

# X7000 Series

## Key specifications

Reference clock	20 MHz (recommended 16.384 or 19.6608 MHz)	
Maximum speed	5MHz	
Travel	24-bit (1 – 16,777,216 pulses)	
Speeds	x 250	
	x 25	250~4,095,750pps
	x 5	25~409,575pps
	x 1	5~81,915pps
	x 0.1	1~16,383pps
Speed adjustment (linear)	x 250	31.25~511,968pps/msec
	x 25	31.25~511,968pps/msec
	x 5	0.625~10.23936pps/msec
	x 1	0.125~2.07872pps/msec
	x 0.1	0.0125~0.207872pps/msec
Acceleration/deceleration time (full range)	Linear	8msec~131sec
	Radial	16msec~262sec
	SIN	12.56msec~205.77sec

## Drive commands

Positioning drive	Incremental (index) drive
	Origin search (origin return I, II, III, IV and V)
	Sensor positioning
Interpolation drive	Linear interpolation drive
	None
Other	Continuous drive
	None

## Drive mode

Deceleration starting point	Auto calculated, manually set, offset setting
Acceleration/deceleration shape	S-shaped, linear, separately set by acceleration/deceleration
Synchronization	Synchronizable between start, stop, accelerate and decelerate chips

## Counters

Speed counter	14bit
Remaining pulse counter	24bit
Deviation counter	24 - and 32 - bit (via setting)
Command position counter	24 - and 32 - bit (via setting)
Actual position counter	24 - and 32 - bit (via setting)
Circular XY command position counter	None
encoder input	2 - clock, 1 - multiplier, 2 - multiplier, 4 - multiplier
Synchronization latch	None

## Comparators

Command position comparator	24-bit (via setting)
Actual position comparator	
Multi-purpose comparator	

## Technology

Gate structure	CMOS	
Input power voltage	X7083A	VddINT 3.0 - 3.6V
	X7043A X7023A	VddIO 4.5 – 5.5 V and 3.0 – 3.6 V
5 V input tolerant	None	

## Packages

8-axis	X7083A QFP208pin (30.0 x 30.0)
4-axis	X7043A QFP144pin (22.0 x 22.0)
2-axis	X7023A QFP100pin (16.0 x 16.0)
1-axis	None