

Touch Operation Panel

Touch Operation Panel



M2l Corporation

Kyonggi Venture Anyang Technical Center, 13th Floor, 572-5,
Anyang 8-Dong, Manan-Gu, Anyang-Shi, Kyonggi-Do, 430-731, Korea
Tel. 82-31-465-3366 Fax. 82-31-465-3355 <http://www.m2l.co.kr>

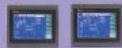


M2l Corporation
(주)엠투아이코퍼레이션

Applications

Semiconductor Production System,
Automobile Production System
Chemical Process Monitoring & Operating System
Building Automation System, Parking System,
Wrapping System, Cutting System, Textile Machine,
Electric Panel, Information Service System
(Advertisement, Publicity, Information Guide)

Line up

	15"	12.1"	10.4"	10"	8.4"	7.5"	5.7"	5.5"	4"
X TOP Series									
A TOP Series									
C TOP Series									

Model Name			XTOP15T	XTOP12T	XTOP10T	XTOP10TS	TOP8TA	TOP6TAS	TOP6TA	TOP6SAS	TOP6SAE	TOP5TAS	TOP5SAD	TOP5MA	TOP5MAE	TOP3TA	TOP3SA	TOP3SAE	TOP3MA	TOP3MAE	CTOP2M-A	CTOP2M-B
Screen Size			15"	12.1"	10.4"	10.4"	12.1"	10.4"	10.4"	10"	10"	8.4"	7.5"	7.5"	7.5"	5.5"	5.7"	5.7"	5.7"	5.7"	4"	4"
Display Type			TFT Color	TFT Color	TFT Color	TFT Color	TFT Color	TFT Color	TFT Color	STN Color	STN Color	TFT Color	STN Color	STN Mono	STN Mono	TFT Color	STN Color	STN Color	STN Mono	STN Mono	STN Mono	STN Mono
Display Color			256 Color	256 Color	256 Color	256 Color	256 Color	256 Color	256 Color	256 Color	256 Color	256 Color	256 Color	Blue(Mono)	Blue(Mono)	256 Color	256 Color	256 Color	Blue(Mono)	Blue(Mono)	Blue(Mono)	Blue(Mono)
Resolution			1024×768	800×600	640×480	800×600	800×600	800×600	640×480	800×600	800×600	800×600	640×480	640×480	640×480	320×240	320×240	320×240	320×240	320×240	320×240	320×240
Main Memory			12MB	8MB	8MB	8MB	6MB	6MB	6MB	6MB	4MB	4MB	2MB	2MB	2MB	2MB	2MB	1MB	1MB	512KB	512KB	512KB
Black up Memory			256KB	256KB	256KB	256KB	256KB	256KB	256KB	256KB	None	256KB	256KB	256KB	None	256KB	256KB	None	256KB	None	None	256KB
Interface	Serial	RS232C	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		RS422C	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Ethernet		○	○	○	○	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None
	USB		○	○	○	○	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None
	CFCard		○	○	○	○	Option	Option	Option	Option	None	Option	Option	Option	None	Option	Option	None	Option	None	None	None
	Printer	Roll Printer		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Printer			*1				Option	Option	Option	Option	None	Option	Option	Option	None	Option	Option	None	Option	None	None	None

*1: Printer with USB port(PCL Level 3 Language)

*2: Printer with Parallel port(PCL Level 3 Language), Option/None - A TOP Series

Next Generation Touch Panel **XTOP Series**

Powerful Network and Interface

1. Ethernet Interface(10 BASE-T/100 BASE-T)
2. Large Capacity CF Card Interface
3. Various USB Storage Interface

Various Products Lineup

1. Full Line up for 15 inch display screen
2. Display status of operation by exterior LED

Easy interface for Data Management

TOP Infominer

- Data query/print and supply reporting tool
- Support user defined report function(MSWord, Excel)
- Export(Excel, XML, TEXT) function for linking another systems(ERP, Groupware)

TOP Anywhere

- Monitoring TOP information, Graph of alarm occurrence, status of communication
- Data Transfer by 1:1 TCP Transfer, 1:N Broadcast Transfer
- Support USB/CF Builder



X TOP Application

Improve your data management system By using CF Card

► Save logging data and transfer recipe data

Logging : Saving logging data to CF Card with CSV format, easy to edit this data with Excel Program in PC

Recipe data transfer : Edit recipe data in PC, transfer it to PLC and Save it to CF Card.



