

OVERVIEW

HUMAN MACHINE INTERFACES



29/08/2012

Communication between humans and machines



Whether in industry, shipping and transportation or in modern office systems, today's technology increasingly requires communication between people and machines. The machine's role therein is to display data, results, messages, etc. and to receive instructions and execute tasks assigned by people.

To meet the great demands of technology, new products have been developed over the last several years: operation terminals – also known as HMIs. HMIs allow humans and machines to interact with each other.

Many functions that previously required lamps, LEDs and switches to be connected, for example, can now be fulfilled with just one device. Other functions that simply made life easier for the user came into being. For example, HMIs can save and display text and graphics, report errors as well as display data and machine status online. By entering instructions on the touch panel, the user can transfer data or issue instructions to the machine or the controller of the machine via a communication interface.

Panasonic HMIs

The new HMIs from Panasonic can be used anywhere, from industrial applications to building automation. From the compact 3" to the large touch terminal with a 15" color display for upscale applications, Panasonic HMIs cover a broad spectrum.



Quality that you see

Powerful touch panels with brilliant displays and parameters such as brightness and contrast, which can be individually specified, guarantee superior legibility. Moreover, all LCDs provide a wide field of view. The housing and extremely durable front panel are indicative of the robust design.

All Panasonic HMIs fulfill the required international standards and regulations. As with all Panasonic products, our HMIs are subjected to extreme tests that far exceed normal operating conditions. Components and material, which are selected meticulously, guarantee long life.

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See *the vividness.*

GT02G/M



GT05M



GT05G



GT05S



GT12



GT21C



GT32M/T



GT32-E



Product lineup

		GT02G	GT02M	GT05G	GT05M	GT05S
Display	Rated voltage	5VDC/ 24VDC			24V DC	
	Screen size (W x H)	3.8" (88,5 x 35,4mm)			3.5" (71 x 53,3mm)	
	Display device	STN monochrome LCD			STN monochrome LCD	
	Display color	2 colors (black/white)			2 colors (black/white)	
	Resolution (W x H)	240 x 96 dots			320 x 240 dots	
	Backlight	3-color LED backlight (green/orange/red)	3-color LED backlight (white/red/pink)	3-color LED backlight (green/orange/red)	3-color LED backlight (white/red/pink)	White LED
	Number of characters	216			768	
	Memory capacity (F-ROM)	2,048kB			2,048kB	
External interface	Serial port	RS232C / RS422 (RS485)			RS232C / RS422 (RS485)	
	USB port	✓			✓	
	Ethernet	-			-	
	SD memory card	GT02M2*D and GT02G2*D only			✓	
	Sound output jack	-			-	

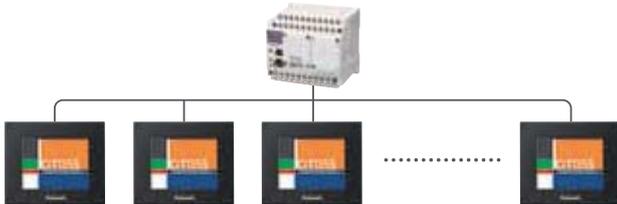
		GT12G	GT12M	GT21C
Display	Rated voltage	24V DC		24V DC
	Screen size (W x H)	4.6" (108.8 x 40.8mm)		4.7" (98.0 x 74.0mm)
	Display device	STN monochrome LCD		STN color LCD
	Display color	2 colors (black/white)		256 colors
	Resolution (W x H)	320 x 120 dots		320 x 240 dots
	Backlight	3-color LED (green/orange/red)	3-color LED backlight (white/red/pink)	White LED backlight
	Number of characters	384		768
Memory capacity (F-ROM)	2,048kB		6.5MB	
External interface	Serial port	RS232C / RS422 (RS485)		RS232C / RS422 (RS485)
	USB port	✓		-
	Ethernet	-		-
	SD memory card	✓		-
	Sound output jack	-		-

		GT32M-E	GT32T-E	GT32M	GT32T0/T1
Display	Rated voltage	24V DC			
	Screen size (W x H)	5.7" (115.2 x 86.4mm)		5.7" (113.2 x 86.4mm)	5.5" (110.8 x 83.6mm)
	Display device	TFT monochrome LCD	TFT color LCD	STN monochrome LCD	TFT color LCD
	Display color	2 colors (black/white)/ 16 shades of gray	4096 colors	2 colors (blue/white)	4096 colors
	Resolution (W x H)	320 x 240 dots			
	Backlight	White LED		CFL	
	Number of characters	768			
	Memory capacity (F-ROM)	12,288kB		2,048kB	12,288kB
External interface	Serial port	RS232C / RS422 (RS485)			
	USB port	✓			
	Ethernet	-		GT32T1 only	
	SD memory card	-		✓	
	Sound output jack	-		GT32T1 only	

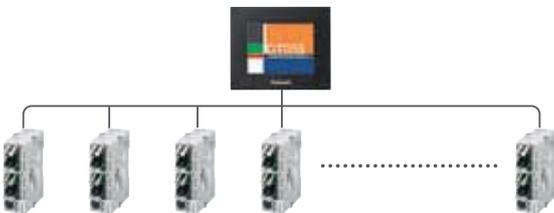
Features

1:N and N:1 communication

Up to 32 GT displays can be connected to one PLC unit.



Up to 31 PLC units can be connected to one GT unit.



Slot for SDHC memory card of up to 32GB (Class 10)

Can be used for:

- Up-/download PLC programs
- Up-/download GT applications
- Recipe memory
- Data logging
- Alarm history



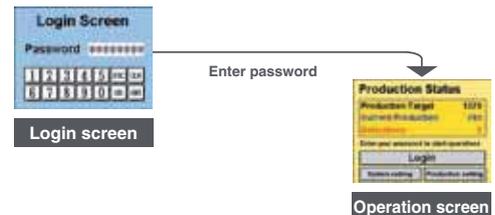
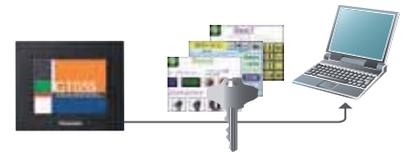
Alarm list

Alarm activation, check, and recovery can be recorded and displayed.



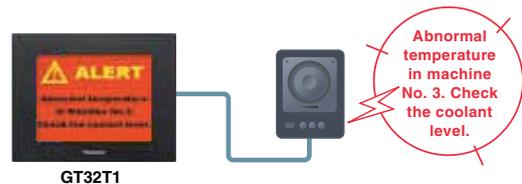
Security features

- Password protection
- Operation security

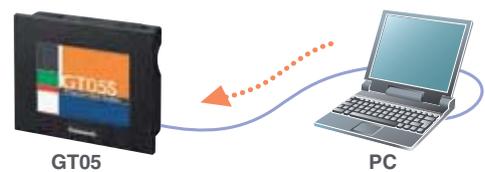


Up to 64 operators can set individual passwords, and up to 16 authorization levels can be set.

Error warning voice messages (GT32T1)



USB interface equipment (not GT21)

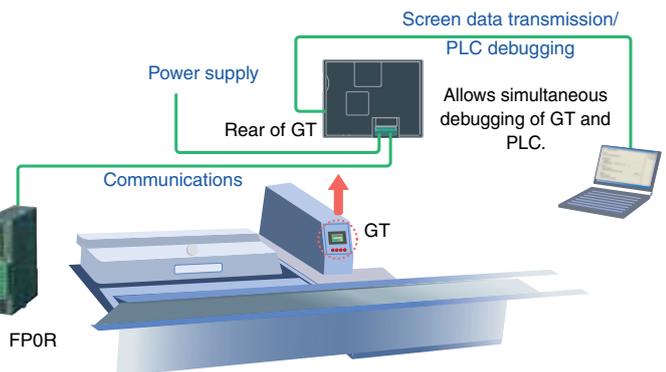


Easy to use software GTWIN

Please see page 22 for more information.

Simple connection and maintenance

The through function improves handling in combination with our FP series PLC. Simultaneous operation of GT data transfer and PLC debugging is available by connecting your GT to a personal computer and to our FP series PLC.



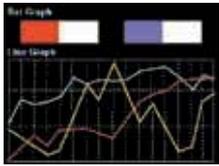
Switch languages

Conventionally, screens were created for each language. With the multi language function, data can be registered in up to 16 languages for each part. The text can be edited in GTWIN or Microsoft Excel.

	Japanese	English	Simplified Chinese	Traditional Chinese	Korean
000 SW0	日本語	English	简体中文	繁体中文	한국어
000 SW0	ありがとうございました	Thank you	热烈欢迎	热烈欢迎	안녕하
000 SW1	1	1	1	1	1
000 SW1	2	2	2	2	2

Wide variety of functions

“Graph function”



You can identify the production or operation status in line or bar graph form.

“Flow display function”



A flowing message of up to 64 characters (two-byte) can be displayed at the bottom of the screen (128 messages).

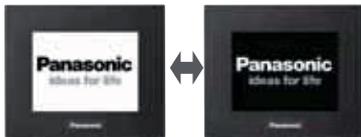
“Recipe function”



Settings by product item and other data (up to 3,600 words) can be transferred to the PLC, simplifying PLC configuration.

Reverse display of black and white

Black and white display on the screen can be reversed. This function is ideal for highlighting the screen display.



Extended line-graph function

Instantaneous display of graphs is possible for devices such as PLCs and Eco-POWER METERS and it is also possible to display graphs for the logged data saved to an SD memory card.



Enhanced switch functions

- Custom switches: Design your own switches
- Multi-function switches: Save space on your screen
- Turning on/off switch display function: Display switches only when necessary



The backlight can be controlled via PLC

The backlight color provides the operator with a clear visual cue of the system status.



PLC data logging function

Values of PLCs, Eco-POWER METERS, etc. can be read and saved in CSV format on an SD memory card. This function serves as a simple logger to, for example, monitor power consumption data of Eco-POWER METERS or collect production quantity and operation status data from PLCs so that the data can be used for preparing monthly reports or problem analysis reports.



The trigger can be selected from among time, frequency (1sec to 24hrs), and conditions (external trigger). Data can be saved for up to 6,000 entries per type and up to 16 types.*

* Depends on the storage capacity of the SD memory card.

