



Controller Software

XG5000 and XG-PM Software for LS Electric Controllers

XG5000 is a powerful software suite for programming and configuring the XMC programmable motion controller and the XGB PLC.

XG5000

Offers four languages from the IEC61131-3 PLC programming standard.

- Ladder Diagram (LD): includes many versatile function blocks, including advanced motion control specific blocks, for convenience when programming complex systems.
- Structured Text (ST): a text based language which is a powerful tool for advanced motion programming and data handling.
- Sequential Function Chart (SFC) and Instruction List (IL) are also supported by the XGB PLC.

The software uses Symbolic (also called Automatic) variables created by the user. These can be created as global or local task variables, and can be aliased to direct variables. Variables can be imported/exported for quick editing in spreadsheet format.

Other features include User data types/function blocks, XY Trend for motion visualization, online system information, simulator, EDS file library for EtherNet/IP communications, ESI file library for EtherCAT device configuration, and much more.



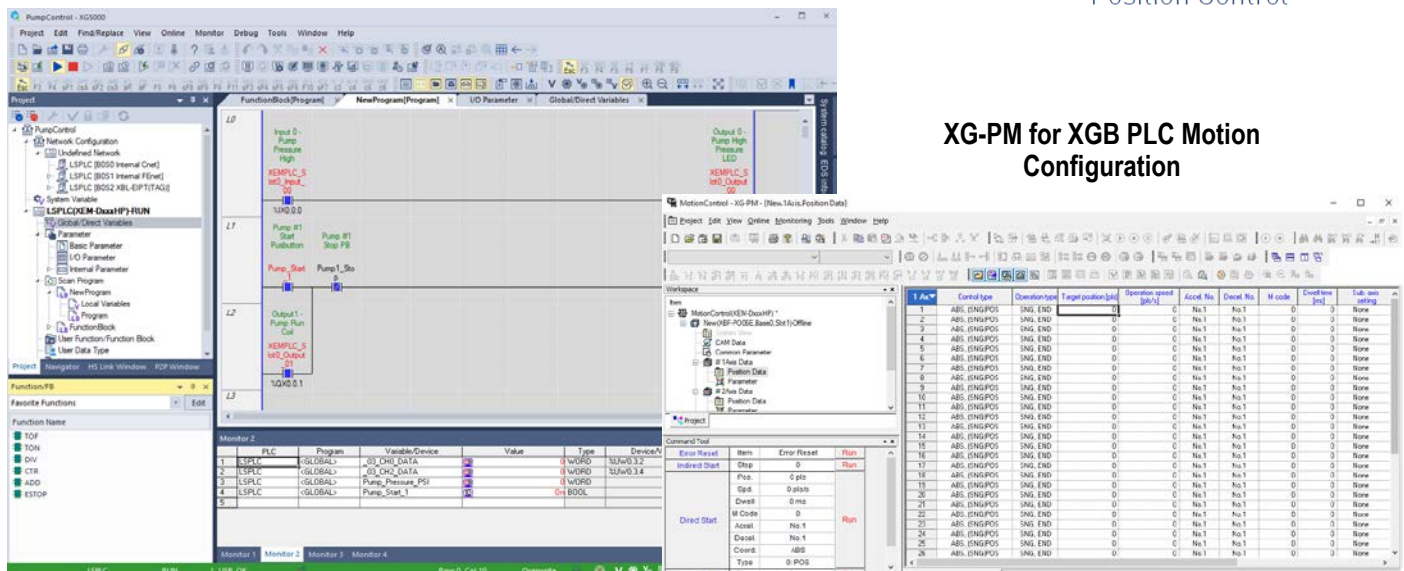
Motion Control Functions	
XGB PLC	Uses LS Electric's custom XPM motion function blocks.
XMC Motion Controller	Uses PLCopen compliant motion function blocks and some custom LS Electric function blocks.

XG-PM (for XGB PLC only)

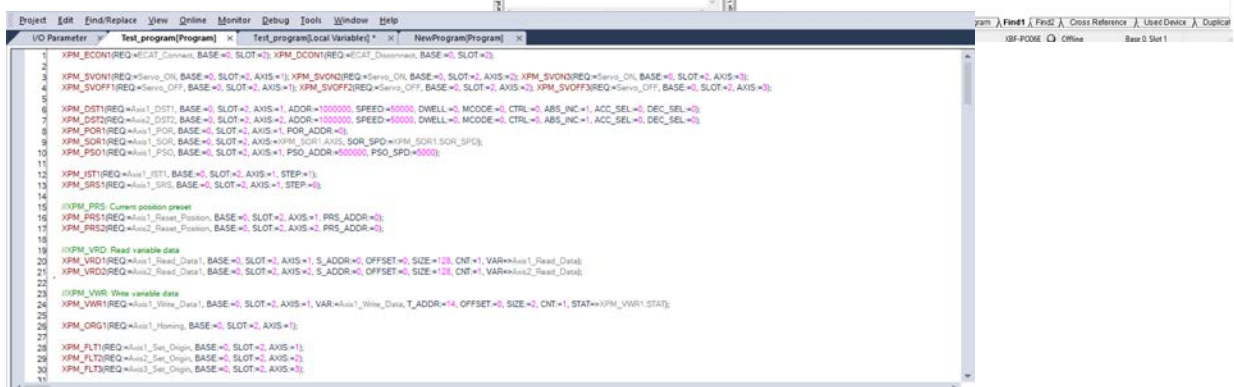
XG-PM Position control software is used to configure the axis parameters of the XGB PLC. The Command Tool allows for quick testing, and online edits make maintenance changes quick and easy. Access XG-PM from the XG5000 Main menu-> Tools -> Position Control.