USB Interface

► Move data from TOP to TOP

Move Project file, OS, Font, Logging/Recipe data To another TOP by using USB memory stick. Support easy Interface because USB Port is in the front case



► Download/Upload

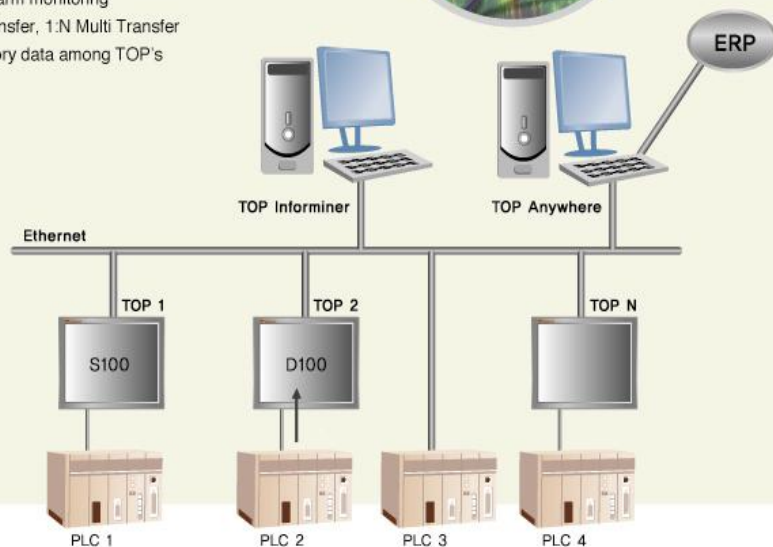
Download Project file, OS, Font, Logging/Recipe data from TOP



X TOP Application

Ethernet

- Remote control and monitoring of controller
- Real-time alarm monitoring
- 1:1 TCP Transfer, 1:N Multi Transfer
- Share memory data among TOP's



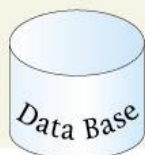
TOP Anywhere

- TOP Information (Version of O.S., Version of Project File...)
- Monitoring (The status of data exchange from TOP to PLC, Realtime alarm, Logging graph, used memory amount)
- Transfer (Data Transfer by 1:1 TCP Transfer, 1:N Multi Transfer)
- Build DB (Collect logging and alarm data and build DB)

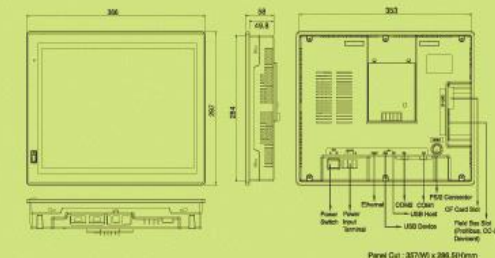


TOP Informer

- Data query/print and supply reporting tool
- Support user defined report function (MSWord, Excel)
- Export (Excel, XML, Text) function for linking another systems (ERP, Groupware)