Ultra compact programmable display

GT02



The compact and innovative 3.8" STN display creates clear and vivid images



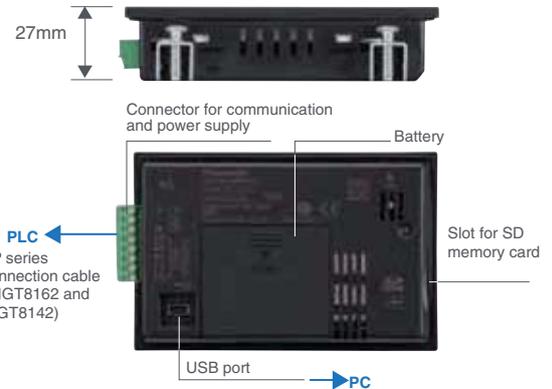
Ash gray



Black

3.8" high-contrast monochrome LCD, 3-color LED backlight

The high-definition LCD (240 x 96 dots) increases information capacity. The 3-color LED backlight is maintenance-free and controllable and comes in two variations: green/orange/red and white/pink/red.



The first programmable display of its class which has an SD memory card slot

The SD/SDHC memory card slot of AIGN02MQ2*D and AIGN02GQ2*D allows for easy screen data transfer, data logging and storage.

Flexible sizing and layout available for switches and characters

Switches with a minimum size of 8 x 8 dots can be moved in increments of 1 dot. A wide range of character fonts and sizes (10 to 96 dots) are supported.

IP67-rated body

Highly impervious to dampness, water, vapors, etc. In addition, a new bracket for more secure fastening has been designed.

Horizontal und vertical mounting

This increases the scope of applications significantly.



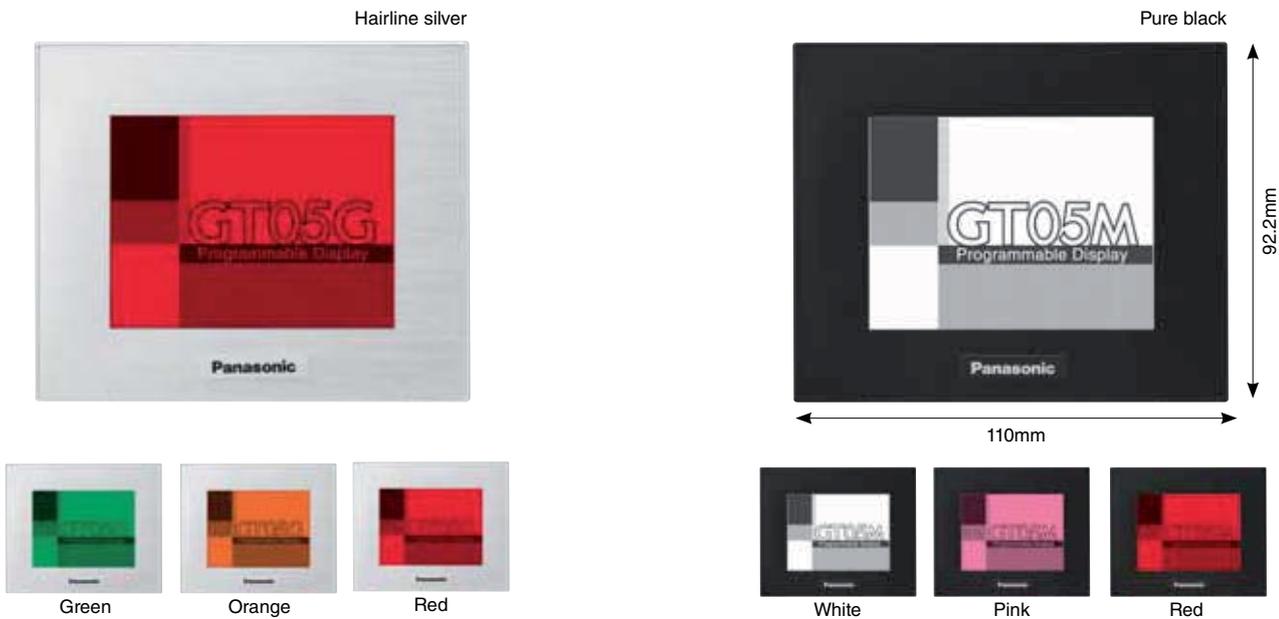
Application example: Water purifier

Compact monochrome display

GT05M/GT05G



3.5" high-contrast black QVGA LCD



GT05G displays screens in green, orange and red, GT05M in white, red and pink, ensuring both operability, visibility and brightness.

The monochrome type GT05 programmable displays come in 12 variations. Whether with a RS232C or RS422 (RS485) interface, color or monochrome display, black or silver housing, the choice is up to you!

The GT05 terminals help you to cut your costs and enhance the performance and design of your machines. Due to their 3-color backlight, machine operation sequences can be made clearly visible on the display ensuring that the users can easily understand the situation and respond quickly.

Characters of a 240-dot maximum size can be displayed

Capable of displaying several fine ten-dot characters or one 240-dot character.

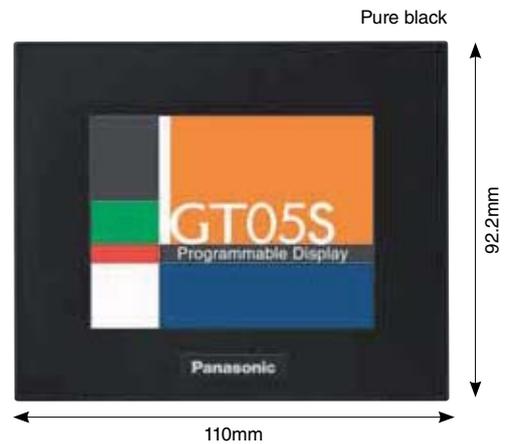
Transformer-isolated power supply

The isolated power supply enhances reliability.

GT05S



3.5" 4096-color QVGA LCD



The LCD is an STN type, and a wide viewing angle (50° horizontally, 60° vertically) has been achieved, improving visibility from different angles.

The GT05 series offers a host of innovative functions and is also pleasing to the eye. The 4096-color graphical display allows you to create effective and user friendly screens.

The industry's smallest 3.5" TFT color display

Large display with space-saving outer dimensions of 110 x 92.2 x 33.8mm.

Interfaces

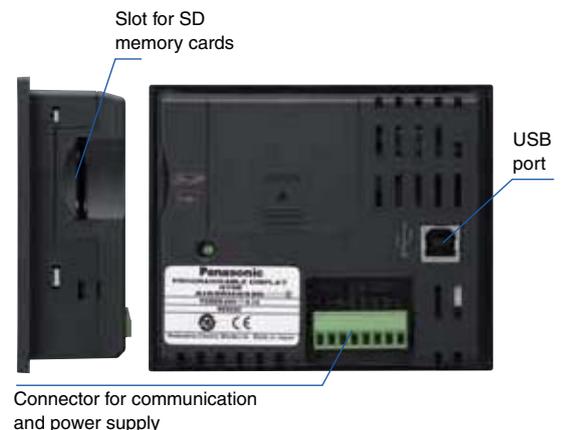
The GT05 series provides an RS232C or an RS422 (RS485) interface, which allows the GT05 touch terminal to be connected to PLCs of several manufacturers or other intelligent devices.

SD/SDHC memory card slot (up to 32GB max.)

Easy to copy, back up and restore GT projects, PLC programs, alarm lists, recipes, and data logs.

USB interface

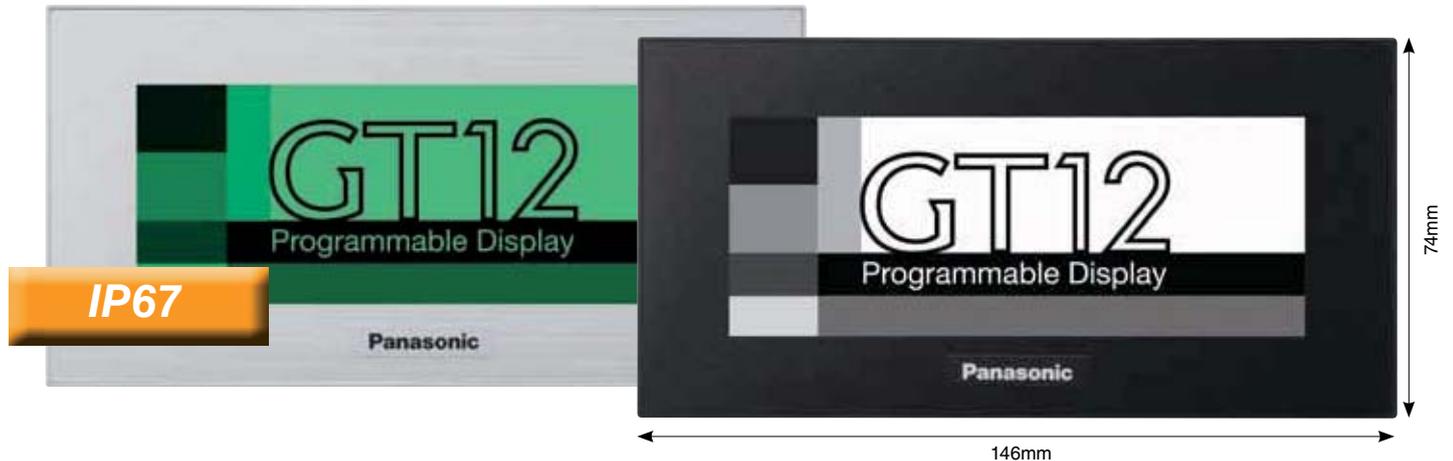
USB interface as standard. Supports the through function using a USB cable, allowing simultaneous debugging of PLC and GT.



GT12



IP67-rated body, top class brightness

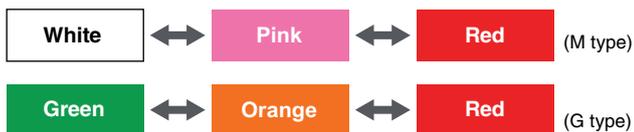


Slim body equipped with a half-QVGA LCD - the highest visual quality in its class

The high-definition (320 x 120 dots) LCD produces crisp images, without annoying dots or lines.

The bright, 3-color LED backlight indicates the equipment status

The color combination is white/red/pink or green/orange/red. The backlight enhances both operability and visibility.



SD/SDHC memory card slot (up to 32GB max.)

Easy to copy, back up and restore GT projects, PLC programs, alarm lists, recipes, and data logs.

