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Mitsubishi Electric to Expand Lineup of Color TFT-LCD Modules with Projected Capacitive Touch Panels for Industrial Application

Market-leading touch functionality and sensitivity combined with max. 5mm cover glass

TOKYO, September 12, 2018 – <u>Mitsubishi Electric Corporation</u> (TOKYO: 6503) announced today the launch of 7.0-inch WXGA and 15.0-inch XGA color TFT-LCD modules equipped with projected capacitive touch panels using cover glass of up to five millimeters in thickness. The new modules are designed for industrial application, including measurement system machine tools, construction, agricultural vehicles and factory automation, as well as gas station point-of-sale terminals. Sample sales will begin on October 31 via Mitsubishi Electric offices worldwide.



7.0-inch WXGA



15.0-inch XGA

Mitsubishi Electric Color TFT-LCD modules with projected capacitive touch panel

The new modules will meet the increasing industrial demand for thicker and sturdier cover glass supporting operation by those wearing gloves. Accurate, multi-touch sensing is possible even when the screens are wet. Combining these cutting-edge touch panel capabilities with Mitsubishi Electric's proven TFT-LCD technology, the new models are built to handle a diverse range of applications and installation configurations.

Product Features

- 1) Projected capacitive touch panels offering superior operability
 - Thick, five-millimeter cover glass withstanding rugged usage
 - Ten-point touch operation allowing accurate sensing
 - High-level operability, even when using gloves or when screens are wet

2) Total touch-panel solution

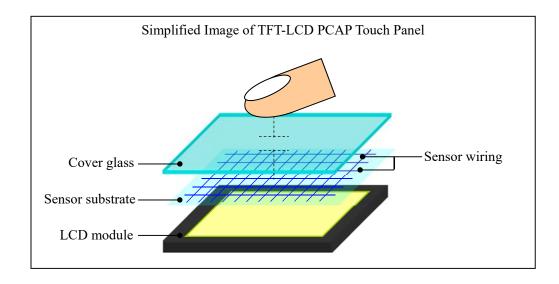
- One-stop solution for TFT-LCD, touch panel and touch-control board
- Optional optical bonding* providing clearer images in bright light
- Tempered cover glass and anti-reflection/anti-smudge surface treatment allowing a wide-range of uses
- Factory-installed TFT-LCD, PCAP touch panel, cover glass and touch controller offering superior reliability
 - * Resin bonding of the TFT-LCD module, touch-panel sensor and cover glass

Sample Sale Schedule

Product	Model	Display Size	Resolution	Brightness (cd/m ²)	Shipment
TFT-LCD Modules with Projected Capacitive Touch Panels	AA070TA01ADA11	7.0-inch	WXGA	800	October 31, 2018
	AA070TA11ADA11				
	AA150XT02DDE11	15.0-inch	XGA	600	November 30, 2018
	AA150XT12DDE11			1200	
	AA150XW01DDE11			400	
	AA150XW14DDE11			800	

Projected Capacitive Touch (PCAP)

Capacitive touch is a touch screen technology that uses two perpendicular layers of conductive material to form a grid. When electric current is applied, a uniform electrostatic field is created. The touch of a finger or other conductive object distorts the field, allowing the system to accurately track movement across the screen at multiple points. This technology is commonly used in smartphones and tablets.



<u>Lineup of Color TFT-LCD Modules with Projected Capacitive Touch Panels</u> (new models in bold)

Display Size	Resolution	Brightness (cd/m ²)	Viewing angles (°) (U/D), (L/R) Model	
6.5-inch	VGA	1000	80/60, 80/80	AA065VE11ADA11
<u>7.0-inch</u>		800	88/88, 88/88	AA070MC01ADA11
	WVGA	1040	88/88, 88/88	AA070MC11ADA11
		800	60/80, 80/80	AA070ME01ADA11
		1200	60/80, 80/80	AA070ME11ADA11
	<u>WXGA</u>	800	88/88, 88/88	AA070TA01ADA11
		<u>800</u>	88/88, 88/88	AA070TA11ADA11
0.0 : 1	WVGA	960	80/80, 80/80	AA080MB01ADA11
8.0-inch		1200	80/80, 80/80	AA080MB11ADA11
		480	88/88, 88/88	AA084SC01ADA11
	SVGA	480	80/60, 80/80	AA084SD01ADA11
		960	80/60, 80/80	AA084SD11ADA11
8.4-inch		560	88/88, 88/88	AA084XD01ADA11
	VC A	800	88/88, 88/88	AA084XD11ADA11
	XGA	400	80/60, 80/80	AA084XE01ADA11
		800	80/60, 80/80	AA084XE11ADA11
10.1 in ab	WVCA	400	88/88, 88/88	AA101TA02ADA11
10.1-inch	WXGA	800	88/88, 88/88	AA101TA12ADA11
10.6-inch	WXGA	800	88/88, 88/88	AA106TA01DDA11
10.6-inch		800	88/88, 88/88	AA106TA11DDA11
	VO.	560	80/80, 80/80	AA121XN01DDE11
		1040	80/80, 80/80	AA121XN11DDE11
	XGA	400	88/88, 88/88	AA121XP01DDE11
12.1 : 1		800	88/88, 88/88	AA121XP13DDE11
12.1-inch		640	80/60, 80/80	AA121TD01DDE11
	WXGA	1200	80/60, 80/80	AA121TD11DDE11
		400	88/88, 88/88	AA121TH01DDE11
		800	88/88, 88/88	AA121TH11DDE11
	<u>XGA</u>	<u>600</u>	60/80, 80/80	AA150XT02DDE11
150 inch		<u>1200</u>	60/80, 80/80	AA150XT12DDE11
<u>15.0-inch</u>		400	88/88, 88/88	AA150XW01DDE11
		800	88/88, 88/88	<u>AA150XW14DDE11</u>
19.0-inch	SXGA	400	80/80, 80/80	AA190EB02DDE11