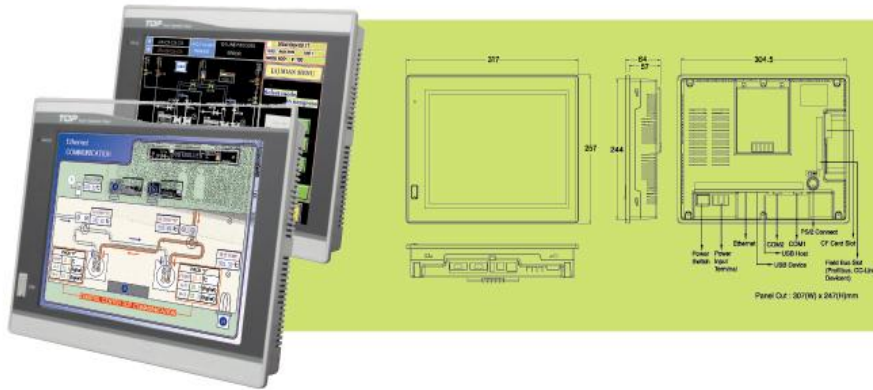


X TOP Specification



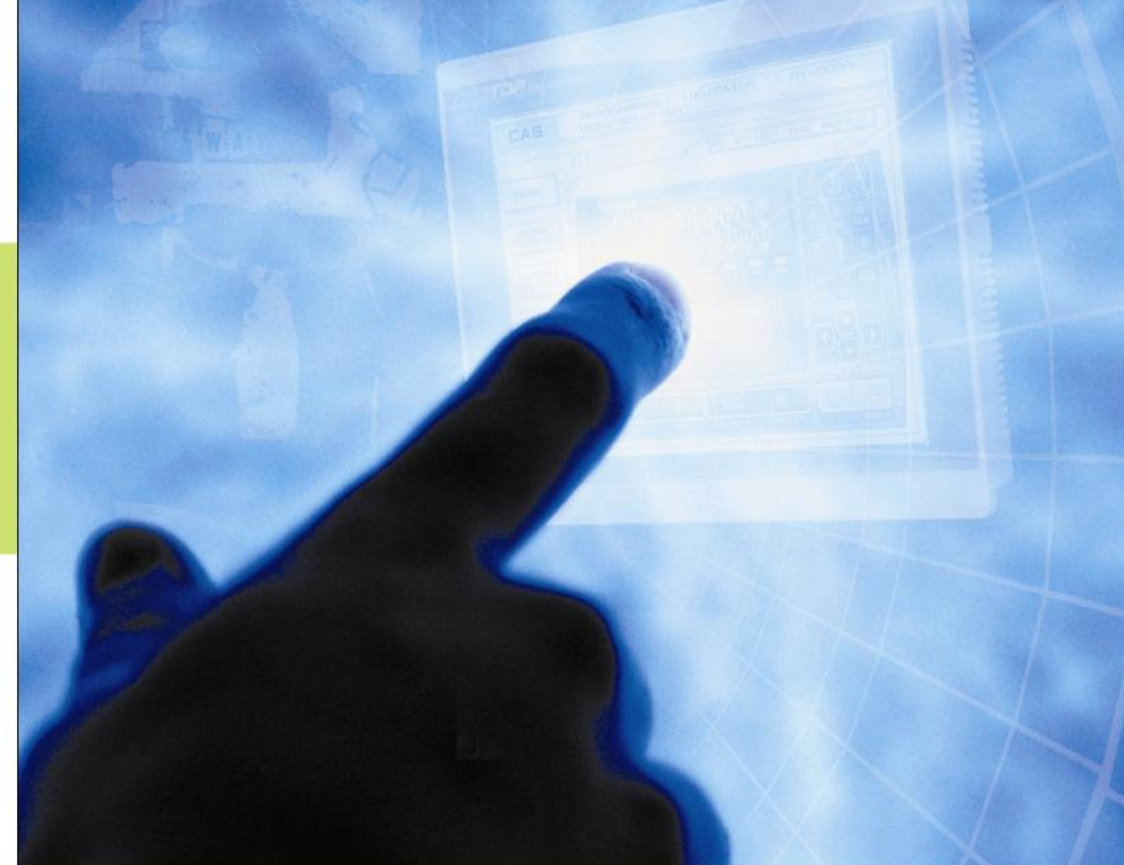
XTOP15T	
Display Type	TFT Color
Screen Size	15"
Resolution	1024 x 768
Display Color	256 Color
Brightness	250cd/m ²
Memory	Screen
	Buffer
	Logging
Touch Type	Analog
Touch Cell	1024 x 768
Language	Korean, Chinese, Japanese, English
	Image Text (Windows Font)
Communication	RS232 C / 422 / 485
	Ethernet
	Devicenet, Profibus
Outer Size	365(W) x 296.5(H) x 58(D)mm
Panel Cut	357(W) x 288.5(H)mm
Input Voltage	AC85~264V
Power Consumption	20W Under
Noise Endurance	1200Vp-p
Operation Temperature	0~50℃
Storage Temperature	-10~60℃
Ambient Humidity	85%RH Under
Insulation Resistance	10 MΩ
Vibration Endurance	10 ≤ F ≤ 25Hz
Impact Endurance	10G
Water Proof	IP 65F
Grounding	Class3 Ground Resistance under 100ohm
Certificate	UL, CE, FCC