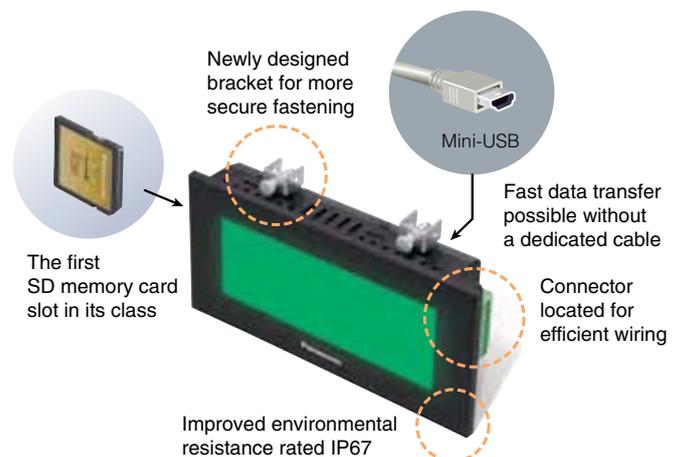
Mini-USB interface as standard equipment

Supports the through function using a USB cable, allowing simultaneous debugging and programming of PLC and GT.

Flexible sizing and layout available for switches and characters

Switches of a minimum of 8 x 8 dots can be moved in increments of one dot.

A wide range of character fonts and sizes are supported. (10 to 120 dots).



Programmable display with real-time clock

GT21C



The 4.7" STN 256-color touch panel displays vivid images



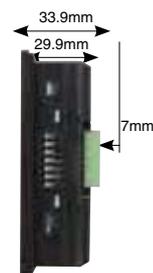
Vivid, top quality images in a small-sized panel

The new 3D-design buttons provide higher visibility and operability.



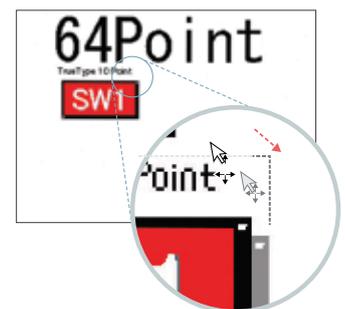
Sleek and sophisticated body design

The sleek design elegantly fits into a variety of installation locations without spoiling the design of the target equipment. The projection from the target equipment surface is as low as 4mm, allowing for a beautiful finish. At only 29.9mm, the body's depth is the industry's thinnest (excluding the projection).



High operability achieved by the customizable screen layout

The analog-touch design allows you to adjust the screen layout in increments of one dot. TrueType font character sizes and arrangement.



Maintenance-free white LED backlight

The white LED backlight eliminates backlight replacement work.

Environmentally friendly low power consumption design

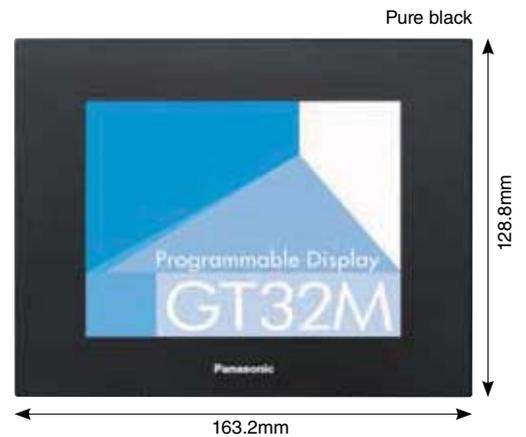
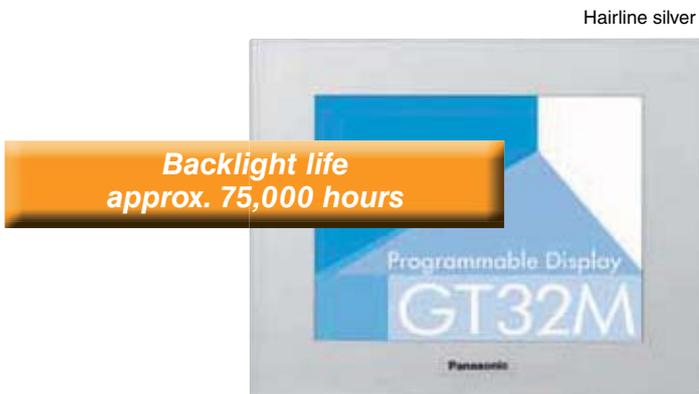
Lower power consumption of 4.8W or less.

Long-life programmable display

GT32M



Clear and beautiful display achieved by the high-definition, long-life CFL backlight



The industry's smallest size in the 5.7" class, only 39.1mm deep
Large display with space-saving outer dimensions of 163.2 x 128.8 x 39.1mm.

SD/SDHC memory card slot (up to 32GB max.)

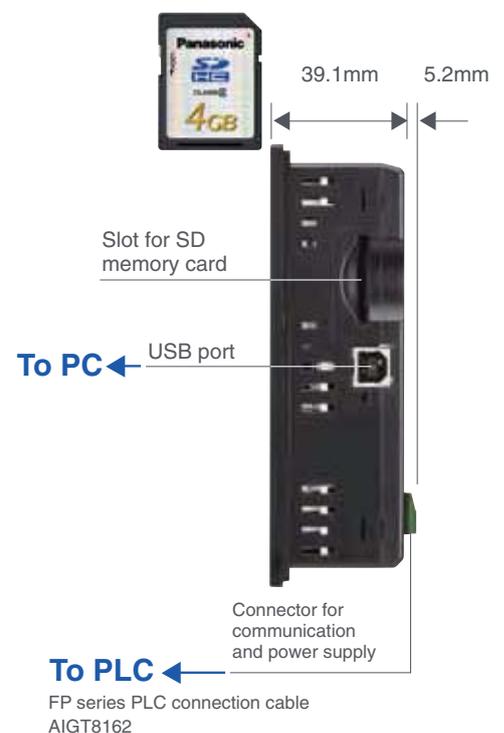
Easy to copy, back up and restore GT projects, PLC programs, alarm lists, recipes, and data logs.

USB interface as standard

You can connect your PC and GT32 using your USB cable to transfer screen data.

Transformer-isolated power supply

The isolated power supply enhances reliability.

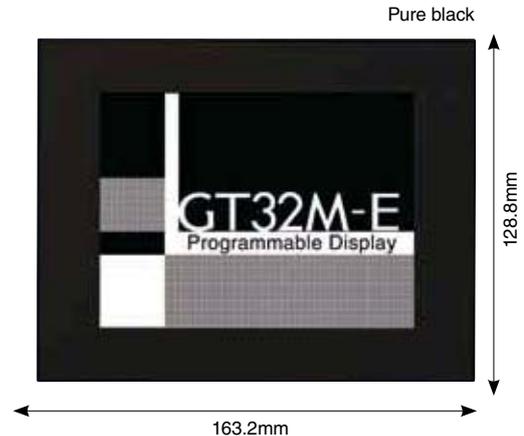


Outdoor programmable display

GT32-E



Programmable display with excellent legibility for a wide variety of outdoor applications



Excellent legibility

Improved brightness, high contrast, and a non-reflecting display ensure excellent legibility in sunlight, rain or fog.

Extensive application range

The ambient temperature ranges from -20°C to + 60°C and the ambient humidity from 10 to 90% RH.

SD/SDHC memory card slot (up to 32GB max.)

Easy to copy, back up and restore GT projects, PLC programs, alarm lists, recipes, and data logs.



Highly impervious to dampness, water, vapors, etc.

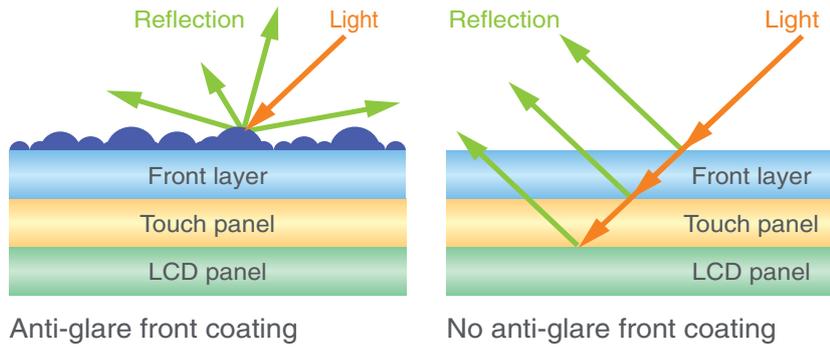
The front panel of the GT-E series provides an IP67 degree of protection, allowing the displays to be used in outdoor environments.

USB interface

USB interface as standard. Supports the through function using a USB cable, allowing simultaneous debugging of PLC and GT.

Anti-glare panel

Thanks to the non-reflecting panel, the display remains clear and easy to read under almost all circumstances. A UV coating ensures a long lifetime for the anti-glare layer.



UV protection layer

GT32-E programmable displays are UV-resistant. The front protection layer also slows down the aging process caused by UV radiation.

Transformer-isolated power supply

The isolated power supply enhances reliability.

GT32T-E

5.7", TFT color LCD with 4096 colors, backlight using long-life LED (approx. 50,000 hours).



New GT32T-E model



Standard GT32T

GT32M-E

5.7", monochrome LCD with 16 shades of gray, backlight using long-life LED (approx. 70,000 hours).



New GT32M-E model

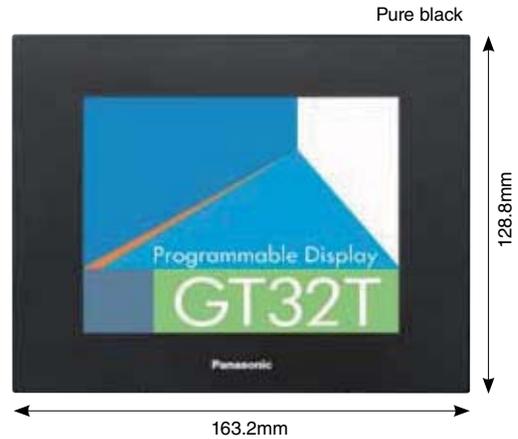


Standard GT32M

GT32T



Sleek new design with a full range of functions



GT32T equipped with 4096-color TFT display

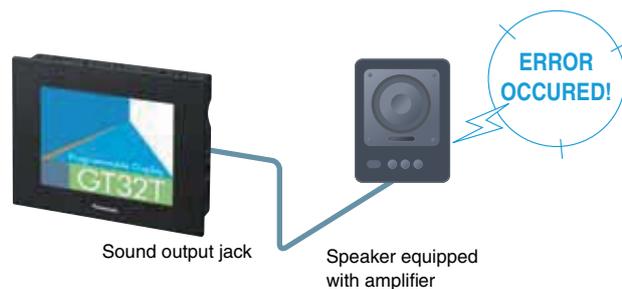
All GT32T types are available in the same size. GT32T0/GT32T1 is ideal for use with upscale equipment models or color-coded operation instructions.