XG-PM for XGB PLC Motion Configuration



XG5000 Main Screen

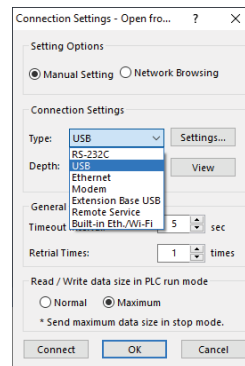


Structured Text Editor

If using an XMC Motion Controller, view the XG5000 overview topic in the XMC Interactive Guide here: [Starting an XG5000 Project](#)

- [illegible]

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- The image shows the rear panel of the XEM-DN52H2 device. On the left, three labels with arrows point to specific ports: 'USB Mini-B' points to a USB Mini-B port, 'Ethernet' points to an Ethernet port labeled 'Tera-X', and 'Serial RS-232C' points to a serial port labeled 'RS-485' and 'RS-232C'. The panel also features a status display with 'XGB', 'PWR', 'RUN', and 'ERR' indicators, and a 'XEM-DN52H2' label at the top right.



Add Project Name → Project name: []

Choose CPU Series XGB(IEC) → CPU Series: XGB(IEC) [Product Name...]

Choose CPU Type XEM-DxxxH2 or HP → CPU type: XEM-DxxxH2 []

Add Program Name → Program name: []

PLC Name: []

Program: []

Programming Format: XEM-DxxxH2 []

Program Language: XGB-KL

New Project ? X

Project

Project name:

File directory: ...

PLC

CPU Series: Product Name...

CPU type:

PLC Name:

Program

Programming Format:

Program name:

Program Language:

OK Cancel

The screenshot displays the Xilinx ISE software interface. On the left, the Project Navigator shows the hierarchy: Test > Network Configuration > Undefined Network > LSPIC (8051 Internal Core) > LSPIC (8051 Internal Ethernet). The I/O Parameter editor is open, showing a table of parameters for the LSPIC core. The 'Current Configuration' table is also visible, showing the selected configuration for the LSPIC core.

Project Navigator:

- Test
 - Network Configuration
 - Undefined Network
 - LSPIC (8051 Internal Core)
 - LSPIC (8051 Internal Ethernet)
 - System Variables
 - LSPIC8051EM_QuasiIO_Offline
 - Global/Device Variables
 - Parameter
 - Basic Parameter
 - I/O Parameter (Selected)
 - Internal Parameter
 - Scan Program
 - Notepad

I/O Parameter Editor:

Parameter	Value
00	01
XEM-DH/DH1	01
XEM-DH/DH2	01
XEM-DH/DH3	01
XEM-DH/DH4	01
XEM-DH/DH5	01
XEM-DH/DH6	01
XEM-DH/DH7	01
XEM-DH/DH8	01
XEM-DH/DH9	01
XEM-DH/DH10	01
XEM-DH/DH11	01
XEM-DH/DH12	01
XEM-DH/DH13	01
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XEM-DH/DH89	01
XEM-DH/DH90	01
XEM-DH/DH91	01
XEM-DH/DH92	01
XEM-DH/DH93	01
XEM-DH/DH94	01
XEM-DH/DH95	01
XEM-DH/DH96	01
XEM-DH/DH97	01
XEM-DH/DH98	01
XEM-DH/DH99	01
XEM-DH/DH100	01

Current Configuration Table:

Slot	Module	Comment	Input Filter	Emergency Output
0	XEM-DH/DH101		3 Standard	Default
1	XEM-DH/DH102			
2	XEM-DH/DH103			
3	XEM-DH/DH104			
4	XEM-DH/DH105			
5	XEM-DH/DH106			
6	XEM-DH/DH107			
7	XEM-DH/DH108			
8	XEM-DH/DH109			
9	XEM-DH/DH110			
10	XEM-DH/DH111			
11	XEM-DH/DH112			
12	XEM-DH/DH113			
13	XEM-DH/DH114			
14	XEM-DH/DH115			
15	XEM-DH/DH116			
16	XEM-DH/DH117			
17	XEM-DH/DH118			
18				