X TOP Specification



		XTOP10T	XTOP10TS	XTOP12T
Display Type		TFT Color		
Screen Size		10.4"		12.1"
Resolution		640 x 480	800 x 600	
Display Color		256 Color		
Brightness		400cd/m ²	230cd/m ²	300cd/m ²
Memory	Screen	8MB		
	Buffer	4096 Word		
	Logging	256KB(CF Compatible)		
Touch Type		Analog		
Touch Cell		640 x 480	800 x 600	
Language		Korean, Chinese, Japanese, English		
		Image Text(Windows Font)		
Communication		RS232C/422/485		
		Ethernet		
		Devicenet, Profibus		
Outer Size		317(W) x 257(H) x 58(D)mm		
Panel Cut		307(W) x 247(H)mm		
Input Voltage		AC 85~264V		
Power Consumption		20W Under		
Noise Endurance		1200Vp-p		
Operation Temperature		0~50℃		
Storage Temperature		-10~60℃		
Ambient Humidity		85%RH Under		
Insulation Resistance		10M Ω		
Vibration Endurance		10 $\leq$ F $\leq$ 25Hz		
Impact Endurance		10G		
Water Proof		IP 65F		
Grounding		Glass3 Ground Resistance under 100ohm		
Certificate		UL, CE, FCC		

www.m2i.co.kr



Advanced Touch Panel – TOP A Series

TOP 대한민국 대표 터치패널
Touch Operation Panel

Powerful Communication

1. Many PLC drivers and protocols for controller
2. Various communication mode such as N:1, 2Port Communication

Various product line up and easy S/W to use

1. Full line up from 5.5" to 12.1"
2. Support easy S/W Tool by tag command
3. Multi Language

Data back up and Monitoring of data history

1. Easy to use Logging and Recipe data manage
2. Save logging upload data to excel file for run mode(COM1)

A TOP Application

Improve your data management system By using CF Card

► Save logging data and transfer recipe data

Logging : Saving logging data to CF Card with CSV format, easy to edit this data with Excel Program in PC

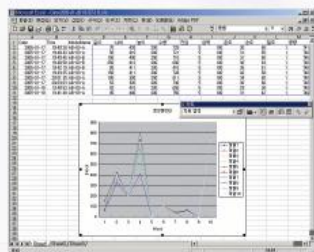
Recipe data transfer : Edit recipe data in PC, transfer it to PLC and Save it to CF Card.



Data Manager

► Save logging data to Excel file for run Mode Made by Data Manager program

View history graph of logging data in Excel



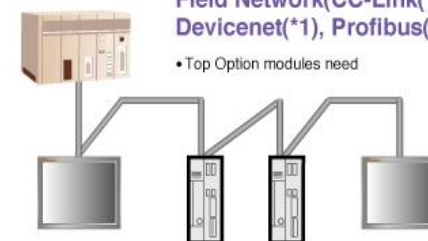
Network Connection

Serial Communication

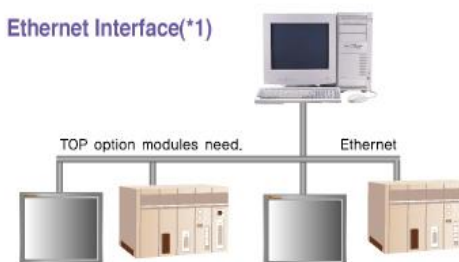


Field Network(CC-Link(*1), Devicenet(*1), Profibus(*1))

• Top Option modules need

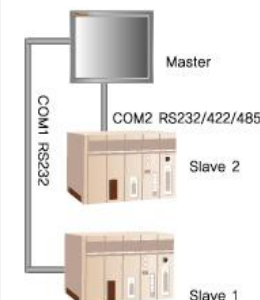


Ethernet Interface(*1)



