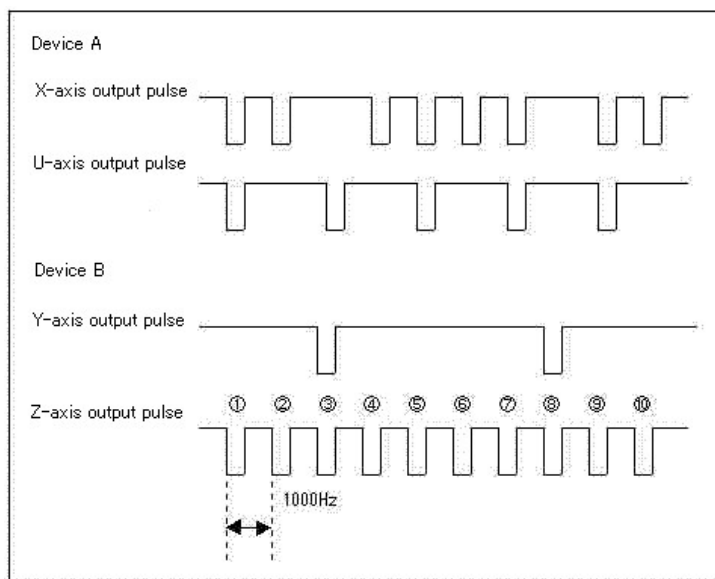


Linear Interpolation 2

Configurable number of axes	More than two axes among multiple controllers can be configured.
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Description	Operates the linear interpolation motion by specifying the moving quantity for multiple axes among multiple controllers. The motion is used to operate the linear interpolation motion of more than 5 axes using more than 2 motion controller boards (up to 8 boards).				
	To start this motion, use the synchronous start signal.(Refer to"Synchronous start.")				
Comments	1	The maximum number of the controllable axes is 32 axes. The linear interpolation 2 motion can be operated among any of the target product models. However, the Compact PCI bus product and the other bus products cannot be connected.			
	2	Set the maximum moving quantity value to the lMaxStep variable of the MtnSetSyncLine function . The axis of the maximum moving quantity is the master axis and the other axes are slave axes. The configurations of the slave axes are the same as the master axis except the moving quantity. The moving direction is depend on the code of the moving quantity.			
	3	When acceleration and deceleration is performed, the velocity is decelerated to the start-up velocity or the deceleration stops by inputting the deceleration signal (SD signal) of moving direction.			
	4	The deceleration stops or immediately stops by the stop signal (EL signal) input of moving direction.			
	5	The deceleration stops or immediately stops by the alarm signal (ALM signal) input.			
	6	If any one axis in the interpolation axes stops in error, all interpolation axes stops as well. Confirm the error stop in "MTR_FINISH_STATUS" of the MtnGetStatus function. (except 0) For the axis which is the error stop factor, the factor bit is "1" and for the other interpolation axes, bit 15 is "1".			
	7	Configure "constant velocity start" for the starting motion.			
	8	Even if the origin signal (ORG signal) is input, it is disregarded.			
	9	Specify the "output pulse cycle completion " to the pulse output completion timing .			
Configuration Example	The linear interpolation 2 operates in the following configuration.				
		Device A		Device B	
		X-axis	U-axis	Y-axis	Z-axis
	Mode	MTR_LINE	MTR_LINE	MTR_LINE	MTR_LINE
	Moving pulse count	800	500	200	1000
	Maximum moving pulse count	1000	1000	1000	1000
	Moving velocity	1000pps	1000pps	1000pps	1000pps
	Startup motion	Constant velocity start	Constant velocity start	Constant velocity start	Constant velocity start
	Master/slave axis	slave axis	slave axis	slave axis	master axis
		The pulses are output in the following timing.			



Multi-function DLL

```

HANDLE hDeviceHandle1, hDeviceHandle2;
int nRet;
WORD wSync[4];
MTNLINE Line;

hDeviceHandle1 = MtnOpen("FBIMTN1", MTR_FLAG_NORMAL );
hDeviceHandle2 = MtnOpen("FBIMTN2", MTR_FLAG_NORMAL );
:

wSync[0] = MTR_SYNC_EXT;
wSync[1] = MTR_SYNC_EXT;
wSync[2] = MTR_SYNC_EXT;
wSync[3] = MTR_SYNC_EXT;
nRet = MtnSetSync( hDeviceHandle1, 0x09, MTR_START_MODE, wSync );
nRet = MtnSetSync( hDeviceHandle2, 0x06, MTR_START_MODE, wSync );

Line.wAxis = 0x09;
Line.wClock = 299;
Line.wMode = MTR_LINE;
Line.wAccMode = MTR_ACC_NORMAL;
Line.fLowSpeed = 100;
Line.fSpeed = 1000;
Line.dwAcc = 100;
Line.dwDec = 100;
Line.fSAccSpeed = 0;
Line.fSDecSpeed = 0;
Line.lStep[0] = 800;
Line.lStep[3] = 500;
nRet = MtnSetSyncLine( hDeviceHandle1, 1000, &Line );
if(nRet != MTR_ERROR_SUCCESS) return -1;

nRet = MtnStartMotion( hDeviceHandle1, 0x09, MTR_CONST, MTR_SYNC_LINE );

Line.wAxis = 0x06;
Line.wClock = 299;
Line.wMode = MTR_LINE;
Line.wAccMode = MTR_ACC_NORMAL;
Line.fLowSpeed = 100;
Line.fSpeed = 1000;
Line.dwAcc = 100;
Line.dwDec = 100;
Line.fSAccSpeed = 0;

```

```
Line.fSDecSpeed = 0;
Line.lStep[1] = 200;
Line.lStep[2] = 1000;
nRet = MtnSetSyncLine( hDeviceHandle2, 1000, &Line );
if(nRet != MTR_ERROR_SUCCESS) return -1;

nRet = MtnStartMotion( hDeviceHandle2, 0x06, MTR_CONST, MTR_SYNC_LINE );

/* Synchronous start signal output */
nRet = MtnOutputSync(hDeviceHandle1, MTR_EXT_START );

* Operating linear interpolation 2 motion for X and U axes of hDeviceHandle1 and
  Y and Z axes of hDeviceHandle2.
```

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