


Leading Innovation, Creating Tomorrow 



New Automation XGK & I



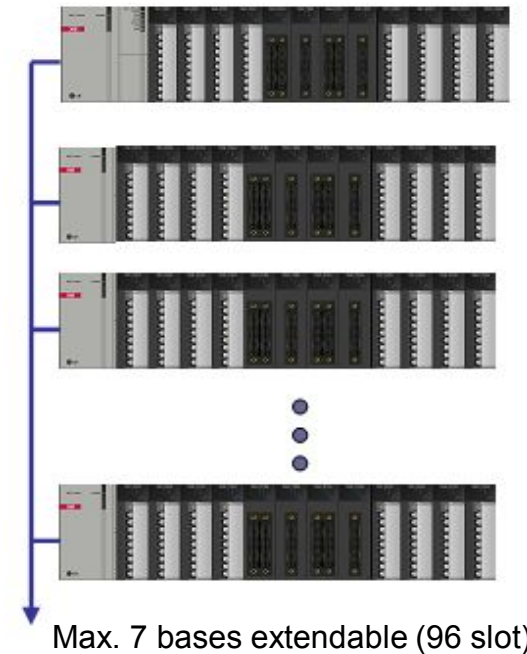
LS Industrial Systems

LS Industrial Systems

1] Overview

XGK CPU

- CPU processing speed: 28ns/Step
- Max 32,768-point I/O control
- Various CPU types: E/S/A/H/U
User Program: 16/32/64/128kstep
- Integrated software package
- Flexible system solution with open network
- Special devices for programming convenience
- Sufficient data memory (device)
- Compatible with MASTER-K (auto-conversion)



XGI CPU



- CPU processing speed: 28ns/step
- Max 131,072-point I/O control
- Type diversity based on speed and capacity: S/H/U
User Program: 128/512/1MB
- IEC 61131-3 standard programming
LD, SFC, ST (Structured Text)
- User-defined F/FB support
- Powerful built-in PID and process control
- Common system components with XGK
Module, Base, etc.
- Automatic program conversion: GLOFA -> XGI

2] Features: High-speed

Fast CPU Processing Speed

- MPU (NGP 1000) developed by LSIS accomplishes the fastest CPU processing speed: 0.028 μ s/step

Operating Speed Comparison: XGK series

	LSIS			M Company	
	XGK-CPUU/H/A	XGK-CPUS/E	MK1000S	Q06/12H	Q01
Sequence	0.028	0.084	0.2	0.034	0.1
Application	0.084	Under 0.3	0.4	0.102	0.8
Floating-point	0.602	0.3	-	0.782	-

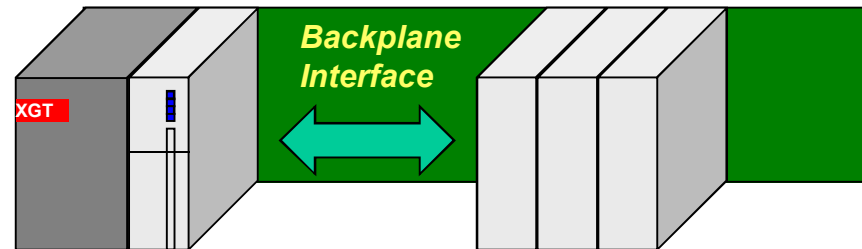
Operating Speed Comparison: XGI series

	LSIS		R Company	S Company
	XGI-CPUU/H/S	GM1/2	Logix5550	S7-400 (414)
Sequence	0.028	0.12	0.08	0.1
Application	0.084	0.24	-	-
Floating-point	0.392	more	-	-

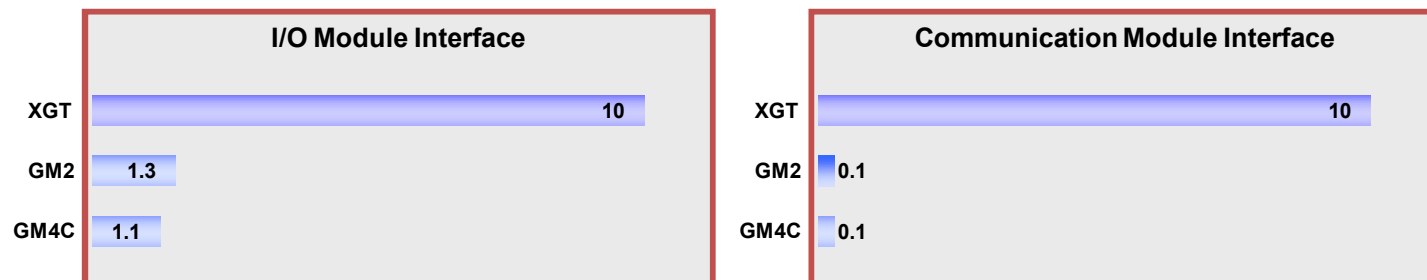
2] Features: High-speed

High-speed Backplane (Base) Data Transmission

- The fastest backplane interface is achieved by dedicated bus controller and high-speed transmission algorithm (16bits).



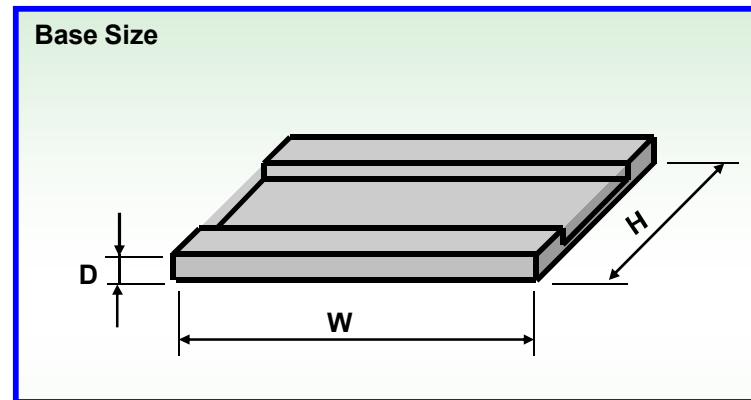
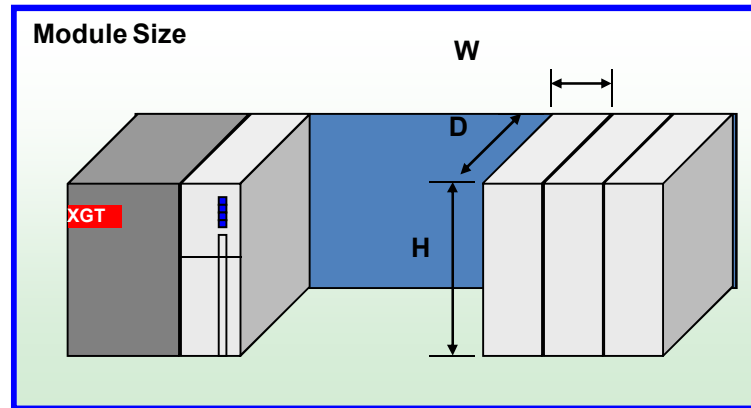
PLC	Main base	Expansion base
XGT	20Mbytes/sec	5Mbytes/sec
	About 0.25 μ s/word	
GLOFA-GM1/2	About 1.7 μ s/word	
MASTER-K1000S	About 2.0 μ s/word	
MELSEC-Q	About 0.56 μ s/word	



2] Features: Smallest Size

■ The smallest size

- The smallest size (dimensions: 27 x 98 x 90) of modules allows compact panel design which leads to cost-efficiency and various applications.



