

Benchmarks: Performance of USB-FPA vs. Xstream-Iso (FlashPro-ARM Software v2.36)

Adapter Type:		USB-FPA 6.1					XStream-Iso 1.0 / XstreamPro-Iso 1.0				
Code Size	Init	Write	Read	Auto Prog. <sup>1</sup>	Prog. Sp. <sup>2</sup>	Init	Write	Read	Auto Prog. <sup>1</sup>	Prog. Sp. <sup>2</sup>	
Units: (KiB)	(sec)	(sec)	(sec)	(sec)	(KiB/s)	(sec)	(sec)	(sec)	(sec)	(KiB/s)	
MCU:											
MSP432P4111	2048	0.5	29.5	37.9	30.5	71	0.7	4.7	5.7	5.7	512
TM4C123GH6PGE	256	0.4	5.5	5.3	6.2	50	0.4	5.5	2.5	6.1	50
CC2640F128	128	0.6	2.3	2.6	2.6	75	0.5	1.7	1.0	1.9	107
MK20DX128VLH7	128	1.5	3.9	3.4	4.3	53	1.1	3.2	1.6	3.5	61
LPC4337JBD144	1024	1.1	12.4	17.0	13.7	91	1.0	3.4	3.7	4.2	427
ATSAM4E16C	1024	1.6	13.6	16.2	14.3	85	1.8	5.1	3.3	5.4	310
BlueNRG-2	256	0.3	4.5	5.2	5.7	61	0.2	3.2	2.8	4.3	85
STM32L496VG	1024	1.6	14.0	17.1	14.4	83	1.4	12.8	3.1	13.3	90
STM32F413RH	1536	1.7	20.3	24.7	21.2	83	1.4	7.3	5.6	8.0	260
STM32F429ZI	2048	1.0	32.9	37.9	34.1	64	1.0	8.8	5.1	9.7	263
EFM32LG990F256	256	0.5	4.5	6.0	5.0	64	0.4	1.9	2.5	2.3	171
EFR32MG13P732F512	512	0.5	6.6	9.0	7.9	84	0.3	4.6	4.6	5.8	119
EFM32GG990F1014	1024	0.5	16.4	20.1	18.1	64	0.4	6.3	6.1	7.8	174
S6E2C58H0	1024	0.4	10.9	16.0	11.4	98	0.3	6.4	2.5	6.9	168
MB9BF566K	512	0.4	5.7	8.5	6.1	97	0.3	3.5	1.7	4	160
nRF51822-QFAC	256	0.3	4.4	5.3	5.5	62	0.3	2.9	2.4	3.9	98
nRF52832-QFAA	512	0.5	9.8	9.9	10.8	55	0.4	9.6	4.3	10.5	56
R7FS5D97C3A01CFB	1024	0.6	11.0	15.9	14.6	98	0.5	3.5	2.9	6.7	341
R7FS3A77C3A01CFM	1024	0.4	13.5	15.1	15.0	78	0.3	13.3	3.8	14.7	79
ADuMC360	128	0.2	2.5	2.9	3.3	56	0.2	2.4	2.0	3.1	58
ADuMC362	256	0.2	4.7	5.5	6.0	57	0.2	4.6	3.6	5.8	58

1. Auto Program: Initialization, Erase, Blank Check, Write, Write SN, Verify. Initial flash contents are blank.

2. Programming Speed: Write operation on empty flash ( code size / (write time - init time) ), fastest JTAG/SWD freq.

Benchmarks: Performance of USB-FPA vs. Xstream-Iso (GangPro-ARM Software v2.36, multiple targets)

Adapter Type:		USB-FPA 6.1					XStream-Iso 1.0 / XstreamPro-Iso 1.0				
Code Size	Init	Write	Read	Auto Prog. <sup>1</sup>	Prog. Sp. <sup>2</sup>	Init	Write	Read	Auto Prog. <sup>1</sup>	Prog. Sp. <sup>2</sup>	
Units: (KiB)	(sec)	(sec)	(sec)	(sec)	(KiB/s)	(sec)	(sec)	(sec)	(sec)	(KiB/s)	
MCU:											
MSP432P4111	2048	0.5	38.8	78.4	40.2	53	0.3	5.6	9.1	8.7	386
TM4C123GH6PGE	256	0.4	6.1	10.4	7.0	45	0.4	5.5	3.0	6.2	50
CC2640F128	128	0.7	2.7	5.3	3.1	64	0.6	1.8	1.1	2.0	107
MK20DX128VLH7	128	1.5	4.0	6.2	4.6	51	1.5	3.6	2.1	4.0	61
LPC4337JBD144	1024	0.5	20.0	40.6	22.2	53	0.5	4.5	5.7	5.6	256
ATSAM4E16C	1024	1.8	16.7	38.3	17.3	69	1.8	5.2	5.5	5.6	301
BlueNRG-2	256	1.4	7.2	11.4	8.2	44	2.3	5.9	3.5	6.7	71
STM32L496VG	1024	1.5	16.3	38.4	17.4	69	1.4	12.8	5.0	13.5	90
STM32F413RH	1536	1.5	23.8	56.9	25.0	69	1.4	7.4	6.8	8.2	256
STM32F429ZI	2048	1.1	44.5	78.9	46.9	47	1.0	13.0	11.1	14.1	171
EFM32LG990F256	256	1.5	7.2	13.3	7.8	45	1.1	3.2	4.5	3.6	122
EFR32MG13P732F512	512	0.5	7.8	19.6	9.4	70	0.4	4.8	4.6	6.0	116
EFM32GG990F1014	1024	0.5	22.6	40.5	24.5	46	0.5	8.5	7.9	10.1	128
S6E2C58H0	1024	0.4	11.8	38.8	12.6	90	0.3	6.5	5.0	7.0	165
MB9BF566K	512	0.4	6.3	19.2	6.8	87	0.3	3.6	2.4	4.0	155
nRF51822-QFAC	256	0.3	6.0	10.4	7.3	45	0.3	3.8	2.9	4.8	73
nRF52832-QFAA	512	0.5	11.9	20.9	13.0	45	0.4	9.7	5.3	10.6	55
R7FS5D97C3A01CFB	1024	0.6	12.0	37.9	17.8	90	0.5	4.1	5.3	9.5	284
R7FS3A77C3A01CFM	1024	0.4	13.6	37.2	15.3	78	0.3	13.4	5.1	14.8	78
ADuMC360	128	0.3	3.3	5.8	4.5	43	0.2	2.7	2.3	3.7	51
ADuMC362	256	0.3	6.2	10.8	8.1	43	0.3	5.0	4.2	6.8	54

1. Auto Program: Initialization, Erase, Blank Check, Write, Write SN, Verify. Initial flash contents are blank.

2. Programming Speed: Write operation on empty flash ( code size / (write time - init time) ), fastest JTAG/SWD freq.