SD/SDHC memory card slot (up to 32GB max.)

Easy to copy, back up and restore GT projects, PLC programs, alarm lists, recipes, and data logs.

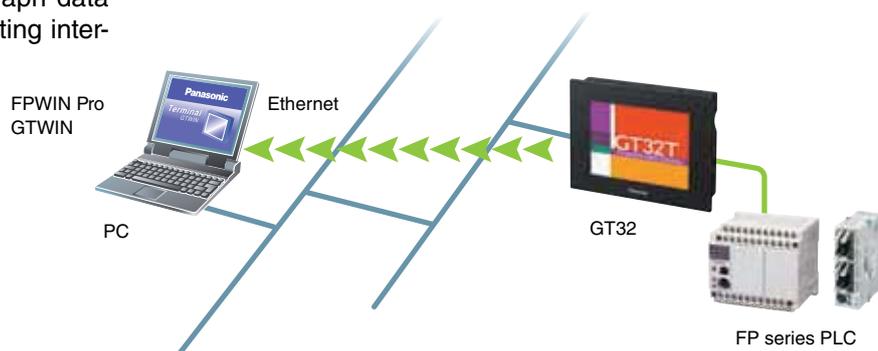
Sound output (GT32T1)

Audio information as well as visual and tactile information allow for more reliable control by operators.



Ethernet connection (GT32T1)

GT Memory Editor (attached to GTWIN) allows alarm record data and line graph data files to be created in addition to editing internal memory.



GT series: PLC compatibility

Company	Series	Model name	GT02/GT05/GT12/GT21/GT32	
			RS232C type	RS422 (RS485) type ^{*1}
Panasonic Electric Works	FP series	FP-X	○	○
		FPΣ (Sigma)	◎	○
		FP-e	◎	○
		FP0/FP0R	◎	○
		FP2	◎	○
		FP2SH	◎	○
Mitsubishi Electric ^{*1}	FX series	FX0N	○	◎
		FX1S	○	◎
		FX1N	○	◎
		FX1NC	○	◎
		FX2N	○	◎
		FX2NC	○	◎
		FX3UC	○	◎
		FX3U	○	◎
		FX3G	○	◎
		Q00CPU	◎	
	Q01CPU	◎		
	Q00JCPU	○		
	Q00HCPU	○		
	Q00JCPU	◎		
	Q26UDHCPU	○	○	
Q25HCPU	◎			
Q12HCPU	◎			
Q06HCPU	◎			
Q02HCPU	◎			
Q02CPU	◎			
A series	A1N	○		
	A2N	○		
	A3N	○		
	A1S	○		
	A1SJ	○		
	A2SH	○		
	A1SH	○		
	A2CCPU24	◎		
	L series	L26CPU-BT	○	○
Omron ^{*1}	C series	C200H	○	
		C200HS	◎	
		C500	○	
		C500F	○	
		C1000H	○	
		C2000	○	
		C2000H	○	
		C1000HF	○	
		C20H	◎	
		C28H	◎	
		C40H	◎	
		C120	○	
		C120F	○	
		CQM1-CPU42	◎	
		SRM1-C02	◎	
		CPM2A	◎	
		CPM1-20CDR-A	○	
		CQM1H-CPU21	◎	
		CPM2C	◎	
		CPM2B	◎	
	α series	C200HE-CPU32-Z	○	
		C200HE-CPU32	○	
		C200HE-CPU32-Z	○	
		C200HE-CPU32	○	
		C200HG-CPU53-Z	○	
		C200HG-CPU53	○	
		C200HX-CPU34-Z	○	
		C200HX-CPU34	○	
		C200HX-CPU54-Z	○	
		C200HX-CPU54	○	
		C200HE-CPU42-Z	◎	
		C200HE-CPU42	◎	
		C200HG-CPU43-Z	◎	
		C200HG-CPU43	◎	
		C200HG-CPU63-Z	◎	
		C200HG-CPU63	◎	
		C200HX-CPU44-Z	◎	
		C200HX-CPU44	◎	
		C200HG-CPU64-Z	◎	
		C200HG-CPU64	◎	
C200HX-CPU65-Z	◎			
C200HX-CPU65	◎			

Company	Series	Model name	GT02/GT05/GT12/GT21/GT32	
			RS232C type	RS422 (RS485) type ^{*1}
Omron ^{*1}	CV series	CV500	○	
		CV1000	◎	
		CVM1	◎	
	CS1 series	CS1H-CPU67	◎	
		CS1H-CPU66	◎	
		CS1H-CPU65	◎	
		CS1H-CPU64	◎	
		CS1H-CPU63	◎	
		CS1G-CPU45	◎	
		CS1G-CPU44	◎	
		CS1G-CPU43	◎	
		CS1G-CPU42	◎	
		CJ1 series	CJ1H	◎
	CJ1M		◎	
	CJ1G		◎	
	CP1 series	CP1H	○	
		CP1L	○	
		CP1E	◎	
Toshiba Machine ^{*1}	TC mini series		Models with RS232C port	Models with RS485 port
Yokogawa Electric ^{*1}	FA-M3 series	F3SP59-7S	◎	
		F3SP58-6S	◎	
		F3SP58-6H	◎	
		F3SP53-4S	◎	
		F3SP53-4H	◎	
		F3SP38-6S	◎	
		F3SP38-6N	◎	
		F3SP35-5N	◎	
		F3SP28-3S	◎	
		F3SP28-3N	◎	
		F3SP25-2N	◎	
		F3SP21-0N	◎	
		KEYENCE ^{*1}	KV series	KV-10/16/24/40
KV-700	◎			○
KV-1000	◎			○
KV-3000	◎			○
KV-5000	○			○
Hitachi Industrial Equipment Systems ^{*1}	EH-150 EHV series	EHV-CPU128	◎	◎
		EHV-CPU64	◎	◎
		EHV-CPU32	◎	◎
		EHV-CPU16	◎	◎
		EH-CPU104A	◎	◎
	EH-150 series	EH-CPU208A	◎	◎
		EH-CPU316A	◎	◎
		EH-CPU516	◎	◎
		EH-CPU548	◎	◎
		10-point	◎	
	MICRO-EH series	14-point	◎	
		20-point	◎	
		23-point	◎	◎
		28-point	◎	◎
		40-point	◎	
64-point		◎		
Web controller	10-point	◎		
	10-point	◎	◎	
ALLEN-BRADLEY ^{*1} Models that support DF protocol	MicroLogix series	MicroLogix500	◎	
		MicroLogix1000	◎	
		MicroLogix1100	◎	
SLC-500 series	SLC-5/03	◎		
	SLC-5/04	◎		
Siemens ^{*1}	S7-200 series	CPU222	○	◎
		CPU216	○	◎
		CPU215	○	◎
		CPU214	○	◎
		CPU212	○	◎
LG ^{*1}	MASTER-K series	80S	◎	
		200S	◎	
		300S	○	
		1000S	○	
Modbus ^{*1}	Models that support RTU protocol	*1	◎	◎
Program controlled communication ^{*1}	Panasonic MEWTOCOL	*FP-X*1	◎	◎

*1 Please see manual or contact manufacturer for details.

◎: Direct connection to the CPU of the PLC is possible.

○: Connection is possible using the communications unit or a signal conversion cable, etc.
(Example: The QJ71C24N or QJ71C24N-R2 calculator link unit is required when using the Mitsubishi Q Series.)

Blank: Not evaluated.

	GT02G/GT02M		GT05M/GT05G		GT05S		GT12M/GT12G		GT21C		
	RS232C	RS422/RS485	RS232C	RS422/RS485	RS232C	RS422/RS485	RS232C	RS422/RS485	RS232C	RS422/RS485	
Rated voltage	5V / 24V DC		24V DC								
Operating voltage range	4.5 to 5.5V DC at 5V 21.6 to 26.4V DC at 24V DC		21.6 to 26.4V DC								
Current consumption	1W max. at 5V DC 2W max. at 24V DC		2.4W max.		3.6W max.		1.7W max.		4.8W max.		
Power supply unit isolation method	-		Transformer isolation				Transformer isolation		-		
Ambient temperature	0 to 50°C								0 to 50°C ¹		
Ambient humidity	20 to 85% RH (no condensation at 25°C)										
Storage temperature	-20 to 60°C										
Storage humidity	10 to 85% RH (no condensation at 25°C)										
Vibration resistance	5 to 8.4Hz, amplitude: 3.5mm; 8.4 to 150Hz, acceleration 9.8 m/s ² ; 10 sweeps each in X, Y and Z directions (1 octave/min)						5 to 9Hz, amplitude: 3.5mm; 9 to 150Hz, acceleration 9.8m/s ² ; 10 sweeps each in X, Y and Z directions (1 octave/min)		10 to 55Hz (1-minute cycle); double amplitude: 0.75mm; 10 minutes in each of the X, Y, and Z directions		
Shock resistance	147m/s ² min: 3 times in each of the X, Y, and Z directions						147m/s ² : 3 times in each of the X, Y, and Z directions		98m/s ² min: 4 times in each of the X, Y, and Z directions		
Noise resistance	1,000V [P-P] min., pulse width of 50ns, 1 ms between power supply terminals (by a noise simulator)* AIGT0030B1/AIGT0030H1: When the ferrite device supplied with our PLC connection cable (AIGT8142) is mounted										
Protection class	IP67 ⁴						IP65 (in the initial stages) ⁴				
Weight	Approx. 160g						Approx. 240g		Approx. 330g		
Functions	Font types		Scalable GT and Windows fonts								
	Languages		English, German, French, Spanish, Italian, Turkish, Japanese, Korean, Traditional Chinese, Simplified Chinese								
	Graphics		Straight lines, continuous straight lines, squares, circles, arcs, elliptic arcs, fan shapes, elliptic fan shapes, beveled squares, bitmaps								
	Number of screens ⁵		Approx. 160			Approx. 180		2-gradation: approx. 250 8-gradation: approx. 200		Approx. 250	
	Screen No. that can be set		Base screens: No. 0 to 3FF, keyboard screens: No. 0 to 7								
	Part functions		Messages, lamps, switches, data, bar graphs, clocks, keyboards, line graphs, and alarm lists								
	Other functions		Recipe, flow display, write device, alarm record, alarm list, language switching, security levels, data logging, SD card recipe							Recipe, flow display, write device, alarm record, alarm list, language switching	
	Clock/calendar function		Refers to and displays external clock data. (Not provided with a built-in clock function.)								
	Contrast adjustment		Contrast can be adjusted by using the touch panel.								
	Automatic communication settings		The baud rate is automatically changed if there is no response from the target equipment.								
	Debugging function		GT connected between a PC and PLC allows the PLC to be debugged without a direct connection with the PC.								
	Screen creation		Dedicated software should be used. Applicable OS: Windows® 2000/XP/Vista/7 ⁶								
Touch key resolution		Free layout (8 dots min.)									
Touch key operation force		0.8N max.									
Touch key life		Min. 1 million operations									
COM port	Interface	RS232C	RS422/RS485		RS422/RS485	RS232C	RS422/RS485	RS232C	RS422/RS485	RS232C	RS422/RS485
	External communication settings	Baud rate: 9,600/19,200/38,400/57,600/115,200bit/s; data length: 7 or 8 bits, parity: none, odd, even, stop bits: 1 bit									
	Protocol	Panasonic FP series/serial port (program controlled communication)/other manufacturers' PLCs (refer to the compatible PLC list for manufacturers and models)									
	Connector	Connector terminal base (8 pins) (part no. AIGT084)									
Screen data transfer interface	Interface	TOOL port (RS232C)									
	PC baudrate setting	9,600/19,200/115,200						9,600/19,200/115,200			
	Protocol	Panasonic MEWTOCOL									
	Connector	USB Mini B						USB Mini B		5-pin mini-DIN	
	Ethernet port ⁷	-									
User's memory		F-ROM									
Memory capacity		2,048kB				12,288kB		2,048kB		6.5MB	
Memory		-									
Memory backup		-						Lithium battery (exchangeable) CR2032, commercial (does not come with product)			