Power Module	Size (W*H*D)	Ratio
LSIS XGT	55 * 98 * 90	100%
M (Q **)	55 * 98 * 91	102
F (SPH **)	70 * 105 * 90	150

Other Modules	Size (W*H*D)	Ratio
LSIS XGT	27 * 98 * 90	100%
M (Q **)	27 * 98 * 91	102
F (SPH **)	35 * 105 * 90	139

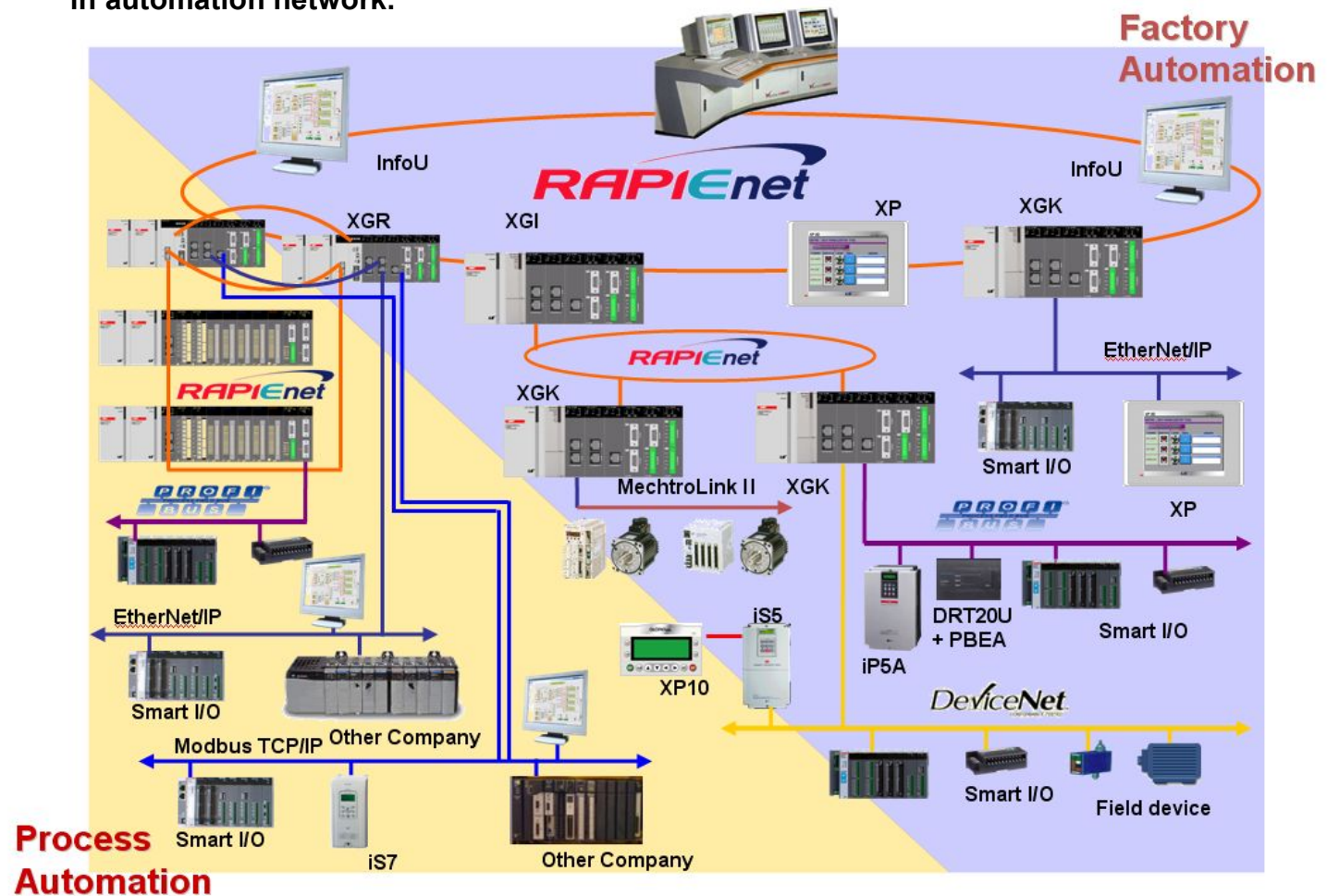
Base(8S)	Size (W*H*D)	Ratio
LSIS XGT	318 * 98 * 15	100%
M (Q **)	328 * 98 * 18	110
F (SPH **)	308 * 105 * 20	143



3] XGT Network

Open Network based System Integration

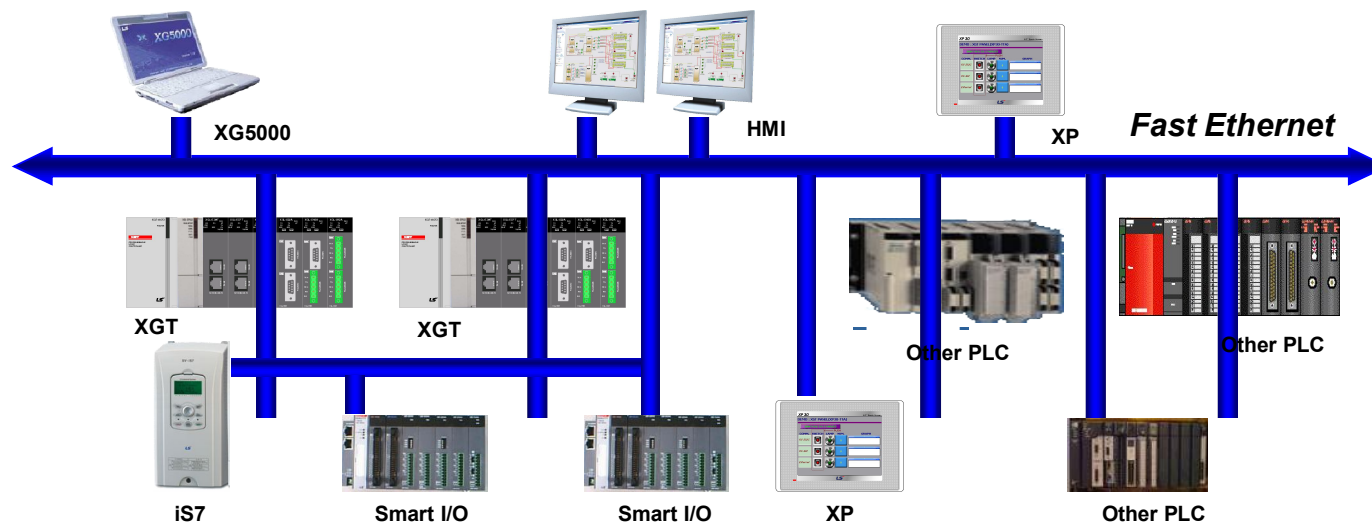
- XGT series support various communication solutions ranging from field level control such as PROFIBUS and DeviceNet to information level with Fast Ethernet, widely used in automation network.



