

# GT16

## Graphic Operation Terminals

### The Multimedia HMI Platform

New dimensions in process visualisation



Display high-resolution motion video from external cameras for monitoring and real-time process visualisation



All standard communications interfaces included



Plug in USB memory sticks directly on the front panel for storing and transporting project data



Optimum integration support for the iQ platform system

# The complete solution!



Operation terminals make it easier to monitor and control processes.

The multimedia capabilities of the GT16 series can make service operations more efficient and give operators a better understanding of the tasks to be performed, resulting in better overall throughput.



A multi-functional human-machine interface



Touch-sensitive screen for easy operation

## A step ahead

The new all-in-one models of the Mitsubishi Electric GT16 series are packed with all the features that users want and need, adding a new dimension of visualisation and operation comfort to the GOT1000 family of terminals. The GT16 series combines video and audio support with integrated communications ports, making it an innovative multimedia platform.

## Well equipped

Many connections and expansion options make it easy to integrate the units in customers' machines and plant systems.

Standard equipment includes one Fast Ethernet and two serial ports (RS-232 and RS-442/485). There are two USB ports with USB Host and USB Device functionality on the front panel that can be used for connecting a computer and plugging in a memory stick. The GT16 models also have a slot for CompactFlash memory cards.

## Exceptional multimedia capabilities

The first things you notice are the attractive, high-quality display set in a stylish, absolutely plane front panel, but that is far from all that the new GT16 models have to offer. With its optional video recording and storage function the multimedia operation terminal can also replace conventional still image and document displays with more easily comprehensible video sequences including sound.



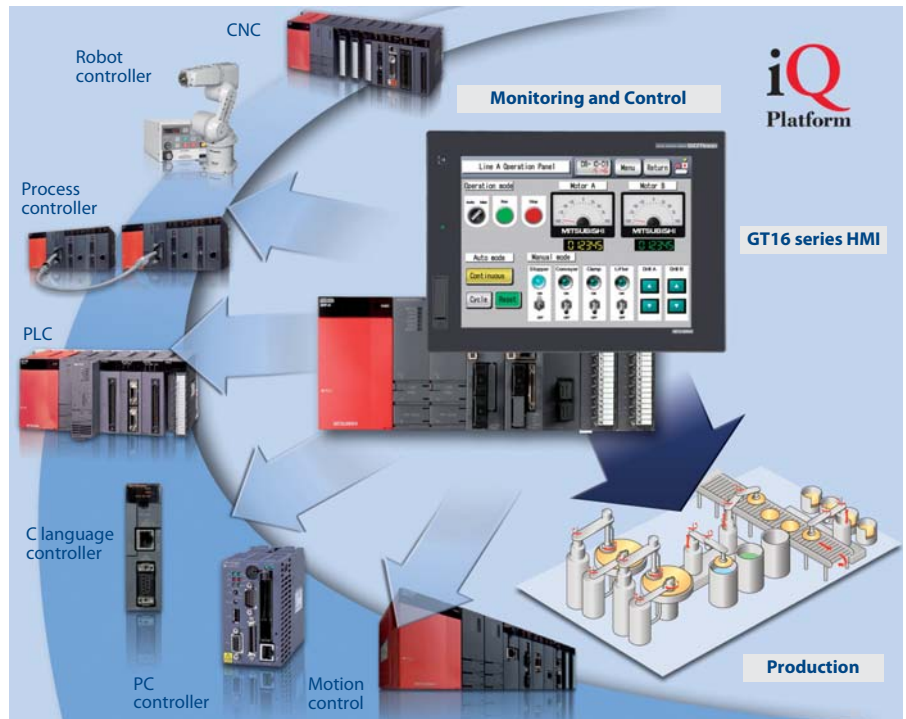
Practical USB ports in the front panel

There are two free slots for flexible expansion with up to six stackable communications or option cards. A wide variety of options are available, including interface and network modules, multimedia, audio and video cards, a USB printer connection module and the MES Interface Function module for transmitting data in real-time to a host Manufacturing Execution System (MES).

## An integrated control concept

The functions of these operation terminals are geared to Mitsubishi Electric's wide range of other products for all your automation needs. This is particularly apparent in the perfect interaction between the GT16 terminals and Mitsubishi's iQ Platform system. This integrated control concept for the manufacturing industry combines PLC, motion control, CNC and robot controllers on a single automation platform. In multi-processor mode control and communication tasks are shared between one PLC central processing unit (CPU) and up to three other CPUs, which can be mixed and matched flexibly.

The GT16 terminals are an important part of this concept, providing the graphical human-machine interface for all factory automation products. They can be connected directly without any additional configuration, integrating themselves as iQ Platform modules that can exchange data with your controllers in real time.