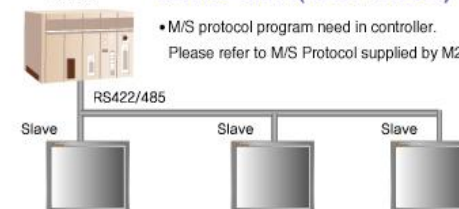
2 Way Communication

• Communication with 2 different kind of PLC/CONTROLLER simultaneously
Connected TOP 2Port (COM1,COM2)



Master-Slave(M/S Protocol)

• M/S protocol program need in controller.
Please refer to M/S Protocol supplied by M21



Please refer to M/S Protocol supplied by M21

Multi Drop

• Communication Tag
• Block communication • Low Speed

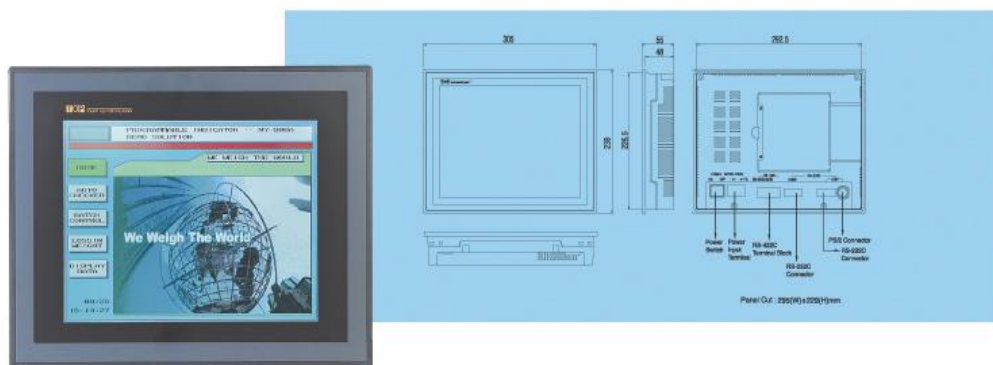


N:1 Serial Communication

• N:1 Serial Communication to be connected with
RS-485 using Token between N TOP machines