	GT32M-E		GT32T-E		GT32M		GT32T0		GT32T1		
	RS232C	RS422/RS485	RS232C	RS422/RS485	RS232C	RS422/RS485	RS232C	RS422/RS485	RS232C	RS422/RS485	
Rated voltage	24V DC										
Operating voltage range	21.6 to 26.4V DC										
Current consumption	4.8W max.		7.2W max.		10W max.			12W max.			
Power supply unit isolation method	Transformer isolation										
Ambient temperature	-20 to 60°C ²				0 to 50°C ³						
Ambient humidity	10 to 90% RH (no condensation at 25°C)				10 to 85% RH (no condensation at 25°C)						
Storage temperature	-20 to 60°C										
Storage humidity	10 to 90% RH (no condensation at 25°C)				20 to 85% RH (no condensation at 25°C)						
Vibration resistance	5 to 8.4Hz, amplitude: 3.5mm; 8.4 to 150Hz, acceleration 9.8m/s ² , 10 times in each of the X, Y and Z directions (1 octave/min)				10 to 55Hz (1-minute cycle); double amplitude: 0.75mm, 10 minutes in each of the X, Y, and Z directions						
Shock resistance	147m/s ² min: 3 times in each of the X, Y, and Z directions				98m/s ² min: 4 times in each of the X, Y, and Z directions						
Noise resistance	—				1,000V [P-P] min., pulse width of 50ns, 1 ms between power supply terminals (by a noise simulator)						
Protection class	IP67 (in the initial stages) ⁴				IP65 (in the initial stages) ⁴						
Weight	Approx. 470g				Approx. 500g		Approx. 470g		Approx. 480g		
Functions	Font types	Scalable GT and Windows fonts									
	Languages	English, German, French, Spanish, Italian, Turkish, Japanese, Korean, Traditional Chinese, Simplified Chinese									
	Graphics	Straight lines, continuous straight lines, squares, circles, ovals, arcs, elliptic arcs, fan shapes, elliptic fan shapes, beveled squares, bitmaps									
	Number of screens ⁵	Approx. 180				Approx. 240		Approx. 180			
	Screen No.	Base screens: No. 0 to 3FF, keyboard screens: No. 0 to 7									
	Part functions	Messages, lamps, switches, data, bar graphs, clocks, keyboards, line graphs, and alarm list parts									
	Other functions	Recipe, flow display, write device, alarm record, alarm list, language switching, security levels, data logging, SD card recipe (GT32T1 with sound output)									
	Clock/calendar function	Provided with a built-in clock function (can also refer to and display a PLC clock). Use a commercially available battery.									
	Contrast adjustment	Contrast can be adjusted by using the touch panel						Not adjustable			
	Automatic communication settings	The baud rate is automatically changed if there is no response from the target equipment.									
	Debugging function	GT connected between a PC and PLC allows the PLC to be debugged without a direct connection with the PC.									
Screen creation	Dedicated software should be used. Applicable OS: Windows® 2000/XP/Vista/7 ⁶										
Touch key resolution	Free layout (8 dots min.)										
Touch key operation force	0.8N max.										
Touch key life	Min. 1 million operations (at 25°C)										
COM port	Interface	RS232C	RS422/RS485	RS232C	RS422/RS485	RS232C	RS422/RS485	RS232C	RS422/RS485	RS232C	RS422/RS485
	External communication settings	Baud rate: 9,600/19,200/38,400/57,600/115,200bit/s; data length: 7 or 8 bits, parity: none, odd, even, stop bits: 1 bit									
	Protocol	Panasonic FP series/serial port (program controlled communication)/other manufacturers' PLCs (refer to the compatible PLC list for manufacturers and models)									
	Connector	Connector terminal base (8 pins) (part no. AIGT084)									
Screen data transfer interface	Interface	USB1.1									
	PC baudrate settings	—									
	Protocol	Panasonic MEWTOCOL									
	Connector	USB TYPE-B									
	Ethernet port ⁷	—								Yes (100BASE-TX, 10BASE-T) ⁷	
User's memory	F-ROM										
Memory capacity	12MB				2MB		12MB (ver.1.10 or later)				
Memory	SRAM										
Memory backup	Lithium battery (exchangeable) AFPX-BATT (does not come with product)										

Notes:

- *1. When the unit is being installed in a horizontal orientation or FP programmer II is being connected to the TOOL port, the usable range is 0 to +45°C.
- *2. When the unit is being installed in a horizontal orientation, the usable range is -20 to 55°C.
- *3. When the unit is being installed in a horizontal orientation, the usable range is 0 to 40°C.
- *4. The protection class applies to the front panel. When reattaching the panel, replace the waterproof packing.
- *5. The number of screens that can be registered varies according to the registered contents.
- *6. Not compatible with 64bit versions of Windows®.
- *7. Simultaneous USB and Ethernet communications are not possible.

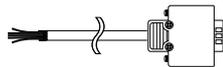
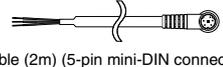
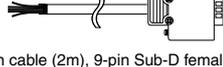
Part numbers: Main unit and tool software

Product	Description				Part number	SD memory slot	
	LCD	Power supply	Communication port	Color			
 	GT02M Main unit	STN monochrome (white/red/pink backlight)	5V DC	RS232C	Black	AIG05MQ02D	
					Ash gray	AIG02MQ03D	
				Black	AIG02MQ04D		
			24V DC	RS422 (RS485)	Ash gray	AIG02MQ05D	
					Black	AIG02MQ12D	
				Ash gray	AIG02MQ13D		
				RS232C	Black	AIG02MQ14D	
	Ash gray	AIG02MQ15D					
	RS422 (RS485)	Black		AIG02MQ22D	✓		
		Ash gray		AIG02MQ23D	✓		
	GT02G Main unit	STN monochrome (green/orange/red backlight)	5V DC	RS232C	Black	AIG02GQ02D	
					Ash gray	AIG02GQ03D	
				Black	AIG02GQ04D		
			24V DC	RS422 (RS485)	Ash gray	AIG02GQ05D	
Black					AIG02GQ12D		
Black				AIG02GQ14D			
Black				AIG02GQ22D	✓		
RS232C	Ash gray	AIG02GQ23D	✓				
	Black	AIG02GQ24D	✓				
Black	AIG02GQ25D	✓					
GT21C Main unit	STN color	24V DC	RS232C	Black	AIGT2230B		
				Ash gray	AIGT2230H		
			RS422 (RS485)	Black	AIGT22332B		
				Ash gray	AIGT2232H		
GT12G Main unit	STN monochrome (green/orange/red backlight)	24V DC	RS232C	Pure black	AIG12GQ12D	✓	
				Hairline silver	AIG12GQ13D	✓	
			RS422 (RS485)	Pure black	AIG12GQ14D	✓	
	Hairline silver	AIG12GQ15D		✓			
	GT12M Main unit	STN monochrome (white/red/pink backlight)	24V DC	RS232C	Pure black	AIG12MQ12D	✓
					Hairline silver	AIG12MQ13D	✓
RS422 (RS485)				Pure black	AIG12MQ14D	✓	
				Hairline silver	AIG12MQ15D	✓	
GT05M Main unit	STN monochrome (white/red/pink backlight)	24V DC	RS232C	Pure black	AIG05MQ02D	✓	
				Hairline silver	AIG05MQ03D	✓	
			RS422 (RS485)	Pure black	AIG05MQ04D	✓	
	Hairline silver	AIG05MQ05D		✓			
	GT05G Main unit	STN monochrome (green/orange/red backlight)	24V DC	RS232C	Pure black	AIG05GQ02D	✓
					Hairline silver	AIG05GQ03D	✓
				RS422 (RS485)	Pure black	AIG05GQ04D	✓
	Hairline silver	AIG05GQ05D	✓				
	GT05S Main unit	TFT color	24V DC	RS232C	Pure black	AIG05SQ02D	✓
Hairline silver					AIG05SQ03D	✓	
RS422 (RS485)				Pure black	AIG05SQ04D	✓	
	Hairline silver	AIG05SQ05D	✓				
GT32M Main unit	STN monochrome	24V DC	RS232C	Pure black	AIG32MQ02D	✓	
				Hairline silver	AIG32MQ03D	✓	
			RS422 (RS485)	Pure black	AIG32MQ04D	✓	
	Hairline silver	AIG32MQ05D		✓			
	GT32T0 Main unit	TFT color	24V DC	RS232C	Pure black	AIG32TQ02D	✓
					Hairline silver	AIG32TQ03D	✓
RS422 (RS485)				Pure black	AIG32TQ04D	✓	
	Hairline silver	AIG32TQ05D	✓				

Product	Description				Part number	SD memory slot	
	LCD	Power supply	Communication port	Color			
 	GT32T1 Main unit	TFT color	24V DC	RS232C	Black	AIG32TQ12D	✓
					Hairline silver	AIG32TQ13D	✓
				RS422 (RS485)	Black	AIG32TQ14D	✓
					Hairline silver	AIG32TQ15D	✓
	GT32T-E Main unit	TFT color	24V DC	RS232C	Ash gray	AIG32TQ03DE	✓
				RS422 (RS485)		AIG32TQ05DE	✓
GT32M-E Main unit	TFT monochrome	RS232C	AIG32MQ03DE	✓			
		RS422 (RS485)	AIG32MQ05DE	✓			
Terminal GTWIN Ver. 2 Tool kit*1	English version	GTWIN CD-ROM, GT Series Technical Manual (English version)			AIGT8001V2		
Terminal GTWIN Upgrade*1	English version	Upgrades Terminal GTWIN Ver. 1 to Ver. 2			AIGT8001V2R		

*1 GTWIN Ver. 2.8 or later is not compatible with Windows® 95, 98, Me or NT.