The GT16 operation terminals integrate perfectly with Mitsubishi Electric's iQ Platform system.



Clear visualisation of complex processes

## Clear diagnostics information

The terminals process alarms and can also access information linked to the alarms and display relevant instructions for problem correction and servicing. In addition to storing and displaying machine documentation and operating and troubleshooting manuals in a variety of standard formats, the GT16 terminals are the first ever that can also display clear video instructions with sound.

The multimedia functions also include the ability to connect a video camera directly to the terminal for full-time monitoring of critical system components. If an error occurs the terminal automatically logs up to 15 minutes of video to document the event and makes it available immediately for diagnosis. Long-term monitoring over a 25-hour period is also possible.

## Transparency on all levels

The optional MES Interface Function module for the GT16 terminals enables direct communication with your database systems with the SQL database language via a bidirectional Ethernet TCP/IP connection.

Every operation terminal can transmit the process and manufacturing data from up to four connected components to your management tools and distribute data from the tools back to the components. The four-channel driver architecture also supports controllers from other manufacturers, making it easy to integrate them in your corporate information system. You select the data you want to collect for your production and business processes with the standard operation terminal software; no database programming skills are required.

## Fast development

The GT Works software package from Mitsubishi Electric is a comprehensive suite of programming, control and visualisation tools with full support for the GOT family of terminals.

The main component is the user-friendly and intuitive GT Designer operation termi-



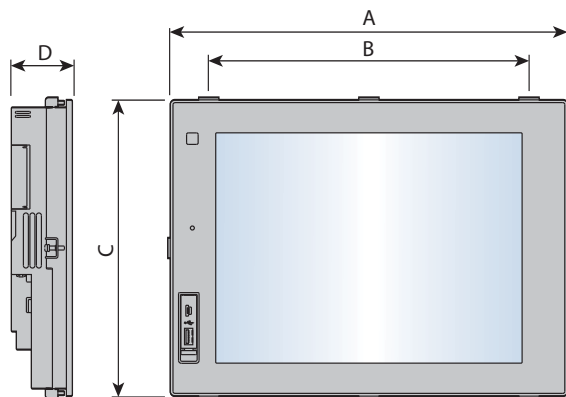
nal management program. A comprehensive library of ready-to-use graphics objects and a large selection of fonts makes it easy to produce effective user screens. Together with the integrated GT Simulator, this makes getting your terminals set up a quick and efficient process.

Also included is the GT-SoftGOT1000 software, which enables you to run GT16 projects on a PC without the GT16 hardware – turning the PC into a powerful PC-based HMI system.



# Specifications ///

Model	GT1665M-VTBA GT1665M-VTBD	GT1665M-STBA GT1665M-STBD	GT1675M-VTBA GT1675M-VTBD	GT1675M-STBA GT1675M-STBD	GT1685M-STBA GT1685M-STBD	GT1695M-VTBA GT1695M-VTBD
Display diagonal	8.4"		10.4"		12.1"	15"
Display type	High resolution TFT type color liquid crystal					
Resolution	640 x 480 (VGA)	800 x 600 (SVGA)	640 x 480 (VGA)	800 x 600 (SVGA)	800 x 600 (SVGA)	1024 x 768 (XGA)
Display size W x H (mm)	171 x 128		211 x 158		246 x 185	304 x 228
Nbr. of educible colors	65,536 colors					
View angle (degrees)	80° right/left, 80° upwards, 60° downwards		88° right/left, 88° upwards, 88° downwards		80° right/left, 60° upwards, 80° downwards	75° right/left, 50° upwards, 60° downwards
Brightness	600 cd/m	400 cd/m	450 cd/m	400 cd/m	470 cd/m	450 cd/m
Input type	Analog touch screen					
Memory capacity	Built-in Flash ROM (15 MB), max. 57 MB with CF card for project data and operating system					
Communication ports	1 x RS232, 1 x RS422/485, 2 x USB (12 Mbps), 1 x 100BASE-TX					
Applicable storage media	USB stick (2 GB max.), CompactFlash					
Battery	Backup battery for clock data, maintenance data and system protocol (optional)					
Power supply	VTBA/STBA/XTBA: 100 – 240 V AC (+10 %, -15 %); VTBD/STBD/XTBD: 24 V DC (+25 %, -20 %)					
Power consumption	39 W / 240 V AC, 38 W / 24 V DC		39 W / 240 V AC, 38 W / 24 V DC		46 W / 240 V AC 40 W / 24 V DC	64 W / 240 V AC 60 W / 24 V DC
Protection	IP 67f					
Ambient temperature	0 to 50 °C					
Weight (kg)	1.7	1.7	2.1	2.1	2.7	5.0
Programming software (optional)	GT Works (for screen data programming)					



