QTERM-G75

Large Screen Graphic Terminal
with Object-Based Programming

QSI CORPORATION
2212 South West Temple #50
Salt Lake City, Utah
84115-2648
USA

Phone 801-466-8770
Fax 801-466-8792
Email info@qsicorp.com
www.qsicorp.com

QSI EUROPE
4 Commerce Way
Leighton Buzzard
LU7 4RW
UK

Phone + 44 (0)1525 373800 / 374466
Fax + 44 (0)1525 374468
Email information@qsieurope.com
www.qsieurope.com

Rev. 3.1

QTERM-G75

Large Screen Graphic Terminal with Object-Based Programming

CE Certified

FEATURES

- Large 640x480 pixel, 264 mm (10.4") diagonal, color, lighted LCD display: TFT, or enhanced TFT
- Available in panel-mount enclosure or as module for tighter integration.
- Touch screen with soft keys on and around viewable area.
- 10/100Base-T Ethernet option; supports TCP/IP, UDP/IP and other protocols.
- Power-over-Ethernet (802.3af) option.
- Two serial ports (2nd optional). EIA-232, -422, -485 on either.
- Optional PS/2 keyboard port.
- Full NEMA-4 sealing for hose-down, icing, salt spray.
- -10 to 60 °C operating temperature; consumes 860 mA @ 12 VDC.
- Powerful ***Qlarity*** event-driven, object-based programming for easy application development, using Windows® programming, simulation and debugging environment.
- Real-time clock, programmable speaker, optional audio (.wav) decoder.
- Manufacturer ID code protects your development investment.
- CE Certified, aluminum housing.
- Make the G75 *your* product with a custom company logo and softkey legend.

HARDWARE

DISPLAY: The QTERM-G75 features a VGA (640x480 pixel), color TFT (256 colors), graphic LCD display. The terminal can optionally be configured with an enhanced TFT color display for viewing in bright sunlight conditions.

The LCD display has excellent readability under most lighting conditions and can operate in either portrait or landscape mode. The display is lighted with a cold-cathode fluorescent backlight (CCFL). The CCFL backlight is software-controlled, replaceable and provides white lighting for high contrast and easy readability.

TOUCH SCREEN / KEYPAD / KEYBOARD: User input occurs through a durable resistive touch screen via any number of keys located on or around the display and/or through an external keypad (up to 8x8 matrix with up to 6 keypad LEDs) or PS/2 keyboard. Touch screen keys are not limited to a certain size or "active" area.

The standard legend shown in Figure 1 shows five soft keys down either side of the display. These keys can have unique functions on every screen, have a global function on all screens or be customized with your choice of text and graphics. A custom legend underlay can be ordered to personalize the unit for your application.

HOUSING: The QTERM-G75 offers a rugged, aluminum, panel-mount housing that meets all NEMA-4 specifications for hose-down, icing and salt spray when mounted in a NEMA-4 enclosure. A gasket and mounting hardware are included. See Figure 3 for dimensions.

The terminal is designed to be mounted in a hole cut in your panel (Figure 2). No screw holes are required; a gasket and mounting hardware are included with the unit.

The components of the QTERM-G75 are available as a module (display, CPU board, touch screen and mounting bracket) for mounting in your housing if these mounting options will not fit your needs.

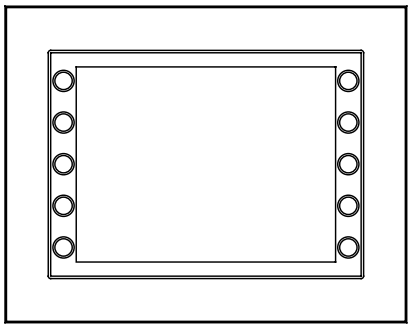
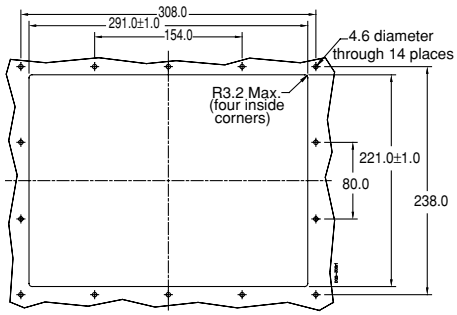


Figure 1 ▲ *QTERM-G75 with standard legend*

Figure 2 ▼ *QTERM-G75 cutout dimensions*



Cutout

Production status and machine control is provided by the QTERM-G75.

CONNECTORS: The QTERM-G75 comes standard with one DB9f serial connection, two if the terminal is configured with the second serial option. The terminal can optionally support a standard PS/2 keyboard and an 8-pin modular Ethernet connector (RJ45).

SPEAKER: A speaker with software-controlled pitch and duration is included on the rear of the unit. Pitch is set by specifying musical tones to simplify creation of distinctive audio sequences.