Part numbers: PLC connection cables

Programmable display	Connection cable	PLC
GT series (RS422/RS485)	 Part no.: AIGT81S2D , PLC connection cable (2m), 9-pin Sub-D female — 2 single wires + shielding wire	Siemens S7-200 series
GT series (24VDC, RS232C)	 Part no.: AIGT8192 , PLC connection cable (2m) (5-pin mini-DIN connector — 3 single wires), AIGT8193 (3m), AIGT8194 (4m) and AIGT8195 (5m) are also available.	Panasonic Electric Works FP series
GT series (24VDC, RS422/RS485)	 Part no.: AIGT8175 , PLC connection cable (5m), 8-pin mini-DIN connector — 4 single wires + shielding wire	Mitsubishi Electric FX series
GT series (24VDC, RS232C)	 Part no.: AIP81842 , PLC connection cable (2m), 9-pin Sub-D female — 3 single wires	Panasonic Electric Works FP2/FP2SH COM port

Options

Panel face protection sheets

10 sheets in a set (option)

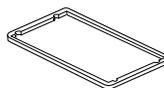
GT02	Part no.:	AIF02800
GT05	Part no.:	AIG0T5800
GT11	Part no.:	AIGT280
GT12	Part no.:	AIG12800
GT21	Part no.:	AIGT28021
GT32	Part no.:	AIG32800



Waterproof packing

Waterproof packing (for replacement), 10 pieces in a set. Package includes one set.

GT02	Part no.:	AIF02810
GT05	Part no.:	AIGT05810
GT11	Part no.:	AIGT181
GT12	Part no.:	AIG12810
GT21	Part no.:	AIGT28121
GT32	Part no.:	AIG32810
GT32-E	Part no.:	AIG32810E



GT05/GT12/GT21/GT32 mounting parts

5 sets of mounting parts (2 parts/set) Package includes one set.

GT05/GT21	Part no.:	AIGT28321
GT12/GT02	Part no.:	AIG12830
GT32/GT32-E	Part no.:	AIGT32830



GT05/GT12/GT32 backup battery

* For GT11 and GT21C, please purchase a commercially available CR2032 battery.

Part no.:	AFPX-BATT
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Screen data transmission cable



9-pin Sub-D connector — 5-pin mini-DIN connector (L type: 3m)
Part no.: **AFC8513**



USB A to B cable for GT05 and GT32
Part no.: **AFPXCABUSB2**



Mini-USB cable for GT12
Part no.: **CABMINIUSB5**

TOOL port panel extension cable



Part no.: **AFC8532**

SD card (GT05/GT12/GT32)

4GB SDHC card class 2
Part no.: **RP-SDR04GE1A**



29/08/2012

GTWIN

GT series screen creation tool

GTWIN is a screen creation software designed for the GT series. You can design screens and download them to a GT touch panel, upload data from a GT panel or print. You can compose messages and graphics. GTWIN comes with a host of pre-defined parts that make it easy for you to design screens quickly and easily, e.g. switches, lamps, clocks, keyboards, etc. Just drag and drop them onto your screen.



Multilingual menu screen

The menu can be displayed in Japanese, English, Simplified Chinese, Traditional Chinese, Korean, German, Italian, Spanish and French.



Simply drag-and-drop parts

You can easily create screens by just dragging parts from the library and dropping them anywhere you want.



4096-color 3D buttons (for GT05S/GT32T)

3D-design buttons with higher visibility and operability are available.

Firmware upgrading function

Automatically upgrade older firmware versions if desired.

Windows2000/XP/Vista/Vista 64-bit/Win 7 and Win 7 64-bit support this system, Windows 95/ 98/Me/NT do not.

Updates

Please visit our website under www.panasonic-electric-works.com for the latest firmware and GTWIN version.

Versatile assistant: SD memory cards

Data logging on an SD memory card

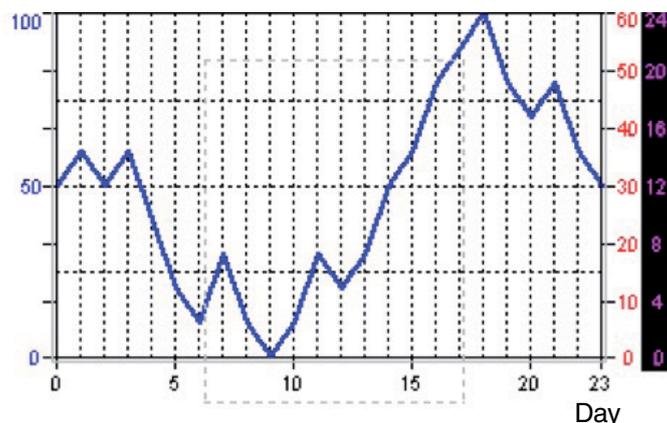
The programmable displays GT02, GT05, GT12 and GT32 support data logging of process data on commercial SD cards. The log files can hold up to 60,000 records and are saved in CSV format. Data logging is hence possible without requiring extra software.



Display SD logging data graphically

Data logged on the SD card can be displayed graphically. You can choose among the following time frames for display:

- 1 year (month unit)
- 1 month (day unit)
- 1 day (hour unit)
- Number of plots: The display begins with the first value of the hour specified



Store recipes on the SD memory card

Within the SD recipe area on the SD card, 100 recipe folders can be created. Each recipe folder can hold up to 64 recipe files. Each recipe file can contain a data set of up to 4096 ingredients (device values). GT02, GT05, GT12 and GT32 support this function.

SD memory card as program memory card

You can save PLC programs on an SD memory card. Using the GT system menu, you can choose in which direction to copy the program. The data type compilation (*.FP) and the source file (*.PCD) are supported. GT02, GT05, GT12 and GT32 support this function.

Save alarms on the SD memory card

The GT panel's alarm list can be saved as a CSV file on the SD card. GT02, GT05, GT12 and GT32 support this function.



1 x RS232C, 1x RS422/RS485 (optional)



TFT display, 256k colors



2 x LAN 10/100/1000 Base-T



CF card slot



2 x USB rear, 1 x USB front (except GN07)



Microsoft Windows CE 6.0



Product lineup

	GN07	GN10	GN12	GN15
Display size (W x H in mm)	7" 152.4 x 91.44	10.4" 211.2 x 158.4	12.1" 246.0 x 184.5	15" 304.1 x 228.1
Display mode	TFT, 256k color	TFT, 256k color	TFT, 256k color	TFT 16.2M color
Brightness	330 cd/m ²	230 cd/m ²	400 cd/m ²	350 cd/m ²
Resolution (W x H)	800 x 480 dots	800 x 600 dots	800 x 600 dots	1024 x 768 dots
Processor	Intel® Atom™ N270 1.6 GHz			
RAM	512 MB			
User memory	1GB (Win CE)			
RS232C	✓	✓	✓	✓
RS485 (422)	Optional			
LAN	2 x 10/100/1000 Base-T			
USB	2 x rear, -	2 x rear, 1 x front	2 x rear, 1 x front	2 x rear, 1 x front
Fieldbus*	Optional			

* planned

29/08/2012

Features

Extreme vividness

Embedded in an elegant black frame, the TFT screens offer a brilliant, vivid and life-like display in 262,144 colors (GN15: 16.2M). The GN series boasts an IP65 degree of protection from the front, and its screen responds flawlessly to the touch.

With a resolution of up to 1024x768 pixels and a brightness of 400cd/m² (max.), you will never be left in the dark.



Alarm management

The powerful alarm management guarantees maximum precision in managing events. Alarm management supports the 4 standard operating states (ON, OFF, ACK, RST) according to the ISA S-18 standard, but they can be easily changed individually according to your needs (events, colors, representations) and give custom help and be set by defined conditions.

Installed Movicon™ CE Runtime

Panels are ready to use with a preinstalled and activated Runtime.

Data logging and recipe

By using the same recording techniques, recipes and data loggers are stored in text files (.dat, .xml or encrypted files) with IMDB technology (InMemory DB). By using objects and wizards, the handling of recipe objects is much easier than with traditional methods.

Broad spectrum of applications

The GN series lends itself to a broad spectrum of applications. In addition to the basic features for recipe management, alarm management and multi-language, the GN series also provides all necessary hardware to support logging data.

If your application requires an HMI between 7" and 15", Panasonic's GN series is the right answer.



Myriad communication interfaces

The GN series was designed to leave no wish unfulfilled. In addition to the wide range of standard interfaces, optional networking interfaces are available.