Model	A	B	C	D
GT1665	241	176	190	56
GT1675	303	252	214	56
GT1685	316	240	242	56
GT1695	397	320	296	61

All dimensions in mm

## EUROPEAN BRANCHES

MITSUBISHI ELECTRIC EUROPE B.V. Radlická 714/113a <b>CZ-158 00 Praha 5</b> Phone: +420 (0)251 551 470	<b>CZECH REPUBLIC</b>
MITSUBISHI ELECTRIC EUROPE B.V. 25, Boulevard des Bouvets <b>F-92741 Nanterre Cedex</b> Phone: +33 (0)1 / 55 68 55 68	<b>FRANCE</b>
MITSUBISHI ELECTRIC EUROPE B.V. Gothaer Straße 8 <b>D-40880 Ratingen</b> Phone: +49 (0)2102 / 486-0	<b>GERMANY</b>
MITSUBISHI ELECTRIC EUROPE B.V. Westgate Business Park, Ballymount <b>IRL-Dublin 24</b> Phone: +353 (0)1 4198800	<b>IRELAND</b>
MITSUBISHI ELECTRIC EUROPE B.V. Viale Colleoni 7 <b>I-20041 Agrate Brianza (MB)</b> Phone: +39 039 / 60 53 1	<b>ITALY</b>
MITSUBISHI ELECTRIC EUROPE B.V. Carretera de Rubí 76-80 <b>E-08190 Sant Cugat del Vallés (Barcelona)</b> Phone: 902 131121 // +34 935653131	<b>SPAIN</b>
MITSUBISHI ELECTRIC EUROPE B.V. Travelers Lane <b>UK-Hatfield, Herts. AL10 8XB</b> Phone: +44 (0)1707 / 27 61 00	<b>UK</b>