The QTERM-G75 can optionally be configured with an audio chipset to play voice, music or other .wav files through the speaker. These sounds can be played in response to events such as a key press, a critical setpoint reached, data received or other events.

FLASH MEMORY: The standard QTERM-G75 includes 8 Mbytes of flash memory and 32 Mbytes of RAM. The PoE unit includes 4 Mbytes of flash memory and 16 Mbytes of RAM. The flash memory contains the firmware, user application, objects and file space.

Firmware and application upgrades can be downloaded through the serial or Ethernet interfaces and into memory without opening the terminal housing.

POWER SUPPLY: The QTERM-G75 includes a switching power supply with a wide input voltage range (8-26 VDC).Typically, power is supplied through the DB9f connector; however, if you have chosen the Power-over-Ethernet (PoE) option, power is supplied through the CAT5 Ethernet cable and your PoE-compliant hub.

Power-over-Ethernet (PoE) (IEEE 802.3af), also called "Active Ethernet," eliminates the need to provide a separate DC supply to your wired Ethernet terminal. By running a single CAT5 cable providing power lines in addition to data lines, you have greater flexibility in where you locate your terminal and you significantly reduce installation costs.

BATTERY-BACKED REAL-TIME CLOCK: The real-time clock can be used to display the current time on the display, time and date stamp messages or for timed polling and program execution.

SERIAL PORT: The standard QTERM-G75 ships with one EIA-232 serial interface with hardware handshaking. The primary and / or optional secondary serial ports can be configured for EIA-232, EIA-422 or EIA-485.

ETHERNET / POWER-OVER-ETHERNET: An Ethernet 10/100Base-T port with an 8-pin modular Ethernet connector (RJ45) is available as an option. A 10Base-T port is available on terminals with Power-over-Ethernet. TCP/IP, UDP/IP, Modbus™ and other communications are supported.

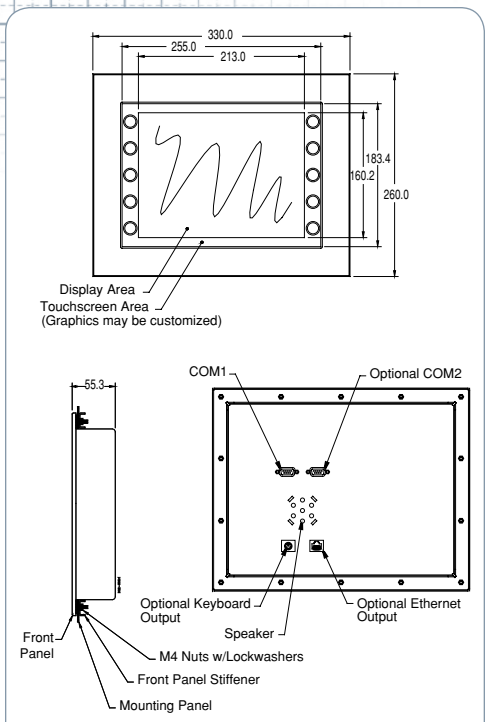


Figure 3 *QTERM-G75 panel-mount dimensions (mm).*

SOFTWARE AND SETUP

OBJECT-BASED PROGRAMMING LANGUAGE: Software for the QTERM-G75 is based on QSI's scripted graphic terminal programming language called ***Qlarity***™ (pronounced "Clarity"). ***Qlarity*** uses objects to display information on the screen, accept user input and communicate with other devices.

PROGRAMMING TOOLS: ***Qlarity Foundry***™ is a PC-based software tool that aids in screen design, application development, compilation and loading programs into the QTERM-G75. ***Qlarity Foundry*** is powerful enough for the elementary user, yet flexible enough for the technical user. Intelligent applications can be created by modifying object properties and without writing a single line of code.

For more information about ***Qlarity***™ and ***Qlarity Foundry*** refer to the appropriate section of this catalog or visit us on the web at *www.qlarity.com.*

MANUFACTURER ID: A unique MID code can be factory programmed into your QTERM-G75 (for a nominal one-time setup fee). Your ***Qlarity*** application can query this MID code to determine if the terminal was purchased by you. If the MID code does not match, your application can halt, preventing your software from being used on QSI terminals purchased by others, and protecting your development investment.

INTERFACES

EIA-232: With proper cables and grounding, the QTERM-G75 can communicate up to 15 meters at its top speed of 115,200.

EIA-422: Using the EIA-422 interface, the QTERM-G75 can operate at distances up to 1000 meters.

EIA-485: Multiple terminals can be connected to each other in a multidrop chain to reduce cabling costs.

ETHERNET: Standard 10/100Base-T interface with TCP/IP and UDP/IP support.

POWER-OVER-ETHERNET: Power-over-Ethernet (PoE) (IEEE 802.3af) supports 10Base-T Ethernet communications and power over a single CAT5 cable.