Standard interfaces:

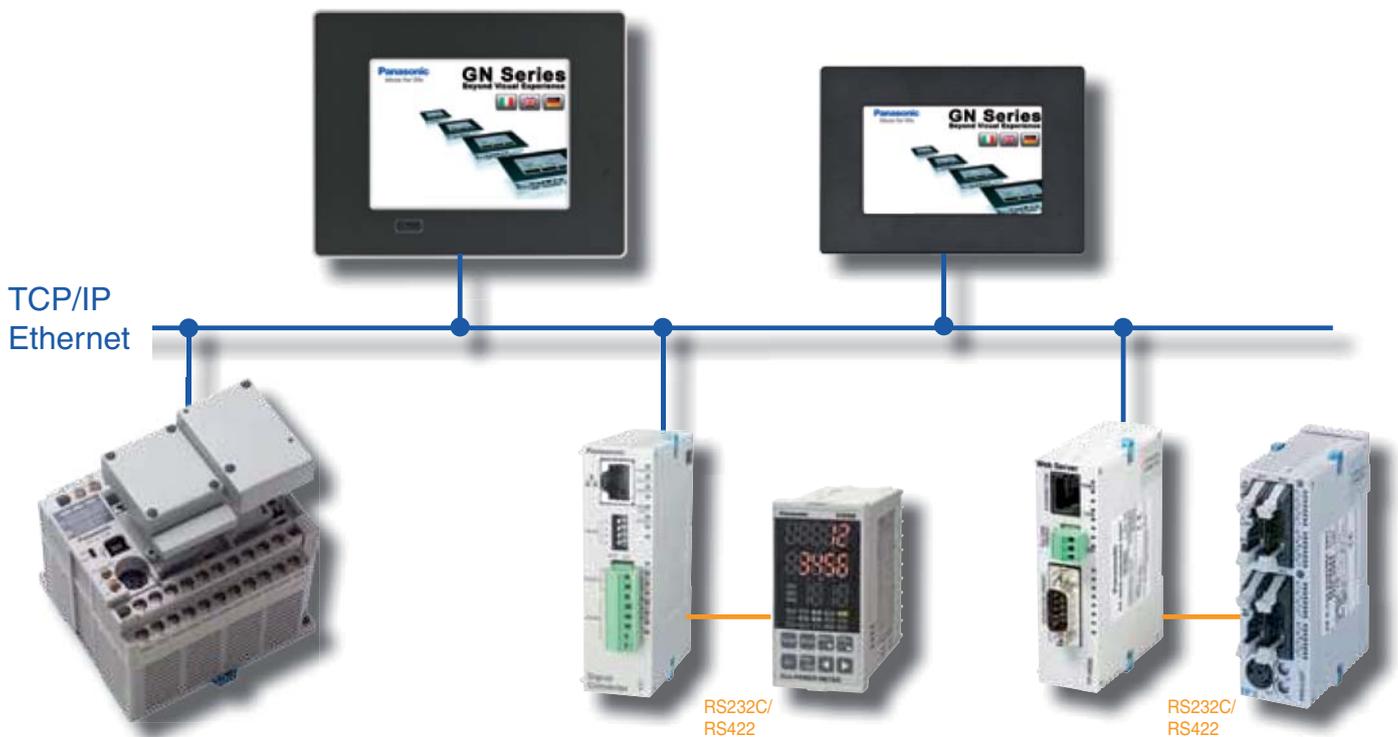
1 x RS232C
2 x USB rear, 1 x USB front (except GN07)
2 x LAN 10/100/1000 Base-T

Optional interfaces:

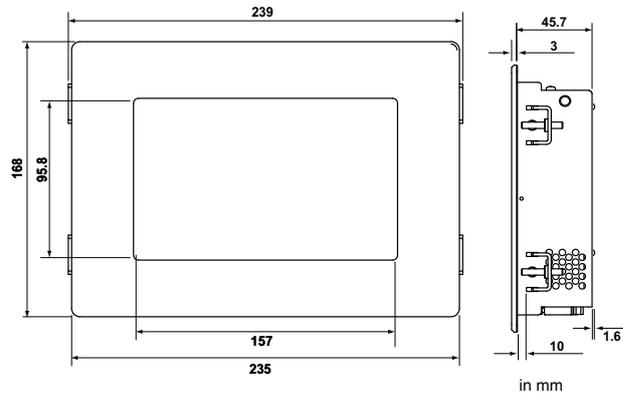
1 x RS485/RS422
Fieldbus interfaces
(PROFIBUS, CANopen)

As Ethernet becomes more and more popular in factory automation worldwide, the GN series comes equipped with 2 Ethernet ports, allowing you to take advantage of the IT world.

- Use existing networks, save wiring
- Reach almost every point of the world via Internet
- Standard software tools already existing on your PC
- Remote control, monitoring and programming



GN07



Compact and powerful

The GN series is available in 4 sizes, from 7" to 15". The smallest member of this series is the GN07. Due to its compact size, this panel can be used in places where little space is available but where emphasis is nevertheless placed on performance.

Regarding performance capability, the GN07 boasts the same works as its big brothers and can do everything they can.

- 7.0" TFT display
- 256k colors
- Resolution: 800 x 480 dots
- Installed Movicon™ CE Runtime

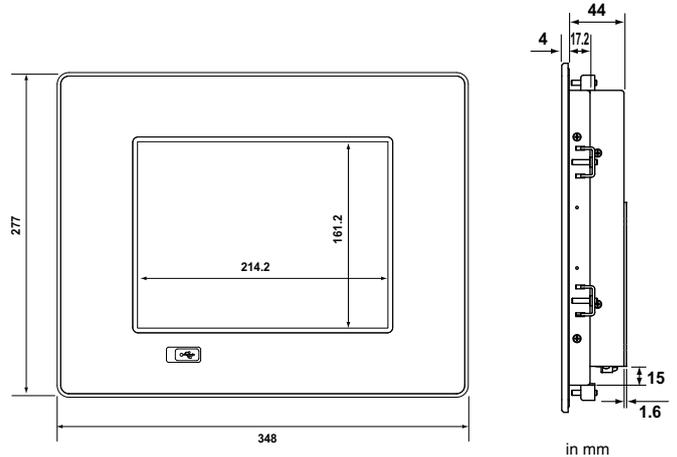


For tight fits

Sometimes there's simply not enough space for a large HMI. There can be many reasons for this. Nevertheless, the application may require a powerful and flexible HMI. With the same inner works as the other models in the GN series, the GN07 is the perfect solution for such cases.

Its many interfaces provide for flexibility, all included in a compact housing that allow it to score under such circumstances.

GN10



Open and flexible

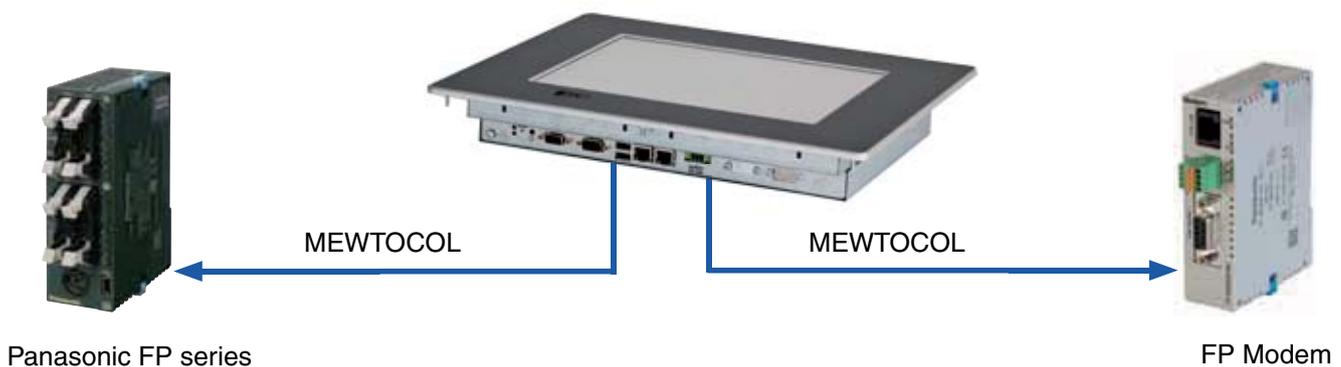
Just like all other GN series touch panels, the GN10 is equipped with numerous interfaces. GN10 also provides a number of configurations and can accommodate a broad spectrum of application areas. Devices can be adapted to individual needs, if need be by request, from being equipped with serial interfaces to having a selection of fieldbus networks.

- 10.4" TFT display
- 256k colors
- Resolution: 800 x 600 dots
- Installed Movicon™ CE Runtime

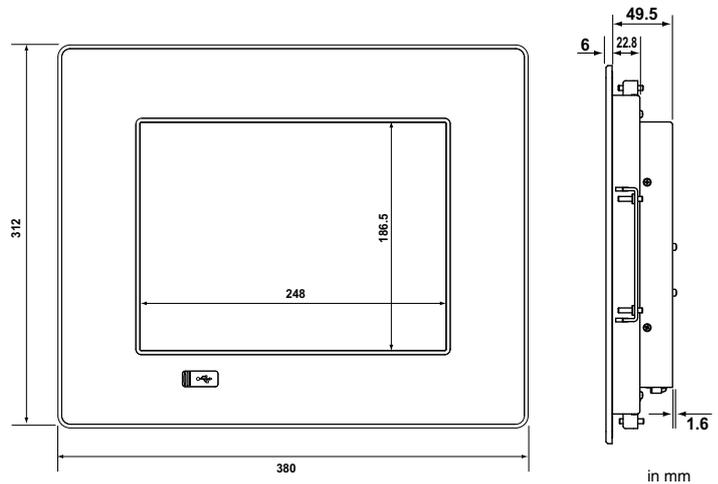
Application example: telecontrol and remote maintenance

Data transmission in both the command and reporting directions plays a central role in making the right decisions when certain events occur, for example in water treatment applications.

In the event of a failure, the pass-through mode not only allows HMI data to be analyzed but can also simultaneously activate the diagnostic mode on the PLC, for example, without requiring the outstation to be directly connected to the PLC.



GN12



Data logging and alarm management

As with all other GN series touch panels, the GN12 offers a CF card slot. History data can be stored on the CF card. Data is registered and recipes are archived as text files using "IMDB" technology, or in relational databases.