## EUROPEAN REPRESENTATIVES

GEVA Wiener Straße 89 <b>AT-2500 Baden</b> Phone: +43 (0)2252 / 85 55 20	<b>AUSTRIA</b>	AutoCont.CS.s.r.o. Technologická 374/6 <b>CZ-708 00 Ostrava-Pustkovec</b> Phone: +420 595 691 150	<b>CZECH REPUBLIC</b>	KAZPROMAUTOM.Ltd. Mustafina Str. 7/2 <b>KAZ-470046 Karaganda</b> Phone: +7 7212 / 50 11 50	<b>KAZAKHSTAN</b>	Beijer Electronics AS Postboks 487 <b>NO-3002 Drammen</b> Phone: +47 (0)32 / 24 30 00	<b>NORWAY</b>	INEA d.o.o. Stegne 11 <b>SI-1000 Ljubljana</b> Phone: +386 (0)1 / 513 8100	<b>SLOVENIA</b>	ILAN & GAVISH Ltd. 24 Shenkar St., Kiryat Arie <b>IL-49001 Petah-Tiqva</b> Phone: +972 (0)3 / 922 18 24	<b>ISRAEL</b>
TEHNIKON Oktyabrskaya 16/5, Off. 703-711 <b>BY-220030 Minsk</b> Phone: +375 (0)17 / 210 46 26	<b>BELARUS</b>	B:TECH A.S. U Borové 69 <b>CZ-S8001 Havlíčkův Brod</b> Phone: +420 (0)569 777 777	<b>CZECH REPUBLIC</b>	Beijer Electronics SIA Vestenas iela 2 <b>LV-1035 Riga</b> Phone: +371 (0)784 / 2280	<b>LATVIA</b>	MPL Technology Sp. z o.o. Ul. Krakowska 50 <b>PL-32-083 Balice</b> Phone: +48 (0)12 / 630 47 00	<b>POLAND</b>	Beijer Electronics AB Box 426 <b>SE-20124 Malmö</b> Phone: +46 (0)40 / 35 86 00	<b>SWEDEN</b>	CEG INTERNATIONAL Cebaco Center/Block A Autostrade DORA <b>Lebanon - Beirut</b> Phone: +961 (0)1 / 240 430	<b>LEBANON</b>
ESCO D & A Culliganlaan 3 <b>BE-1831 Diegem</b> Phone: +32 (0)2 / 717 64 30	<b>BELGIUM</b>	Beijer Electronics A/S Lykkegårdsvej 17, 1. <b>DK-4000 Roskilde</b> Phone: +45 (0)46 / 75 76 66	<b>DENMARK</b>	Beijer Electronics UAB Savanoriu Pr. 187 <b>LT-02300 Vilnius</b> Phone: +370 (0)5 / 232 3101	<b>LITHUANIA</b>	Sirius Trading & Services Aleea Lacul Morii Nr. 3 <b>RO-060841 Bucuresti, Sector 6</b> Phone: +40 (0)21 / 430 40 06	<b>ROMANIA</b>	Econotec AG Hinterdorfstr. 12 <b>CH-8309 Nürensdorf</b> Phone: +41 (0)44 / 838 48 11	<b>SWITZERLAND</b>	CBI Ltd. Private Bag 2016 <b>ZA-1600 Isando</b> Phone: +27 (0)11 / 928 2000	<b>SOUTH AFRICA</b>
Koning & Hartman b.v. Woluwelaan 31 <b>BE-1800 Vilvoorde</b> Phone: +32 (0)2 / 257 02 40	<b>BELGIUM</b>	Beijer Electronics Eesti OÜ Pärnu mnt.160 <b>EE-11317 Tallinn</b> Phone: +372 (0)6 / 51 81 40	<b>ESTONIA</b>	ALFA TRADE Ltd. 99, Paola Hill <b>Malta-Paola PLA 1702</b> Phone: +356 (0)21 / 697 816	<b>MALTA</b>	Craft Con. & Engineering d.o.o. Bulevar Svetog Cara Konstantina 80-86 <b>SER-18106 Nis</b> Phone: +381 (0)18 / 292-24-4/5	<b>SERBIA</b>	GTS Bayraktar Bulvari Nutuk Sok. No:5 <b>TR-34775 Yukari ISTANBUL</b> Phone: +90 (0)216 526 39 90	<b>TURKEY</b>	CSC Automation Ltd. 4-B, M. Raskovoyi St. <b>UA-02660 Kiev</b> Phone: +380 (0)44 / 494 33 55	<b>UKRAINE</b>
INEA BH d.o.o. Aleja Lipa 56 <b>BA-71000 Sarajevo</b> Phone: +387 (0)33 / 921 164	<b>BOSNIA AND HERZEG.</b>	Beijer Electronics OY Jaakonkatu 2 <b>FIN-01620 Vantaa</b> Phone: +358 (0)207 / 463 500	<b>FINLAND</b>	INTENSIS srl bld. Traian 23/1 <b>MD-2060 Kishinev</b> Phone: +373 (0)22 / 66 4242	<b>MOLDOVA</b>	INEA SR d.o.o. Izletnicka 10 <b>SER-113000 Smederevo</b> Phone: +381 (0)18 / 292-24-4/5	<b>SERBIA</b>	AutoCont Control s.r.o. Radlinského 47 <b>SLOVAKIA</b> Phone: +421 (0)43 / 5868210	<b>SLOVAKIA</b>	CS MTrade Slovensko, s.r.o. Vajanského 58 <b>SK-92101 Piestany</b> Phone: +421 (0)33 / 7742 760	<b>SLOVAKIA</b>
AKHNATON 4 Andrej Ljagchev Blvd. Pb 21 <b>BG-1756 Sofia</b> Phone: +359 (0)2 / 817 6004	<b>BULGARIA</b>	ITECO A.B.E.E. 5, Mavrogenous Str. <b>GR-18542 Piraeus</b> Phone: +30 211 / 1206 900	<b>GREECE</b>	HIFLEX AUTOM. B.V. Wolverveerstraat 22 <b>NL-2984 CD Ridderkerk</b> Phone: +31 (0)180 - 46 60 04	<b>NETHERLANDS</b>	AutoCont Control s.r.o. Radlinského 47 <b>SLOVAKIA</b> Phone: +421 (0)43 / 5868210	<b>SLOVAKIA</b>	CS MTrade Slovensko, s.r.o. Vajanského 58 <b>SK-92101 Piestany</b> Phone: +421 (0)33 / 7742 760	<b>SLOVAKIA</b>		
INEA CR d.o.o. Lošinjska 4-a <b>HR-10000 Zagreb</b> Phone: +385 (0)1 / 36 940-01/-02/-03	<b>CROATIA</b>	MELTRADE Ltd. Fertő utca 14. <b>HU-1107 Budapest</b> Phone: +36 (0)1 / 431-9726	<b>HUNGARY</b>	Koning & Hartman b.v. Haarlerbergweg 21-23 <b>NL-1100 CH Amsterdam</b> Phone: +31 (0)20 / 587 76 00	<b>NETHERLANDS</b>						

Mitsubishi Electric Europe B.V. /// FA - European Business Group /// Gothaer Straße 8 /// D-40880 Ratingen /// Germany  
Tel.: +49(0)2102-4860 /// Fax: +49(0)2102-4861 120 /// info@mitsubishi-automation.com /// www.mitsubishi-automation.com

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