3] XGT Network

XGT Fast Ethernet

- Support 10/100BASE-T, 100Base-FX
- High reliability and performance with 32-bit Processor
- Seamless integration of devices from other manufacturers: XGT protocol, Modbus TCP/IP and user-defined protocol
- 24 comm. modules installation for one CPU: High-speed Link 12 modules, P2P 8 modules



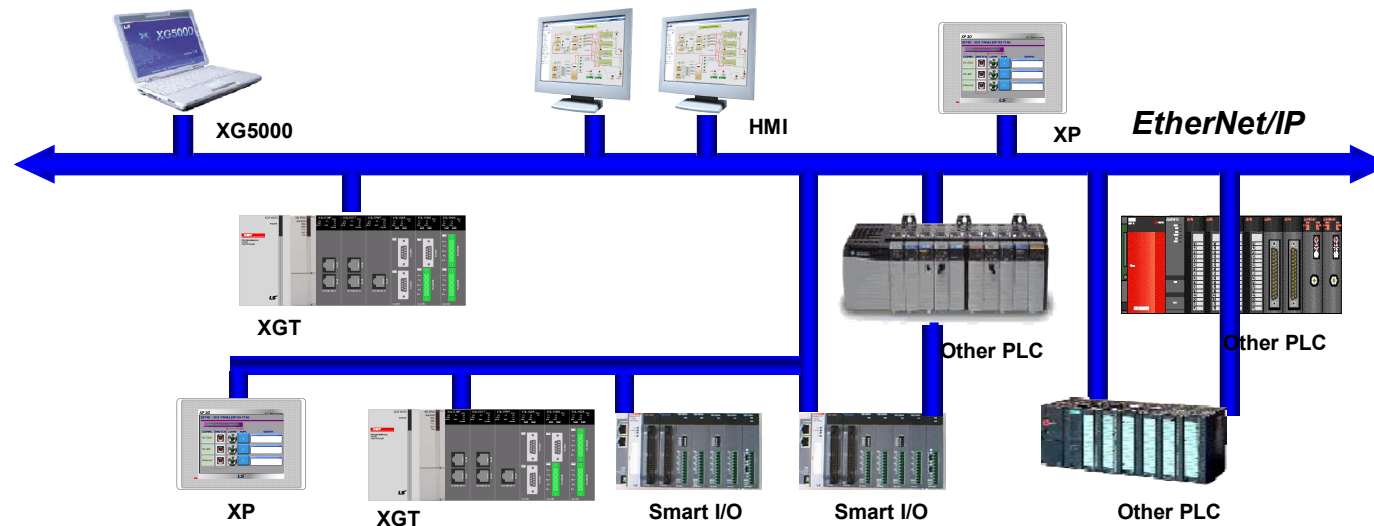
Mode	Protocol	Usage	Remark
Server	XGT	HMI ↔ XGT, XGT ↔ XGT	
	Modbus TCP/IP	HMI ↔ XGT, XGT ↔ XGT, Other PLC ↔ XGT	
	XG5000 Service	XG5000/XG-PD ↔ XGT	
Client	XGT	XGT ↔ XGT	
	Modbus TCP/IP	XGT ↔ Other PLC, XGT ↔ XGT	
	User Define	XGT ↔ GM/MK, XGT ↔ Other PLC	
High-speed Link Service		XGT ↔ XGT, XGT ↔ GM/MK	



3] XGT Network

XGT EtherNet/IP

- Support 100BASE-TX full Duplex
- No additional switch or hub needed: built-in switch
- Auto Crossover function
- Compatible with EtherNet/IP Conformance Test Suite Version 2.10

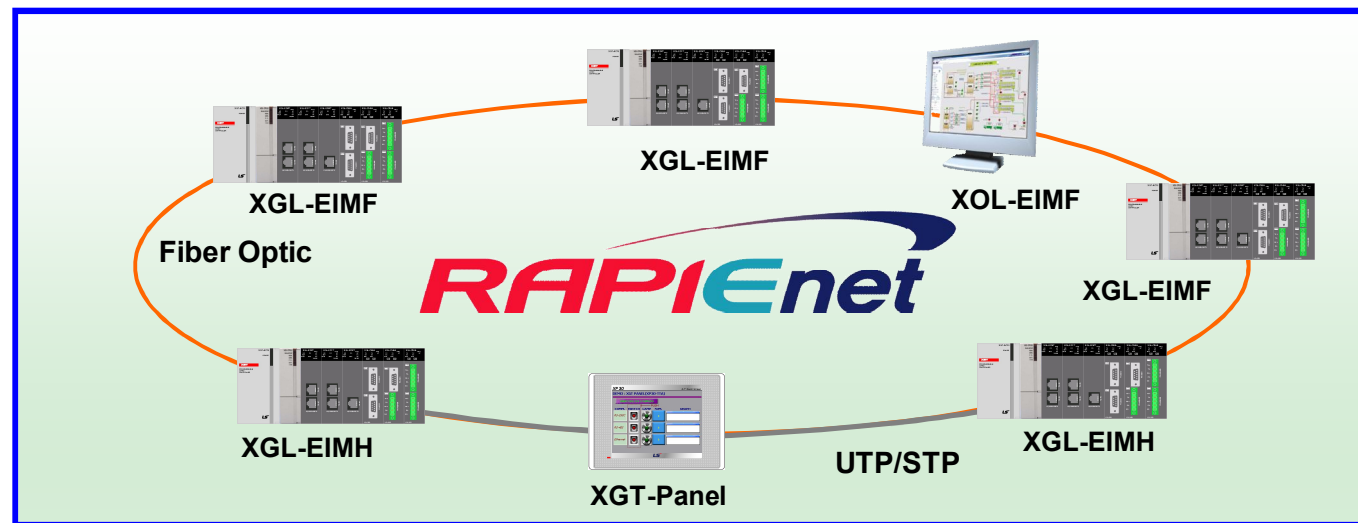


Mode	Protocol	Usage	Remark
Server	Implicit	LS, Third party Client ↔ XGT, Periodic communication	
	Explicit	LS, Third party Client ↔ XGT, Non-periodic communication	
	XG5000 Service	XG5000/XG-PD ↔ XGT	
Client	Implicit	XGT ↔ XGT, XGT ↔ Third party Server	
	Explicit	XGT ↔ XGT, XGT ↔ Third party Server	

3] XGT Network

➤ RAPIEnet ... Ethernet-based Ring Network

- Improved Network reliability: F.O./T.P. network configuration based on Fast Ethernet
- Seamless system integration from control Level to enterprise level
- RAPIEnet network extensibility:
XGT PLC, PC (XOL-EIMT/EIMF), XGT-Panel (XPO-EIMT)
- RAPIEnet network flexibility:
Twisted pair, Fiber optic, Hybrid (T.P./F.O.) types

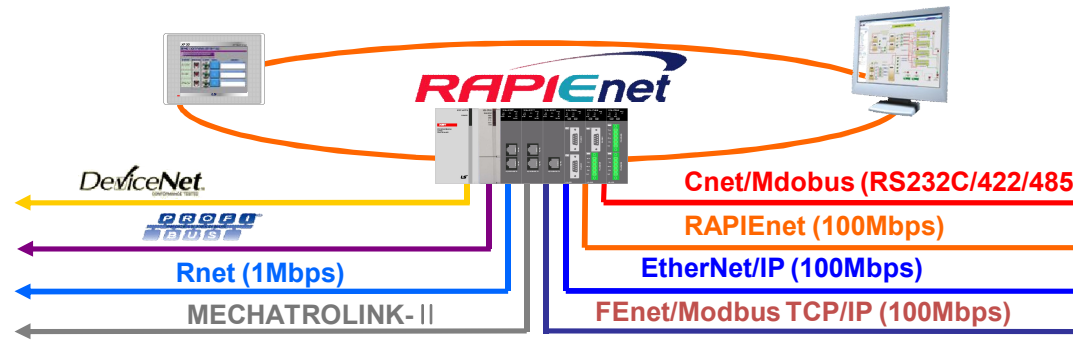


Mode	Protocol	Usage	Remark
High-speed Link	RAPIEnet	XGT ↔ XGT, XGT ↔ HMI	Broadcast
P2P	RAPIEnet	XGT ↔ XGT	Unicast
XG5000	XG5000	XG5000/XG-PD ↔ XGT	



