CyberShuttle Cycle Time Commitment for Q3/16

Shuttle Type			Total C/T (days)
0.5um	1P4M, High Voltage	F3	48
0.35um	3P3M, SiGe BiCMOS	F3	51
	1P4M, Logic / Mix Signal	F3	33
		F10	41
	1P4M, High Voltage	F3	42
		F10	50
0.25um	2P5M, EmbFlash	F3	51
		F10	63
		F11	54
	1P5M Mixed-Signal/RF/Logic	F3	42
		F8	42
		F10	50
	1P6M, BCD	F8	60
	1P5M High Voltage	F8	63
0.18um	1P6M, Logic/Mixed-Signal/RF	F3/5/6	42
		F8	42
		F11	48
		SSMC	55
		F10	52
	1P6M, SiGe BiCMOS	F3	66
	2P6M, EmbFlash	F3	65
		F10	77
		F11	75
	1P6M, CIS w/o Color Filter	F8	50
	1P6M, BCD/ Gen2 BCD	F5/F8	62
		SSMC	85
	1P6M, High Voltage	F8	56

Shuttle Type			Total C/T (days)
0.15/0.16um	1P6M, Logic Generic	F6	38
		F10	46
		SSMC	49
0.13um	1P8M, Logic Generic (FSG)	F6	54
		F12/14	56
	1P8M, Mixed-Signal/RF (FSG)	F6	54
		F12/14	56
	1P6M, BCD	F6	65
	1P6M, BCD	F12	79
0.11um	1P8M, Logic Generic	F6	55
		F14	57
80/90nm	1P9M, Logic Generic	F12/14	61
	1P9M, eDram	F12	64
	1P9M, EmbFlash	F14	81
	1P9M, High Voltage	F12	73
85nm	1P9M, Logic Generic	F12/14	59
65nm	1P9M, Logic Generic	F12/14	63
55nm	1P9M, Logic Generic	F12/14	65
	1P9M, EmbFlash	F14	88
	1P9M, High Voltage	F12	77
45nm	1P10M, Logic (LP / GS)	F12/14	76
40nm	1P10M, Logic (LP / GS / GP / ULP)	F12/14	76
	3P10M, E-flash	F12/14	111
28nm	1P10M, LP, LP plus, LP RF	F15	66
	1P10M, HP, HPL, HPL RF	F15	68
	1P10M, HPM, HPC	F15	70
	1P10M, ULP	F15	71
N16nm	1P13M, FFP	F14	72
	1P11M, FFC non shrink	F14	66
	1P11M, FFC shrink	F14	81

***Option layer - bump, color filter and wafers form shipping not included in this table and it need additional cycle time. (please refer to page 3)**

CyberShuttle Cycle Time Commitment for Q2/16

Shuttle Type			Total C/T (days)
0.5um	1P4M, High Voltage	F3	48
0.35um	3P3M, SiGe BiCMOS	F3	51
	1P4M, Logic / MixSignal	F3	33
		F10	41
	1P4M, High Voltage	F3	42
		F10	50
0.25um	2P5M, EmbFlash	F3	51
		F10	63
		F11	54
	1P5M Mixed-Signal/RF/Logic	F3	42
		F8	42
		F10	50
	1P6M, BCD	F8	60
	1P5M High Voltage	F8	63
0.18um	1P6M, Logic/Mixed-Signal/RF	F3/5/6	42
		F8	42
		F11	48
		SSMC	55
		F10	52
	1P6M, SiGe BiCMOS	F3	66
	2P6M, EmbFlash	F3	65
		F10	77
		F11	75
	1P6M, CIS w/o Color Filter	F8	50
	1P6M, BCD/ Gen2 BCD	F5/F8	62
		SSMC	85
	1P6M, High Voltage	F8	56

Shuttle Type			Total C/T (days)
0.15/0.16um	1P6M, Logic Generic	F6	38
		F10	46
		SSMC	49
0.13um	1P8M, Logic Generic (FSG)	F6	54
		F12/14	56
	1P8M, Mixed-Signal/RF (FSG)	F6	54
		F12/14	56
	1P6M, BCD	F6	65
	1P6M, BCD	F12	79
0.11um	1P8M, Logic Generic	F6	55
		F14	57
80/90nm	1P9M, Logic Generic	F12/14	61
	1P9M, eDram	F12	64
	1P9M, EmbFlash	F14	81
	1P9M, High Voltage	F12	73
85nm	1P9M, Logic Generic	F12/14	59
65nm	1P9M, Logic Generic	F12/14	63
55nm	1P9M, Logic Generic	F12/14	65
	1P9M, EmbFlash	F14	88
	1P9M, High Voltage	F12	77
45nm	1P10M, Logic (LP / GS)	F12/14	76
40nm	1P10M, Logic (LP / GS / GP / ULP)	F12/14	76
28nm	1P10M, LP, LP plus, LP RF	F15	66
	1P10M, HP, HPL, HPL RF	F15	68
	1P10M, HPM, HPC	F15	70
	1P10M, ULP	F15	71
N16nm	1P13M, FFP	F14	74
	1P11M, FFC non shrink	F14	68
	1P11M, FFC shrink	F14	81

***Option layer - bump, color filter and wafers form shipping not included in this table and it need additional cycle time. (please refer to page 3)**

CyberShuttle Cycle Time

CyberShuttle Cycle time = (1) tape-out preparation +
(2) mask preparation +
(3) fab processing +
(4) wafer thinning and dicing (please refer to note 3) +
(5) shipping

Note:

1.Cycle time road map will be revisited periodically.

2. CyberShuttle cycle time is applicable for reservations with quantity less than 200 die. If additional quantity is required, then additional cycle time will be required.

3. Special wafer thinning and dicing optional services takes additional C/T (please refer to the table below)

4. Extra 0.05 D/L is needed for requesting wafer start more than 12 wafers.

5. For N28 technology lots, the 1st leading lot will grant Hot Run priority. As for the 2nd lot, total cycle time will be longer.

Optional services	Additional C/T
Solder bump	4 days
Lead Free bump (12")	4 days
Lead Free bump (8")	9 days
Lead Free bump (8") + wafer thinning	18 days
Gold bump	9 days
Color filter (>= 6 layers)	7 days
Wafer form shipping (< 4 wafers)	7 days
Additional 8" wafer thinning	5 days
Additional bumped wafer thinning and die saw (each 200 ea)	4 days