



Features	I2C – L1	I2C – L2	SPI – L1	SPI – L2	SPI – L3	eSPI Active	eSPI Analysis	Aardvark		Cheetah	Beagle I2C/SPI
Protocols Supported	I2C	I2C	SPI-Single I/O	SPI-Single, Dual I/O	SPI-Single, Dual, Quad I/O	eSPI-Single, Dual, Quad I/O	eSPI	I2C	SPI-Single I/O	SPI-Single I/O	I2C, MDIO SPI-Single I/O
Master Clock Speed	1 MHz	3.4 MHz	12.5 MHz	40 MHz	80 MHz	66 MHz	66 MHz	800 kHz	8 MHz	40+ MHz	24 MHz
Slave Clock Speed	1 MHz	3.4 MHz	8 MHz	20 MHz	20 MHz	N/A	66 MHz	800 kHz	4 MHz	N/A	24 MHz
Function	Master/Slave	Master/Slave	Master/Slave	Master/Slave	Master/Slave	Master/Slave	Real-time Bus Monitor	Master/Slave		Master	Real-time Bus Monitor
Chip/Slave Select	N/A	N/A	1	3	8	up to 8	Monitor 2 alerts, 2 resets, 2 chip	1		3	Monitor 1 slave select
Slave Capability	Advanced	Ultra ¹	Advanced	Advanced	Ultra ¹	Standard 20 MHz	N/A	Standard		None	N/A
GPIO(s)	≤6	≤12	≤6	≤12	≤16	≤16	N/A	≤6		0	N/A
Voltage Levels (V) ²	0.9–3.45 V, 5 V	0.9–3.45 V, 5 V	0.9–3.45 V, 5 V	0.9–3.45 V, 5 V	0.9–3.45 V, 5 V	1.8 V	1.8 V	3.3–5 V		3.3–5 V	3.3–5 V
Target Power (V)	2 Independent, 1 Programmable, [0.9–3.45 V], 1 Switchable [3.3–5 V]. 200mA available							5 V, 30mA available		5 V, 30mA available	5 V, 30mA available
Variable Word Length			✓	✓	✓						
Connection	High Speed USB, Ethernet	High Speed USB, Ethernet	High Speed USB, Ethernet	High Speed USB, Ethernet	High Speed USB, Ethernet	High Speed USB, Ethernet	High Speed USB, Ethernet	Full Speed USB		Full Speed USB	Full Speed USB

¹ Release anticipated for Q1 2016. Features subject to change.

² Compatible with 5 V.

Total Phase products include free software downloads including Control Center Serial GUI and API, which are cross-platform (Windows, Linux, Max OSx) and Flash Center Software GUI (Windows, Linux).