3] XGT Network

Network Service



Item	FEnet	EtherNet/IP	RAPIEnet	Cnet	Profibus-DP	DeviceNet	
Network topology	Star, Tree, Bus (F.O., T.P.)	Star, Tree, Bus	Ring, Bus (F.O., T.P., Mixed)	1:1(RS-232C), 1:N (RS-422/485)	Multi-drop	Trunk & Drop / Multi-drop	
Speed	100/10Mbps	100Mbps	100Mbps	300 ~ 11.5kbps	9.6k ~ 12Mbps	125/250/500kbps	
Distance	100m (T.P.) 2km (F.O.)	100m	100m (T.P.) 2km (F.O.)	Max. 500m (RS-422/485)	Max. 1.2km	Max. 500m	
Station	64 (High-speed link)	Implicit: 64 Explicit: 128	64	32(RS-422/485)	32/segment	64	
Protocol & Service	HS Link	●	-	●	-	● (Master)	
	Server	XGT Protocol Modbus TCP/IP	Implicit Explicit	RAPIEnet	XGT Protocol Modbus RTU/ASCII	-	-
	P2P Client	XGT Protocol Modbus TCP/IP User-defined	Implicit Explicit	RAPIEnet	XGT Protocol Modbus RTU/ASCII User-defined	-	-
	XG5000 I/F	●	●	●	●	-	-
	E-Mail	●	-	-	-	-	-
Configuration	XG-PD				XG-PD & SyCon or PROFICON*		
No. of modules	Total 24 modules Dedicated Comm.: Max. 24 modules (FEnet, Cnet, EtherNet I/P), High-speed Link: Max 12 modules, P2P: Max 8 modules						

* PROFICON: Network Configuration Tool for XGL-PMEC



3] XGT Network

Link Performance

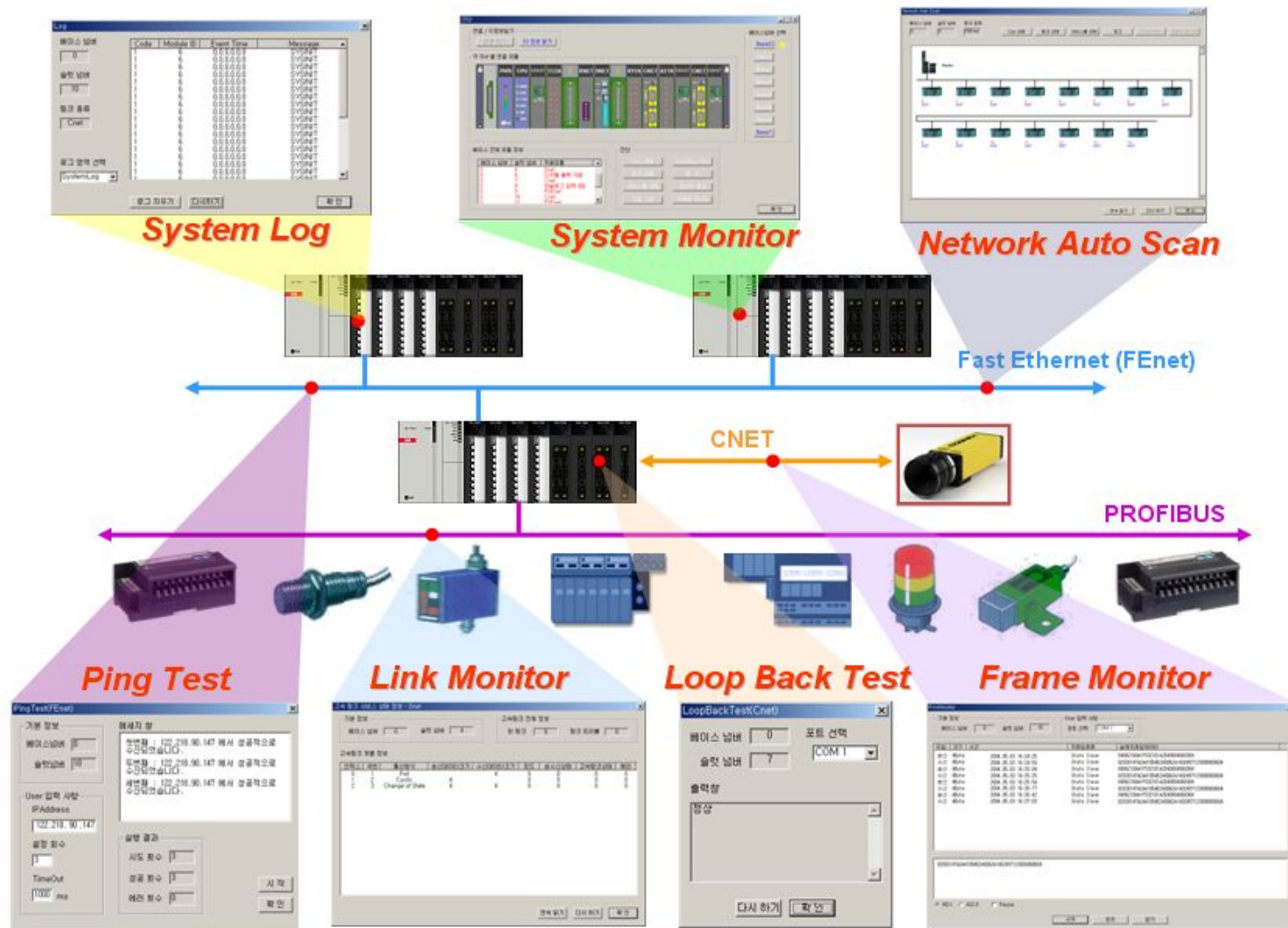
- Communication capacity expansion:
Huge data communication for large-scale network system configuration is available.

Item		LSIS			M company
		FEnet	Ethernet/IP	RAPIenet	NET10/H
Communication speed		100Mbps	100Mbps	100Mbps	25Mbps
High-speed Link	Transmission capacity per module (Max, word * block)	6,400 word (200 * 32)	-	12,800 word (200 * 64)	1,000word
	Reception capacity per module (Max, word * block)	25,600 word (200 * 128)	-	25,600 word (200 * 128)	8192word
P2P Client	Communication capacity per module (Max, word * block)	44,800word (700 * 64)	Implicit: 16,000 word (250 * 64) Explicit: 44,800 word (700 * 64)	44,800 word (700 * 64)	-
Server	Communication capacity per module (Max, word/block)	700	Implicit: 250 Explicit: 700	700	-
Module Installation	High-speed Link	12 modules	12 modules	12 modules	4 modules
	P2P Client	8 modules	8 modules	8 modules	-
	Server	24 modules	24 modules	24 modules	
	Total	Max 24 modules			4 modules

- 1] Overview
- 2] Features
- 3] Network**
- 4] Software
- 5] Programming
- 6] Specification
- 7] Comparison

3] XGT Network

Various Network Monitoring & Diagnostic Functions



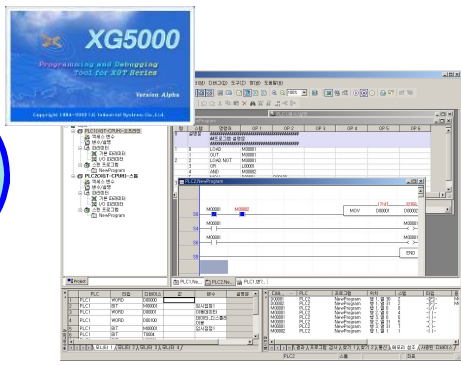
- 1] Overview
- 2] Features
- 3] Network
- 4] Software**
- 5] Programming
- 6] Specification
- 7] Comparison

4] Software

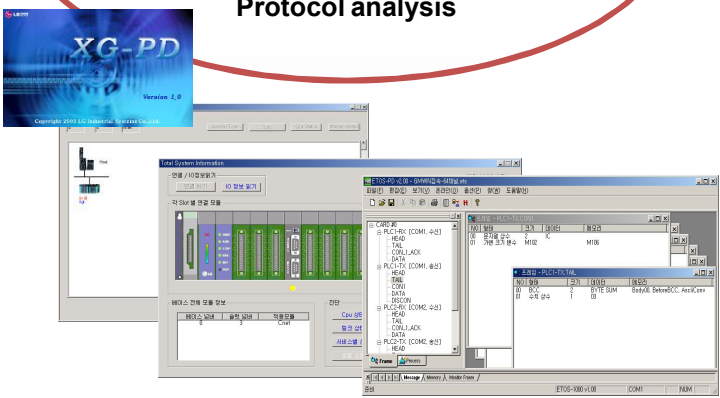
XGT Software Package

- XG Software Package provides integrated engineering environment from basic programming to special function module setting as well as diagnosis. This package consists of XG5000 for PLC programming, XG-PD for comm. setting/diagnosis and XG-APM for positioning control.

