spec, everything after SoC reset should be available as open source				
	Last-stage bootloader git tree URL	git://git.linaro.org/people/paul.liu/vendor-uboot.git	e.g. UEFI/EDK2 or u-boot				
	Fastboot protocol support	Yes					
	User can update bootloader	Yes					
	Possibility to unbrick the board w/o special hardware	Yes					
	GPU acceleration	Needs userspace binary blobs					
	Camera ISP	Needs userspace binary blobs					
	DSP	NA					
	Multimedia	Needs userspace binary blobs					
Key	**Software Functionality**	**Response**	**Comments**	**Validation Results (Linaro)**	**Linaro comments**	**Final Results (Linaro)**	**Validation Test Description**
	Boot to Graphical UI	Yes					
	Graphics acceleration using SoC GPU	Yes					
	Standard set of Distribution end user applications	Partial					
	Video playback support for media files	Yes					

	Audio playback support for AV media files via A2DP Bluetooth and display audio	Yes																												
	Networking using all onboard interfaces and USB ethernet interfaces	Yes																												
	Software power shutdown and reboot options	Yes																												
	Appropriate activity LEDs (e.g. Bluetooth, WiFi)	Yes																												
	Additional storage is usable: eMMC (if fitted), SD, SATA, USB	Yes																												