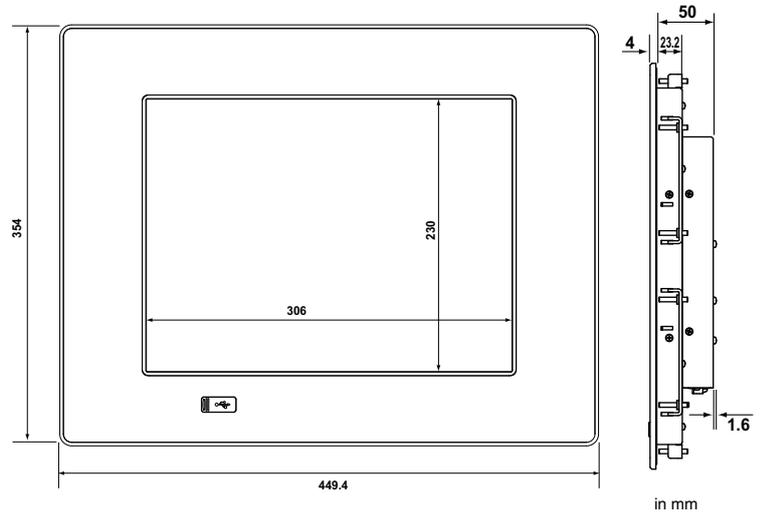
- 12.1" TFT display
- 256k colors
- Resolution: 800 x 600 dots
- Installed Movicon™ CE Runtime

Application example: gateway

Depending on the application area and requirements, very different communication protocols are used in machines and industrial systems. When systems or machines are expanded, problems can quickly arise. The GN series touch panels not only provide a powerful HMI, they also provide a gateway that allows networks to communicate with each other. Communicate without hurdles.



GN15



When size matters

Our largest model, the GN15, is the perfect choice when a lot of information requires a superior display. 16.2 million colors and a brightness of 350 cd/m² make for a convincing display. Should questions arise while using the panel, the integrated viewer can call up the corresponding help files.

1024 security levels and 16 entry areas make sure information is only available to those for whom it is intended.

- 15.0" TFT display
- 16.2M color
- Resolution: 1024 x 768 dots
- Installed Movicon™ CE Runtime

Visualizing vast amounts of data

Precise data collection as well as an exact and clear display are indispensable in order to react quickly to changes in an application. With the largest HMI of the GN series, you can arrange numerous screens and large amounts of data clearly and in a structured manner.

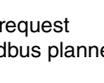
You can also integrate external programs into the visualization by using the interfaces available.



Specifications/dimensions

GN series		GN07	GN10	GN12	GN15
TFT LCD display	Screen size Active area (W x H) [mm]	7" 152.4 x 91.44	10.4" 211.2 x 158.4	12.1" 246.0 x 184.5	15" 304.1 x 228.1
	Number of dots (W x H) [pixel]	800 x 480	800 x 600 (SVGA)	800 x 600 (SVGA)	1024 x 768 (XGA)
	Pixel pitch (W x H) [mm]	0.1905 x 0.1905	0.264 x 0.264	0.3075 x 0.3075	0.297 x 0.297
	Color depth	256k			16.2M
	Backlight	LED	1 x CCFL	2 x CCFL	
	Brightness cd/m ²	330	230	400	350
	Control signal	1x 6-bit LVDS			
	Viewing angle (°) (r / l / u / d)	60 / 60 / 40 / 55	70 / 70 / 55 / 65	70 / 70 / 50 / 60	70 / 70 / 65 / 60
	Contrast ratio	400:1	500:1	500:1	700:1
Touch screen	4-wire resistive analog				
Processor	Intel® Atom™ processor N270 1.6GHz				
Battery	Lithium battery 3.0V for real-time clock. Type CR2032, UL-listed				
Rated voltage	12V DC (GN07/GN10/GN12: 2.8A/GN15: 3.5A)				
USB 2.0 interface	2 x	3 x			
Ethernet interface (10/100/1000Mbit/s) (LAN0, LAN1)	2 x				
VGA interface	1 x				
Serial RS232 interface (COM1)	1 x				
Protection class	IP65 (front side)				
Optional interfaces	<ul style="list-style-type: none"> • Serial RS422/RS485 • Industrial fieldbus 				
Power LED (PWR)	Yes				
Reset button (RESET)	Yes				
CF card slot	1 x				
Storage media	CF card				
Operating system	Standard: Windows CE 6.0 (other operating systems available upon request)				
DC power plug (3 pin)	1 x				
Mounting clamps	4 x (1 screw)	8 x (1 screw)	6 x (2 screws)	8 x (2 screws)	

Part numbers

Product		Description				Part number
		Type	Operating system	Visualization runtime	Serial port	
	GN07 series	GN07	WIN CE 6.0	Movicon CE	RS232C	AIGN07M232
			WIN CE 6.0	—	RS485	AIGN07M485
	GN10 series	GN10	WIN CE 6.0	Movicon CE	RS232C	AIGN07C232*
			WIN CE 6.0	—	RS485	AIGN07C485*
	GN12 series	GN12	WIN CE 6.0	Movicon CE	RS232C	AIGN10M232
			WIN CE 6.0	—	RS485	AIGN10M485
	GN15 series	GN15	WIN CE 6.0	Movicon CE	RS232C	AIGN12M232
			WIN CE 6.0	—	RS485	AIGN12M485
	GN15 series	GN15	WIN CE 6.0	Movicon CE	RS232C	AIGN12C232*
			WIN CE 6.0	—	RS485	AIGN12C485*
	Movicon Development tool	Software	—	—	—	AIGNDEVPRG

*on request
fieldbus planned

Communication cable

GN series COM1-> FP series TOOL port (3m)
Part no.: **AFC8513**



GN series

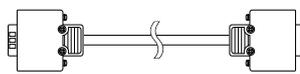


Panasonic FP series

GN series COM1 -> FP2 COM (2m)
Part no.: **AIP81862E1D**



GN series



Panasonic FP2SH/MCU RS232C

GN series COM1 (RS232C) -> loose wire (2.90m)
Part no.: **AIGNCAB232**



any PLC



GN series

Movicon

Panasonic Movicon

Panasonic provides the most powerful HMI platform for Windows® CE today: Movicon™ 11. Comprehensive projects, wholly capable of satisfying your every need in visualization and control in a compact environment without foregoing the potential of the SCADA system can be created with the development tool. Our GN series offers the complete flexibility by using Movicon™ C runtime:

- Alarm management
- Multiple drivers
- Integrated VBA logic
- Built-in Web client
- Security concept
- Data loggers and recipes on database
- Extensive graphic library



Movicon™ 11: strong points

- Openness: Movicon™11 is completely based on XML. Projects are simple XML files, which can be opened and edited with any XML editor. Fully open to integration and customization in the world of Windows® applications.
- Security: Movicon™11 guarantees top data security. Projects, though based on XML, can be encrypted with 128 bit algorithms. The User Password Manager guarantees safe access by level and/or area.
- Standards: Movicon™11 is completely based on standard technologies to ensure that your investments are safe. The XML, VBA, Web Services, TCP-IP and SQL technologies are all integrated to guarantee easy data access and transparency.
- Performances: Movicon™11 enhances performance by renewing its "exception-based" technology concept and graphics engine based on SVG (Scalable Vectorial Graphics).
- Connectivity: Movicon™11 has implemented a new generation of communication drivers to maximize flexibility in communication.
- Web-enabled architecture: Movicon™11 has renewed Web client technology. The innovative architecture, based on JAVA (integrating perfectly with XML, SVG, Web Services technologies), enables server access using Internet browsers on any platform (Windows®, Linux, Palm, PocketPC and Javaphones thanks to J2ME). Multiuser, performance and security are guaranteed keeping costs and maintenance to a minimum. Servers can be both Windows® Vista/XP and Windows® CE.

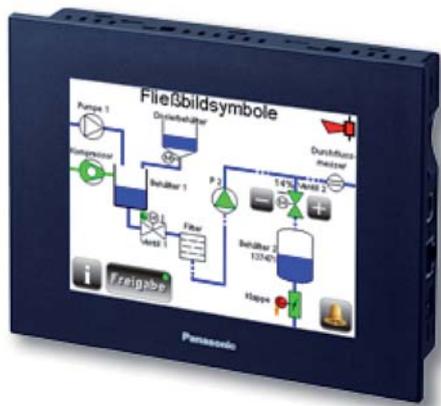
Movicon™ 11 intelligent editor

- Combining power with simplicity is not an easy thing to do. Often systems easy to use are restricted in what they can do. On the other hand, those which are very powerful tend to be too complex to use. This is where Movicon™ steps in. Movicon™ has been designed intelligently to fit all user needs to be more productive in less time and with less effort.
- Configurable workspace, floating or conventional windows, shortcut commands and quick-to-configure pop-up windows.
- Auto-create projects using wizards with project templates.
- Symbol and template libraries. Power Templates™ technology for managing complex object libraries with integrated VBA code. Template management also provided for alarms, data loggers, events and schedulers.
- Powerful on-line debugger with functions to analyze and simulate projects.

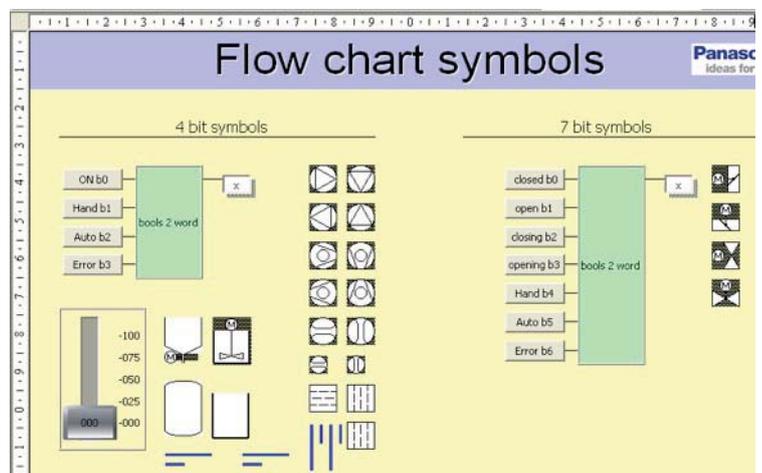
TB SYMKEYS 2

User library with flow diagram symbols and switch elements for GT and GN touch terminals

The library TB-SYMKEYS 2.2 for programmable displays of the GT and GN series helps you to efficiently create HMI applications with flow charts, e.g. for water management applications. This product contains a floating icon library and four key libraries which can be integrated into GTWIN. For the GN series, this product contains sample projects for Movicon with all symbols. Each symbol functions as a button that can open a new page, switch equipment directly, or just call up info. The functionality is supported by a comprehensive PLC program that animates the flow chart objects. These libraries can be used by the monochrome or color touch panels GT02, GT05, GT12, GT21 and GT32 and by all GN series panels.



GTWIN screen shots of GTWIN and MOVICON™:



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Europe

Asia Pacific

China

Japan

Panasonic Electric Works

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