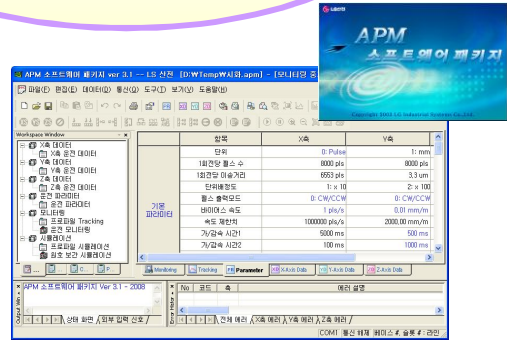
XG 5000
Program editing & Engineering Software
Windows-based easy operation
Support Multi PLC Multi Programming
Various monitoring and diagnostic functions



XG-PD
Communication module parameter setting
Protocol editing
Network diagnosis
Frame monitoring
Protocol analysis



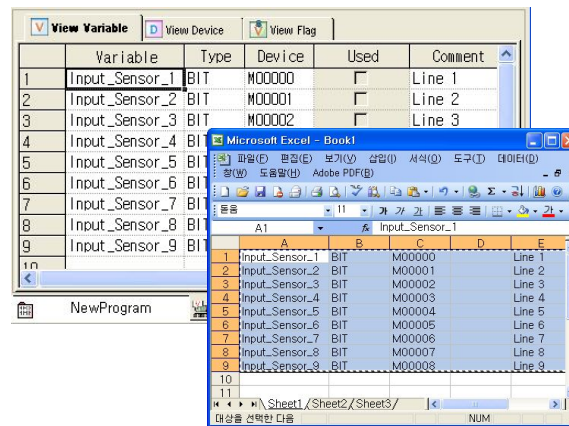
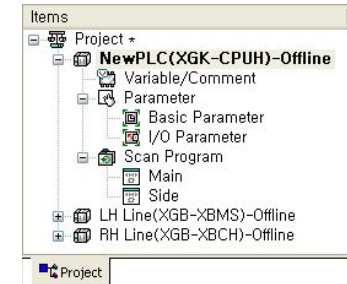
XG-APM
Positioning parameter setting
Data editing in EXCEL
Monitoring and Diagnosis
Tracking Function



4] Software

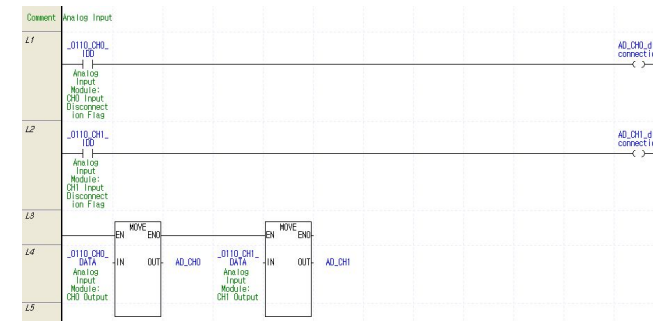
Easy & Convenient Editing

- Program parameterization: Program-less parameter setup for special & communication module.
- Program modulization: Max 256 programs per CPU to Import/Export
- Multi PLC Multi Program: Different PLC systems in one project can be edited, connected, monitored, and modified simultaneously.



- Drag & Drop: Project, Variable/Comment, Ladder, Monitoring Variable, etc.
- Function/FB registration: Most Recently Used, Most Frequently Used, Favorite Function
- Cell-type input window
- Cell unit editing
- Auto fill function
- Compatible with Microsoft EXCEL

- User-friendly functions:
Cross Reference, Used Device
- Convenient Programming:
Register Special/Communication Module Variable

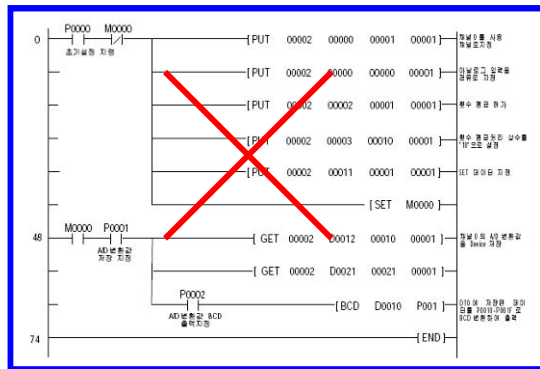


- 1] Overview
- 2] Features
- 3] Network
- 4] Software**
- 5] Programming
- 6] Specification
- 7] Comparison

4] Software

Program-less Setup

➤ Simple configuration with easy parameter setting: Special/Communication



Analog Module Setting

XGF-AV8A (Voltage, 8-CH)								
XGF-AV8A (Voltage, 8-CH)								
Parameter	CH 0	CH 1	CH 2	CH 3	CH 4	CH 5	CH 6	CH 7
<input type="checkbox"/> Channel status	Enable	Disable	Disable	Disable	Disable	Disable	Disable	Disable
<input type="checkbox"/> Input range	0~5V	1~5V	1~5V	1~5V	1~5V	1~5V	1~5V	1~5V
<input type="checkbox"/> Output type	0~16000	0~16000	0~16000	0~16000	0~16000	0~16000	0~16000	0~16000
<input type="checkbox"/> Filter process	Disable	Disable	Disable	Disable	Disable	Disable	Disable	Disable
Filter constant	1	1	1	1	1	1	1	1
<input type="checkbox"/> Average setting	Disable	Disable	Disable	Disable	Disable	Disable	Disable	Disable
<input type="checkbox"/> Average processing	Count-Avr	Count-Avr	Count-Avr	Count-Avr	Count-Avr	Count-Avr	Count-Avr	Count-Avr
Average value	2	2	2	2	2	2	2	2

P2P Parameter Setting

Index	Ch.	Driver Setting	P2P func	Conditional	Command type	Data typ	No. of	Data size	Destn	Destination	Fram	Setting	Variable setting contents
0	2	Modbus RTU client	WRITE	M0000	Continuous	WORD	1	4	<input checked="" type="checkbox"/>	1		Setting	Number:1:READ1:D:0000,SAVE1:0x40004
1	2	Modbus RTU client	READ	M0001	Continuous	WORD	1	8	<input checked="" type="checkbox"/>	1		Setting	Number:1:READ1:0x30006,SAVE1:D:0020
2	2	Modbus RTU client	WRITE	M0002	Continuous	WORD	1	4	<input checked="" type="checkbox"/>	2		Setting	Number:1:READ1:D:0100,SAVE1:0x40004
3	2	Modbus RTU client	READ	M0003	Continuous	WORD	1	8	<input checked="" type="checkbox"/>	2		Setting	Number:1:READ1:0x30006,SAVE1:D:0120