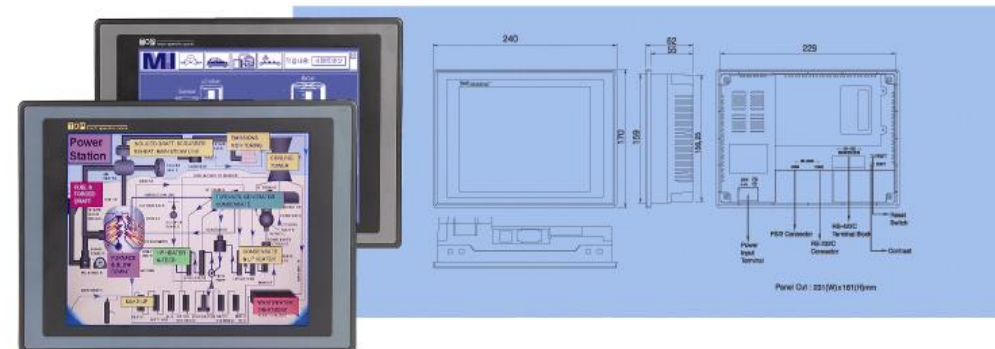
*1: Under development

A TOP Specification 1



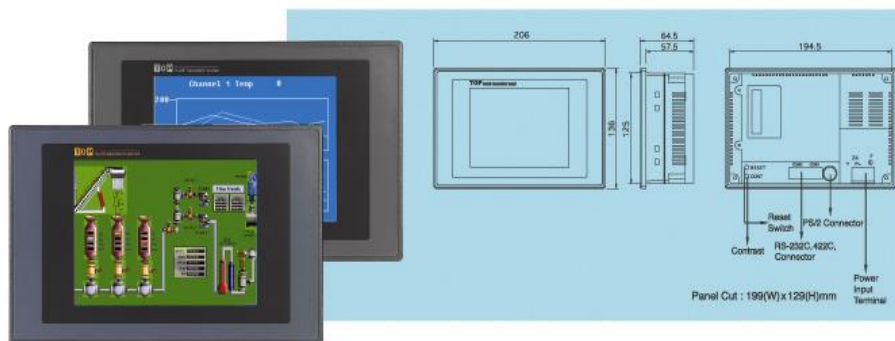
		TOP6SAE	TOP6SAS	TOP6TA	TOP6TAS	TOP8TA
Display Type		STN Color			TFT Color	
Screen Size		10"			10.4"	12.1"
Resolution		800x600			640x480	800x600
Display Color		256 Color				
Brightness		100 cd/m ²			230 cd/m ²	125 cd/m ²
Memory	Screen	4MB	6MB			
	Buffer	4096 Word				
	Logging	None	256kB			
Touch Type		Analog				
Touch Cell		800x600			640x480	800x600
Language		Korean, Chinese, Japanese, English Image Text(Windows Font)				
Communication		RS232C/422/485				
Outer Size		305(W) x 239(H) x 55(D)mm				
Panel Cut		295(W) x 229(H)mm				
Input Voltage		AC 85~264V/DC 24V(20~28V)				
Power Consumption		20W Under/12W Under				
Noise Endurance		1200Vp-p/900Vp-p				
Operation Temperature		0~50℃				
Storage Temperature		-10~60℃				
Ambient Humidity		85%RH Under				
Insulation Resistance		10 MΩ				
Vibration Endurance		10 ≤ F ≤ 25Hz				
Impact Endurance		10G				
Water Proof		IP 65F				
Grounding		Class3 Ground Resistance under 100ohm				
Certificate		UL, CE, FCC				

A TOP Specification 2



		TOP5MAE	TOP5MA	TOP5SAD	TOP5TAS
Display Type		STN Mono		STN Color	TFT Color
Screen Size		7.5"			8.4"
Resolution		640 x 480			800 x 600
Display Color		Blue(Mono)		256 Color	
Brightness		120 cd/m ²		100 cd/m ²	150 cd/m ²
Memory	Screen	1MB	2MB		4MB
	Buffer	4096 Word			
	Logging	None	256KB		
Touch Type		Analog			
Touch Cell		640 x 480			800 x 600
Language		Korean, Chinese, Japanese, English Image Text(Windows Font)			
Communication		RS232C/422/485			
Outer Size		240(W) x 170(H) x 52(D)mm			
Panel Cut		231(W) x 161(H)mm			
Input Voltage		DC 24V(20~28V)			
Power Consumption		12W Under			
Noise Endurance		900Vp-p			
Operation Temperature		0~50℃			
Storage Temperature		-10~60℃			
Ambient Humidity		85%RH Under			
Insulation Resistance		10 MΩ			
Vibration Endurance		10 ≤ F ≤ 25Hz			
Impact Endurance		10G			
Water Proof		IP 65F			
Grounding		Class3 Ground Resistance under 100ohm			
Certificate		UL, CE, FCC			

A TOP Specification 3



		TOP3MAE	TOP3MA-B	TOP3SAE	TOP3SA	TOP3TA
Display Type		STN Mono			STN Color	
Screen Size		5.7"				5.5"
Resolution		320 x240				
Display Color		Blue(Mono)		256 Color		
Brightness		220 cd/m ²		200 cd/m ²		250 cd/m ²
Memory	Screen	512K	1MB	1MB	2MB	2MB
	Buffer	4096 Word				
	Logging	None	256KB	None	256KB	
Touch Type		Analog				
Touch Cell		320 x240				
Language		Korean, Chinese, Japanese, English				
		Image Text(Windows Font)				
Communication		RS232C/422/485				
Outer Size		206(W) x 136(H) x 64(D)mm				
Panel Cut		199(W) x 129(H)mm				
Input Voltage		DC 24V(20~28V)				
Power Consumption		12W Under				
Noise Endurance		900Vp-p				
Operation Temperature		0~50℃				
Storage Temperature		-10~60℃				
Ambient Humidity		85%RH Under				
Insulation Resistance		10 MΩ				
Vibration Endurance		10 ≤ F ≤ 25Hz				
Impact Endurance		10G				
Water Proof		IP 65F				
Grounding		Class3 Ground Resistance under 100ohm				
Certificate		UL, CE, FCC				

www.m2i.co.kr



Compact Touch Panel CTOP Series

Small and More Convenient

- Supply program with easy user interface
- 6 Function Keys for User define program
- 320X240 Resolution Graphic LCD
- 512K Flash Memory
- Data back up and Monitoring of data history(Optional)
- Multi Language Support