The QTERM-G75 serves as a control panel for a label printer.

DISPLAY

Color TFT (256 colors)
Enhanced color TFT (256 colors) optional
Pixels: 640x480
211.2x158.4 mm "live area" — 264 mm / 10.4" diagonal
Dot Pitch: 0.33 mm
Lighting: Cold-cathode fluorescent
Brightness is software-controllable

TOUCH SCREEN

Analog-resistive operation
Transparent touch area over viewable display
Labeled touch area underlay on each side of the display

INTERFACE

EIA-232 serial port with hardware or software handshaking
Baud rates: 1200, 2400, 4800, 9600, 14,400, 19,200, 38,400, 57,600 and 115,200
Data formats: 8n1, 8e1, 8o1, 8n2, 7e1, 7o1, 7n2, 7e2 and 7o2
Connector: DB9f serial
8-pin modular (RJ45) Ethernet
Options: Configurable primary and secondary serial ports: EIA-232, EIA-422 or EIA-485
Ethernet 10/100Base-T or Power-over-Ethernet 10Base-T
PS/2 keyboard port

MEMORY

8 Mbytes flash and 32 Mbytes RAM memory (standard terminal), 4 Mbytes flash and 16 Mbytes RAM memory (Power-over-Ethernet terminal)

SPEAKER

Software programmable pitch and duration
Audio decoder for .wav file audio support is available as an option

PHYSICAL

Panel-mount configuration
Housing: Aluminum bezel and back panel
Accommodates panels from 0 to 7 mm thick with standard screws
Alternate housing supports in-wall mounting using a unique cam system
Size: 330x260x56 mm
Mass: 3.2 kg
Processor: 400 MHz Intel® XScale™ core (standard terminal), 200 MHz Intel® XScale™ core (Power-over-Ethernet terminal)

ENVIRONMENTAL

Sealing: NEMA-4 front panel
Temperature: Operating -10 to 60 °C
(-10 to 50 °C Prototype legend)
Storage -20 to 70 °C
Humidity: 0 to 95%, non-condensing
Vibration: 5 to 5000 Hz, 4 g RMS
Shock: 20 g, 3 ms, any axis

POWER

8 to 26 VDC – 860 mA at 12 VDC (optional hardware uses more), Power-over-Ethernet (IEEE 802.3af)

SOFTWARE

Qlarity™ – Object-based programming language
Qlarity Foundry™ – Windows® design environment

CUSTOMIZING

Inner legend underlay around display can be customized with your "keys" and graphics.
Internal module available for custom mounting requirements.

CERTIFICATION

FCC Part 15, Class A
CE Certified: EN60950:1992, EN55022:1994 FCC Part 15, Subpart B, ICES-003, EN55024:1998

ORDER WORKSHEET 1

Company _____ City / State / Zip _____ / _____ / _____

Address _____ Telephone _____ Fax _____

_____ Email _____

Who do we call with questions (name & phone)? _____

Check ONE box in each of the following groups, then fill in the customizing information you are requesting. A unique part number will be assigned when your worksheet is received.

MAIN CONFIGURATION

- ❑ 640x480 Color TFT
- ❑ Module, Color TFT

PRIMARY SERIAL PORT

- ❑ EIA-232
- ❑ EIA-422
- ❑* EIA-485

SECONDARY SERIAL PORT

- ❑ None
- ❑* EIA-232
- ❑* EIA-422
- ❑* EIA-485

ETHERNET

- ❑ None
- ❑* 10/100Base-T Ethernet (RJ45)
- ❑* 10Base-T Power-over-Ethernet (IEEE 802.3af)

KEYBOARD

- ❑ None
- ❑* PS/2 Keyboard Connection

AUDIO

- ❑ Standard Audio
- ❑* Audio (.wav) Decoder

CUSTOMIZING

Inner Legend

- ❑ Standard Legend
- ❑* Prototype Legend
- ❑* Custom Legend

Legend customization is described in detail in the “Legend Customization” section at the front of this catalog. Refer to “Custom Art Submissions” in the "How to Order" section for custom logo art and special font submission requirements.

STANDARD Standard legend. No customization.

PROTOTYPE Fill out all of the keys you want customized. Specify custom typefaces, colors (Pantone PMS†) and logo text or submit your own custom logo. Default text is Black Helvetica Bold typeface.

CUSTOM Fill out all of the keys you want customized. Specify custom typefaces, colors (Pantone PMS) and logo text or submit your own custom logo. Default text is Black Helvetica Bold typeface.

❑ Custom Art ❑ Custom Fonts _____ ❑ Custom Colors _____

* Extra cost option
** Cost reduction option – minimum quantity required
† Approximate color match

ORDER WORKSHEET 2

!!FILL IN APPROPRIATE AREAS FOR CUSTOMIZING!!
NOTE: Legend is not to scale.