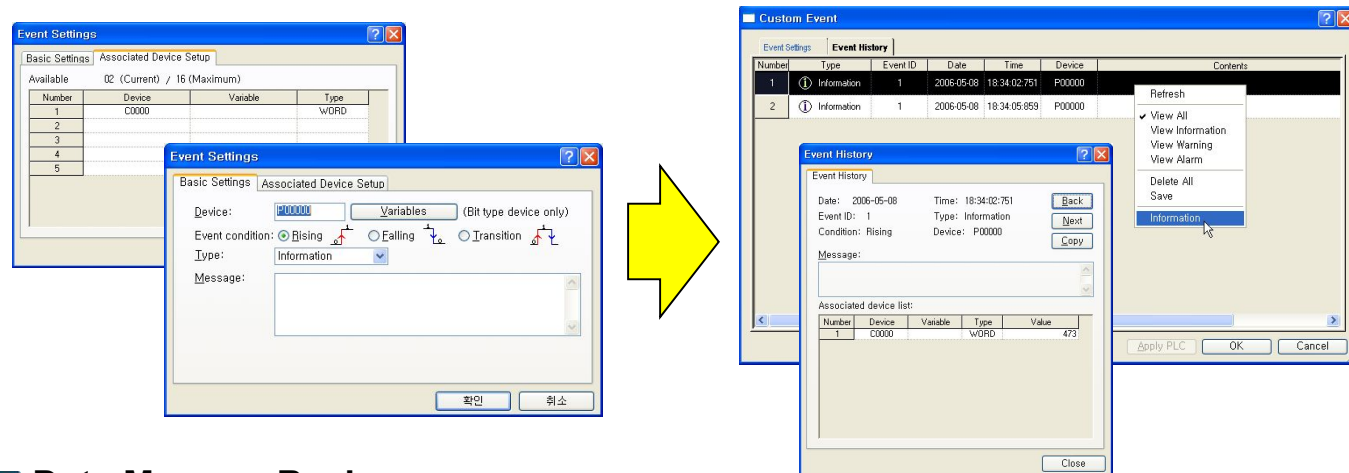


4] Software

Special Function

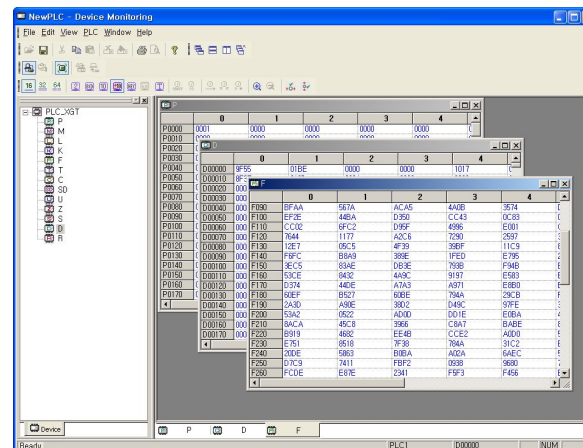
Custom Event

Data logging and event history at custom event conditions of specific devices.



Data Memory Back-up

Read, restore and write data of specific devices.



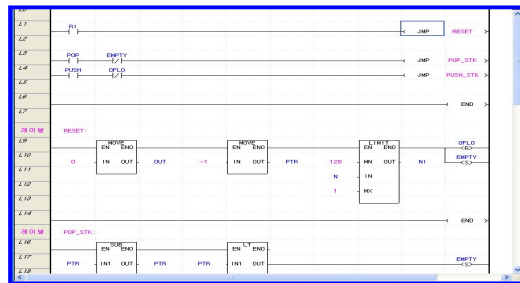
- 1] Overview
- 2] Features
- 3] Network
- 4] Software
- 5] Programming**
- 6] Specification
- 7] Comparison

5] Programming & Engineering

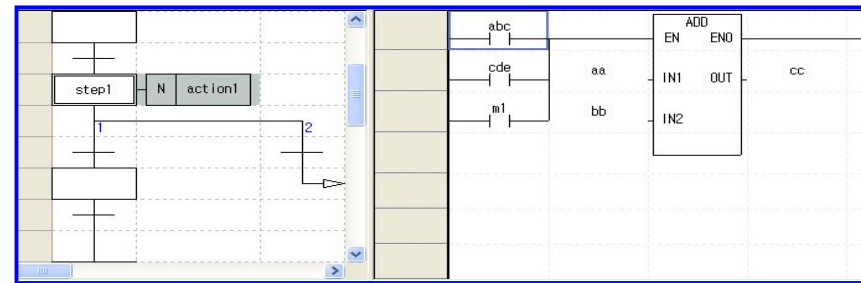
Programming Language

Support IEC Standard LD (Ladder Diagram), SFC (Sequential Function Chart), ST (Structured Text) language programming

Ladder Diagram



SFC



ST (Structured Text)

```

19 X2 := (- B - SQRT(D))/(2.0*B) ;
20 END_IF ;
21
22
23 // CASE문 예제
24 TW := WORD_BCD_TO_INT(THUMBWHEEL);
25 TW_ERROR := 0;
26 CASE TW OF
27   1,5: DISPLAY := OVEN_TEMP;
28   2: DISPLAY := MOTOR_SPEED;
29   3: DISPLAY := GROSS - TARE;
30   4, 6..10: DISPLAY := ADD(TW, 4);
31 ELSE DISPLAY := 0;
32   TW_ERROR := 1;
33 END_CASE;
34 %MW100 := INT_TO_BCD_WORD(DISPLAY);
35
36 // FOR문 예제
37 SUM := 0;
38 FOR I := 1 TO 3 DO
39   FOR J := 1 TO 2 DO
40     IF FLAG THEN EXIT; END_IF;
41     SUM := SUM + J;
42   END_FOR;
43   SUM := SUM + I;
44 END_FOR;

```

- High-level language.
(C++ programming Concept)
- Easy access for computer programmer
- General text editor applicable
- Complex algorithm realization
- Various open source (compatibility)
- Faster processing than LD
- Strong data processing



5] Programming & Engineering

➤ User-defined Function & Function Block

- No limitation on source program development (every F/FB and variable applicable)
- Source program protection: password
- Max 64 input variables, Max 64 output variables
- LD (Ladder Diagram) and ST (Structured Text) support