Specifications

Model		AA070TA01ADA11	AA070TA11ADA11	
Display size/resolution		17.8cm (7.0 inches) WXGA		
Display a	rea (mm)	151.68 (H) × 91.01 (V)		
Number	r of dots	1280 (H) × 768 (V)		
Pixel pitch (mm)		$0.1185 (H) \times 0.1185 (V)$		
Contrast ratio		1000:1		
Luminand	ce (cd/m ²)	800		
Viewing angles (°) (U/D), (L/R)		88/88, 88/88		
Co	lors	262K (6 bits/color),	16.7M (8 bits/color)	
LED driver		Implemented	_	
Electrical interface		LVDS 6/8 bits		
Cina	W	189.8 (LCD: 169.8)		
Size	Н	129.7 (LCD: 109.7)		
(mm)	D	13.6 (LC	CD: 8.9)**	
Operational ter	nperatures (°C)	-30 to +70		
Storage temp	eratures (°C)	-40 to +80		
Glass thick	kness (mm)	Up to 5		
Black mas	sk printing	Available		
Strengthening treatment		Available		
Low-reflection treatment		Available		
Anti-smudge treatment		Available		
Optical bonding*		Available		
Controller interface		USB		
Operating systems***		Windows 7/8.1/10 and Linux		

^{**} Depends on cover glass thickness (1.1mm in this example)

*** Support for other operating systems is available upon request

Model		AA150XT02	AA150XT12	AA150XW01	AA150XW14		
		DDE11	DDE11	DDE11	DDE11		
Display size/resolution		38.1cm (15.0 inches) XGA					
Display a	rea (mm)	304.1 (H) × 228.1 (V)					
Number	r of dots	1024 (H) × 768 (V)					
Pixel pitch (mm)		0.297 (H) × 0.297 (V)					
Contrast ratio		80	0:1	1000:1			
	Luminance (cd/m ²)		1200	400	800		
Viewing angles (°) (U/D), (L/R)		60/80, 80/80		88/88, 88/88			
Colors		262K (6 bits/color), 16.7M (8 bits/color)					
LED driver		_		Implemented	_		
Electrical interface		LVDS 6/8 bits					
g:	W	346.5 (LCD: 326)					
Size	Н	275 (LCD: 255)					
(mm)	D	20.4 (LCD: 16.6)**		15.4 (LCD: 10.5)**			
Operational temperatures (°C)		-20 to +70		-30 to +70			
Storage temp	eratures (°C)	-20 to +80		-30 to +80			
Glass thickness (mm)		Up to 5					
Black mask printing		Available					
Strengthening treatment		Available					
Low-reflection treatment		Available					
Anti-smudge treatment		Available					
Optical bonding*		Available					
Controller interface		USB					
Operating systems***		Windows7/8.1/10 and Linux					

^{**} Depends on cover glass thickness (1.8mm in this example)

Environmental Awareness

These models are mercury-free and fully compliant with the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) directive 2011/65/EU.

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About Mitsubishi Electric Corporation

With nearly 100 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Embracing the spirit of its corporate statement, Changes for the Better, and its environmental statement, Eco Changes, Mitsubishi Electric endeavors to be a global, leading green company, enriching society with technology. The company recorded consolidated group sales of 4,444.4 billion yen (in accordance with IFRS; US\$ 41.9 billion*) in the fiscal year ended March 31, 2018. For more information visit:

www.MitsubishiElectric.com

Windows is a registered trademark of Microsoft Corporation in the United States and other countries. Linux is the registered trademark of Linus Torvalds in the United States and other countries.

^{***} Support for other operating systems is available upon request

^{*}At an exchange rate of 106 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2018