Powerful Networking

- RS232C, RS422/485
- Support various PLC drivers and other protocols
- Rapid development of protocols when it is required
- Support various communication mode such as N:1, 2Port Communication

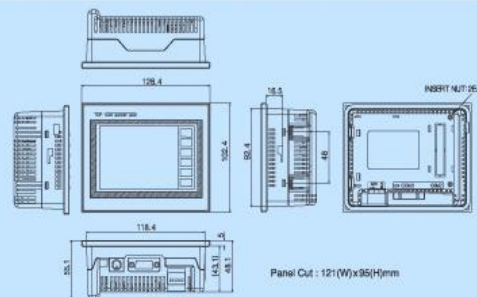
Reasonable Price

- Save engineering time and support easy maintenance from downsizing wiring works.
- Cost saving for control board by reasonable price and various Function

Interface



C TOP Specification



		CTOP2M-A	CTOP2M-B
Display Type		STN MONO	
Screen Size		4'	
Resolution		320 x 240	
Display Color		Blue(Mono)	
Brightness		120 cd/m ²	
Memory	Screen	512 KB	512 KB
	Buffer	4096 Word	
	Logging	None	256KB
Touch Type		Analog	
Touch Cell		320 x 240	
Language		Korean, Chinese, Japanese, English	
		Image Text(Windows Font)	
Communication		RS232C/422/485	
Outer Size		128(W) x 102(H) x 55(D)mm	
Panel Cut		121(W) x 95(H)mm	
Input Voltage		DC 24V(20~28V)	
Power Consumption		8W Under	
Noise Endurance		900V _{p-p}	
Operation Temperature		0~50℃	
Storage Temperature		-10~60℃	
Ambient Humidity		85%RH Under	
Insulation Resistance		10 MΩ	
Vibration Endurance		10 ≤ F ≤ 25Hz	
Impact Endurance		10G	
Water Proof		IP 65F	
Grounding		Class3 Ground Resistance under 100ohm	
Certificate		UL, CE, FCC	

www.m2i.co.kr

TOP Designer



Easy, Powerful Screen Editor S/W TOP Designer!

Supply easy Interface to make project file and advanced functions

Powerful Data Management tool

Integrated S/W to be applied to all TOP Series

Advanced Spec

- Support upto real 256 colors including bitmap
- Logging function for data back up and analysis (upto 8 kind)
- Recipe function for transferring a block parameters according to kinds of production
- External tags for monitoring data in Logging or recipe (recorder possible)
- Bitmap(upto 256 color) switch or lamp is available (supporting resize)
- Communication diagnosis for all PLC
- Support cross-reference function
- Auto changing address to use/find an address (In PLC or System Buffer)
- Tag list, logging/recipe/alarm data can be exported to excel format
- Communication with 2 different kind of PLC simultaneously (COM1 with PLC2, COM2 with PLC1 : Select PLC1 or PLC2 in each tag)
- Upto 4 window popup possible at the same time
- Function to transfer a screen/ image/message/alarm/symbol individually
- Support auto tenkey (No need user program)
- Off-Line Simulation
- Support Script
- USB Printing
- File downloading to TOP using Ethernet
- Ethernet networking between TOP'S

Feature

- Full 256 Color Possible
- Easy one project-based development environment
- Project/Information window/ Thumbnail view support
- Windows 98/Me/NT/2000/ XP Compatible
- High speed transfer data up to 115,200 bps
- Auto-save function
- Screen capture function
- Simulation function
- Support communication with 2 PLC respectively