1] Overview

2] Features

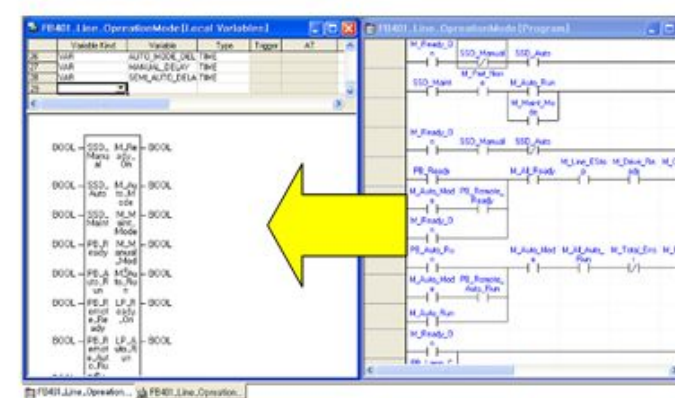
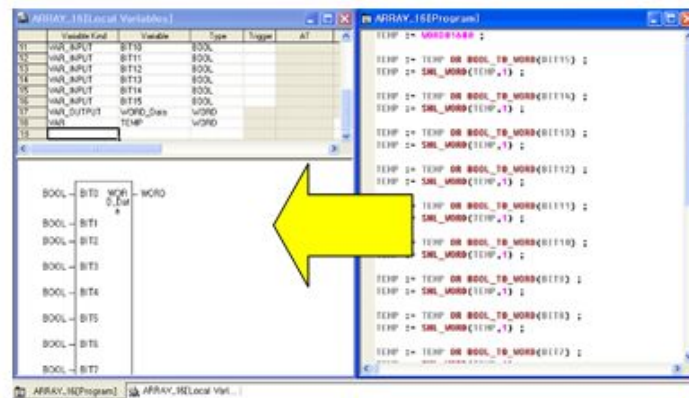
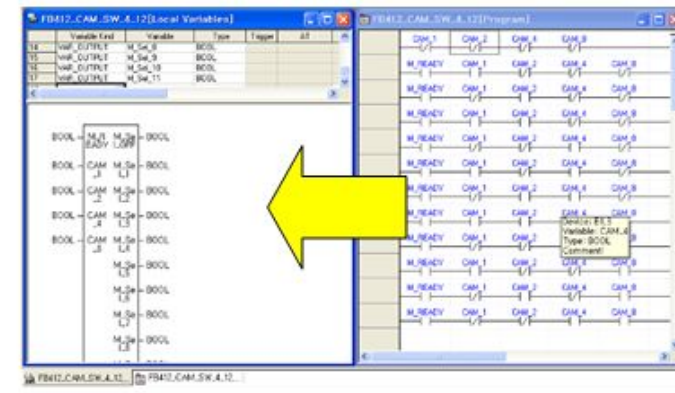
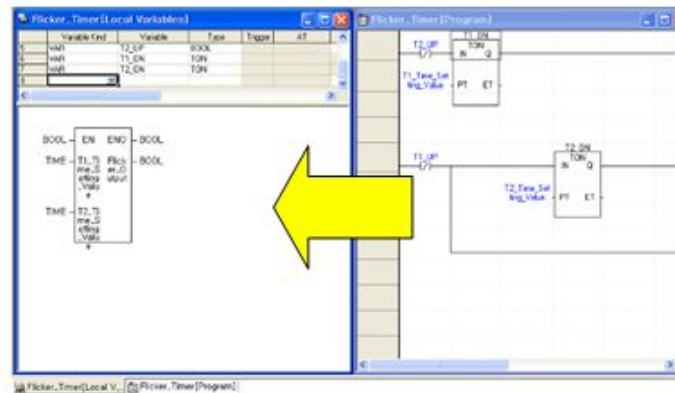
3] Network

4] Software

5] Programming

6] Specification

7] Comparison



- 1] Overview
- 2] Features
- 3] Network
- 4] Software
- 5] Programming**
- 6] Specification
- 7] Comparison



5] Programming & Engineering

Offline Simulation

Program simulation and monitoring in XG5000

The screenshot displays the XG5000 software interface during an offline simulation. The main window shows a ladder logic diagram with various rungs and components. A blue arrow points to the simulation controls, with a callout box containing the text "Start Simulation !!". A dialog box titled "Change Custom Value" is open, showing a "Current value" of 124 and a "Default" value of 124. The dialog box also includes fields for "Device" (D00151), "Type" (WORD), and "Display type" (Unsigned decimal). The background shows a ladder logic diagram with rungs 13, 18, 22, and 25. Rung 13 contains a normally open contact labeled "F00099" connected to a coil labeled "U08 02 0". Rung 18 contains a normally open contact labeled "U04 02" connected to a coil labeled "U04 23 0". Rung 22 contains a normally open contact labeled "U04 02" connected to a coil labeled "U04 23 C". Rung 25 contains a normally open contact labeled "F00099" connected to a coil labeled "U04 23 4". The diagram also shows various function blocks like MOV, BCD, and HSC VAL. The status bar at the bottom shows "DeviceNet INTERPOLATION INF_READ DI.DO.AI.AO.HSC".

- 1] Overview
- 2] Features
- 3] Network
- 4] Software
- 5] Programming
- 6] Specification**
- 7] Comparison

6] XGT Specification

■ XGK CPU Specifications (I)

Item		CPUU	CPUH	CPUA	CPUS	CPUE
Operation		Cyclic scan and execution of stored program				
I/O Control		Batch processing by scan synchronization (Refresh method)				
Program Language		Ladder Diagram, Instruction List				
Instruction	Basic	42				
	Application	About 700				
I/O	Base I/O	6,144		3,072		1,536
	Remote I/O	32,768 points				
Processing Speed	Sequence Instruction	0.028 μ s			0.084 μ s	
	Application Instruction	0.084 μ s			0.252 μ s	
	Floating-point Instruction	0.602 μ s			1.442 μ s	
Program Memory		128ksteps	64ksteps	32ksteps	32ksteps	16ksteps
Program	Total	256				
	Scan Program	256 – (Initialization + Cycle + Internal)				
	Initialization	1				
	Cycle	32				
	Internal	32				



- 1] Overview
- 2] Features
- 3] Network
- 4] Software
- 5] Programming
- 6] Specification**
- 7] Comparison

6] XGT Specification

■ XGK CPU Specifications (II)

			Item	CPUU	CPUH	CPUA	CPUS	CPUE	
D A T A	Bit	P	Input/Output	32,768 points (P00000 ~ P2047F)					
		M	Internal relay	32,768 points (M00000 ~ M2047F)					
		F	Function relay	32,768 points (F00000 ~ F2047F)					
		L	Link relay	180,224 points (L00000 ~ L11263F)					
		K	Keep relay	32,768 points (K00000 ~ K2047F)					
M E M O R Y	Word	D	Register	32,768 words (D00000 ~ D32767)		20,000words (D00000 ~ D19999)			
		Z	Index register	128words (Z000 ~ Z127)					
		U	Analog register	U00.00 ~ U07.31		U00.00 ~ U03.31		U00.00 ~ U01.31	
		R	File register	32,768 words * 2 blocks			32,768 words * 1 block		
	Step	S	Step controller	128 groups* 100 steps (S00.00 ~ S127.99)					
	Timer	T	Timer	2048 points (T0000 ~ T2047, 0.1/1/10/100ms timer)					
	Counter	C	Counter	2048 points (C0000 ~ C2047)					
Flash Memory for Data				2MB, 32 blocks (64KB per block, accessed by R device)					
Max No. of Base				8 bases (main 1 + extension 7)		4 bases (main 1 + extension 3)		2 bases (main 1 + extension 1)	
Max No. of Slot				96 (8 * 12)		48 (4 * 12)		24 (2 * 12)	
Distance of Extension Base				Max 15m					
Programming port				USB & RS-232C 1 port each					
Built-in CPU communication				Modbus Slave (RS-232C)					

6] XGT Specification

■ XGI CPU Specification (I)

Item		CPUU	CPUH	CPUS
Operation		Cyclic scan and execution of stored program		
I/O Control		Batch processing by scan synchronization (Refresh method)		
Programming Language		Ladder Diagram SFC ST		
Command	Operator	18		
	Basic Function	136 + Floating-point Function		
	Basic Function Block	43		
	Dedicated Function Block	For Special functioning module (AI, AO, HSC, APM, etc)		
I/O	Base I/O	6,144 points	3,072 points	
	Remote I/O	131,072 points	32,768 points	
Processing Speed	Sequence Instruction	0.028 μ S		
	MOVE	0.084 μ S		
	Floating-point Instruction	\pm : 0.392 μ S (S), 0.924 μ S (D)		
		\times : 0.896 μ S (S), 2.240 μ S (D)		
\div : 0.924 μ S (S), 2.254 μ S (D)				
Program Memory		1MB (about 128ksteps)	512KB (about 64ksteps)	128KB (about 16ksteps)



6] XGT Specification

■ XGI CPU Specification (II)

Item		CPUU	CPUH	CPUS	
Data Memory	Auto Variable (A)	512KB (Retain: Max 256KB)		128KB (Retain: Max 64KB)	
	Input Variable (I)	16KB (%IX0.0.0~%IX127.15.63)		4KB (%IX0.0.0~%IX31.15.63)	
	Output Variable (Q)	16KB (%QX0.0.0~%QX127.15.63)		4KB (%QX0.0.0~%QX31.15.63)	
	Direct Variable	M	256KB (Retain: Max 128KB)		64KB (Retain: Max 32KB)
		R	64KB x 2blocks		64KB x 1block
		W	128KB		64KB
	Flag Variable	F	4KB		
		K	16KB (256 PID Loops)		4KB (64 PID Loops)
		L	22KB		
		N	42KB		
		U	8KB		4KB
	Timer	No limitation in Auto Variable area Time range: 0.001sec ~ 4,294,967.295 sec (Max: 49D17H2M47.295S)			
	Counter	No limitation in Auto Variable area Count range: 0 ~ 18,446,744,073,709,551,615 (Max: 64-bit expression range)			
	Flash Memory for Data		2MB, 32 blocks (64KB per block, accessed by R device)		
Parameter Area		818KB (Basic, I/O, Special, Communication parameter area)			

6] XGT Specification

▣ XGI CPU Specification (III)

Item		CPUU	CPUH	CPUS
Program	Total	256		
	Scan	256 – (Initialization + Cycle + Internal)		
	Initialization	1 program		
	Cycle	32 programs		
	Internal	32 programs		
Restart Mode		Cold, Warm		
Self Diagnosis		Scan watchdog, Memory error, I/O error, Battery error, Power error, etc.		
Program Port		USB & RS-232C 1 port each		
Built-in CPU Communication		Modbus Slave (RS-232C)		
Data Retain during Power Failure		Retain Area Setup in Basic Parameter Setting		
Max No. of Bases		8 bases (main 1 + extension 7)	4 bases (main 1 + extension 3)	
Distance of Extension Base		Max 15m		

- 1] Overview
- 2] Features
- 3] Network
- 4] Software
- 5] Programming
- 6] Specification
- 7] Comparison**



7] Comparison

XGK Comparison

Item		LSIS		Mitsubishi		
		XGK-CPUU/H	XGK-CPUS	Q12/06H	A3A/A3U	
CPU	DI/DO	Base I/O	6,144 points	3,072 points	4,096 points	2,048 points
		Remote I/O	32,000 points		8,192 points	2,048/8,192 points
	AI/AO (CH)		768	384	512	1024
	Processing Speed (μs)	Sequence	0.028	0.084	0.034	0.15
		Application	0.075	0.3	0.1	-
		Floating-point	0.25	0.3	0.782	-
	Program Memory (KB)		128/64kstep	32kstep	248/120KB	120KB
	Data Memory	Word	96KW	52KW	D: 12KW W: 8KW	D: 8KW W: 8KW
		Bit (points)	32k points		M: 8k points, B: 8k points	M: 8k points, B: 8k points
		Timer	2048 points		2048 points	256 points
		Counter	2048 points		1024 points	256 points
	Flash Memory/EEPROM		Built-in Flash		Flash Option	EEPROM Option
	Loader Port	USB	○		○	×
		Serial	RS-232C		RS-232C	RS-422
Base	Max No. of Extension Base		7	3	7	7
	Max No. of Slot		96	48	64	64
	Extension Distance		15m		13.2m	6.6m
	Module Hot Swap		○		△ (limited)	△ (limited)

- 1] Overview
- 2] Features
- 3] Network
- 4] Software
- 5] Programming
- 6] Specification
- 7] Comparison**

7] Comparison

📌 XGK Comparison

Item		LSIS		Mitsubishi		
		XGK-CPUH	XGK-CPUS	Q12/06H	A3A/A3U	
Program	Language	Format	Dedicated		Dedicated	
		Type	LD, IL		LD, IL, SFC	
	Structured Programming (Index)	○		○		
	Multi-Program Block	○ (256 Blocks)		○ (128)	×	
	Task Programming	○ Initialization Task, Cycle Task, Internal Task		○ Initialization Cycle Low-speed Operation	×	
Network	Information Level		Fast Ethernet (Open)		Fast Ethernet	Ethernet
	Line Speed		100/10Mbps		100/10Mbps	10Mbps
	Media	Fiber Optic	100BaseF, 10BaseF		×	×
		T.P.	100BaseT, 10BaseT		100BaseT, 10BaseT	×
		Coaxial	10Base5		10Base5, 10Base2	10Base5, 10Base2
	Protocol		TCP/IP, UDP/IP		TCP/IP, UDP/IP	
	No. of Channel		16		16	8
	Service	PC↔PLC	Dedicated Communication		Dedicated Protocol	
		PLC↔PLC	High-speed Link Communication		Fixed Buffer, No Protocol	
		Loader I/F	○ (XG5000 service)		○	△ (limited)
Program Up/Download		○		○	×	
Embedded Mail Server		○		○	×	



7] Comparison

XGI Comparison

Item		LSIS		AB	Siemens	
		XGI-CPUH	XGI-CPUS	Logix 5550	S7-400 (414/413)	
CPU	DI/DO	Base I/O	6,144 points	3,072 points	512 points	16,384/8,192 points
		Remote I/O	131,072 points	32,768 points	128,000 points	16,384/8,192 points
	AI/AO (CH)		768	384	4000	1024/512
	Processing Speed (μs)	Sequence	0.028		0.08	0.1/0.2
		MOVE	0.084		-	-
		Floating	±: 0.392(S), 0.924(D) ×: 0.896(S), 2.240(D) ÷: 0.924(S), 2.254 (D)		-	-
	Program Memory (KB)		512KB (About 64ksteps)	128KB (About 16Ksteps)	660KB/1MB/2MB	128KB/72KB
	Data Memory	Word	Auto Variable: 512KB	Auto Variable: 128KB		8K/4K
		Bit (points)	Direct Variable: 416KB	Direct Variable: 136KB		256
		Timer	Flag: 102KB	Flag: 76KB		256
		Counter				
	Flash Memory/EEPROM		Built-in Flash		EEPROM Option	EEPROM Option
	Loader Port	USB	○		×	×
		Serial	RS-232C		RS-232C	MPI
Base	Max No. of Extension Base		7	3	×	15/9
	Max No. of Slot		96	48		Field Network
	Extension Distance		15m			3m/100m
	Module Hot Swap		○		-	-

7] Comparison

XGI Comparison

Item		LSIS		AB	Siemens
		XGI-CPUH	XGI-CPUS	Logix 5550	S7-400 414/413)
Program	Language	Format	IEC 61131	IEC 61131	IEC 61131
		Type	LD, SFC, ST	LD, SFC ,ST	S7-Graph, Hi Graph, SCL, CFC
	Structured Programming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
	Multi-Program Block	<input type="radio"/> (256 Blocks)	<input type="radio"/>	<input type="radio"/>	
	Task Programming	<input type="radio"/> Initialization Task, Cycle Task, Internal Task	<input type="radio"/> Cycle Time, Event: Input, Message, Logic	<input type="radio"/>	
Information Level		Fast Ethernet (Open)	EtherNet/IP	PROFINET	
Line Speed		100/10Mbps	100/10Mbps	100/10Mbps	
Media	Fiber Optic	100BaseF, 10BaseF	100BaseF, 10BaseF	100BaseF, 10BaseF	
	TP	100BaseT, 10BaseT	100BaseT, 10BaseT	100BaseT, 10BaseT	
	Coaxial	10Base5	-	10Base5	
Protocol		TCP/IP, UDP/IP	TCP/IP, UDP/IP	TCP/IP, UDP/IP	
No. of Channel		16	-	32	
Service	PC↔PLC	Dedicated communication	Dedicated Protocol	ISO on TCP	
	PLC↔PLC	High-speed Link Communication	Peer to Peer Message	ISO on TCP (S7↔S7) ISO (S7↔S5)	
	Loader I/F	<input type="radio"/> (XG5000 service)	<input type="radio"/>	<input type="radio"/> (PG/OP Service)	
Program Up/Download		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Network					