Connectable PLC

Maker	Series	CPU Type	CPU Port	Link (I/F Module)	Multi-Drop (1:N)
Compile	Tiny	TCP32	●		
		TCP37	●		
Delta	DVP	DVP-ES	●		
FATEK	Facon FB	20MC	●		
Fuji	Micrex-F	F80/120H/250/120/140/150S		●	
GE-Fanuc	Fanuc 90-30	311/331		●	
	Fanuc 90-70	731/732/771/772/781/782	●		
Hitachi	HIDIC-H	EH-150	●	●	●
		Micro EH	●		●
Honeywell	Honeywell	HC900	●		●
KDT	CIMON	CM1-CP1/2/3/4A	●	●	
KEYENCE	KV	KV-700/1000	●		
KOYO	DL-205/305/405	D2 240/330/430	●		
LG	GLOFA-GM	GM1/2/3/4/6/CCPU	●	●	
		10S1/10S/100S	●	●	
		30/60/80/200/300/1000S	●	●	
		60/200H	●		
		5001000		●	
	XGT			●	
				●	
				●	
				●	
				●	
Matsushita	MEWNET	FPx	●	●	
Mitsubishi	Melsec-A	A1N/ A2N/A3N/A2N-S1	●	●	
		A1S/ A2S/A1SH/A1SJ/A1SJH	●	●	
		A2A/A3A/A2A-S1	●	●	
		A2U/A3U/A4U/A2US/A2U-S1/A2US-S1	●	●	
		AOJ2/AOJ2H	●	●	
	Melsec-QnA	Q2/3/4A	●	●	
		Q2A-S1	●	●	
		Q2AS	●	●	
		Q2ASH	●	●	
		Q2AS-S1	●	●	
	Melsec-FX	FX0/1/2/FX1S/1N/2N	●	●	
		Q2/Q2H/Q6H/12H/25H/Q0/Q1	●	●	
Modicon (Schneider)	Modbus	884		●	●
		984A		●	●
		984B		●	●
		984X		●	●
		Slot-mount 984		●	●
	TWIDO	LCAA 10DRF	●	●	●
		LCAA 16DRF	●	●	●
		LCAA 24DRF	●	●	●
		LMDA 20DTK	●	●	●
		LMDA 20DUK	●	●	●
		LMDA 20DRT	●	●	●
		LMDA 40DTK	●	●	●
		LMDA 40DUK	●	●	●
	SYSMAC C	C200H	●		
		C200HS	●		

Rockwell(AB)	SYSMAC CS	C500	●		
		C500F	●		
		C1000H	●		
		C2000H	●		
		C2000	●		
	SYSMAC CJ	C50	●		
		C120	●		
		C120F	●		
		CQM1	●	●	
		CPM1	●	●	
POSCON	POSFA A	POSFA-A	●	●	
		CS1G	●	●	
		CS1H	●	●	
		CJ1G	●	●	
		CJ1M	●	●	
	PLC5	PLC5/11/20/30/40/40L/60/60L	●		
		SLC500	●		
		Control Logix	●		
		SAIA	●		
		Fara	●	●	
Siemens	SPC	PCD2	●	●	
		7000/N70,700	●	●	
		N70/700alpha/NX70/700	●	●	
		N70/700 plus	●	●	
		SPC-10/100/300/24S/120S	●	●	
	SIMATIC S5	90/95/100/115/135/155U		●	
		212/214/215/216/221/222/224/226	●		
		312IFM	●	●	
		(PC adapter)	●	●	
		(HMI adapter)	●		
Toshiba	Prosec-T	T3		●	
		T3H		●	
		T2E	●	●	
		T2N		●	
			●		
Yaskawa	PROGIC-8	PROGIC-8	●		●
		MP920	●		●
		MP930	●		●
	Control Pack	CP-9200SH		●	●
			●		

Inverter/ Motion Controller

Maker	Series	CPU Type	CPU Port	Link (I/F Module)	Multi-Drop (1:N)	Type
ABB	ACS	ACS140/400/500	●	●		Inverter
Delta-Tau	PMAC	Mini-PMAC	●			Motion
Gidding & Lewis	MMC	MMC	●			Motion
LG	SV-IG5	SV-IG5	●	●		Inverter
Mistubishi	FX2N	FX2N-10/20GM	●			Motion
Rexroth Indramat	VisualMotion	VM7, VM8	●	●		Motion