

G3 Series HMI

Web-Enabled Graphic Operator Interface Terminals



- Remote monitoring and operation
- The most on-board comms ports
- Built-in Ethernet
- Protocol converter
- Affordable price

The only HMI that lets you control and communicate with up to five different device types, simultaneously.

Now you can make complete integration of your machine a reality. The G3 HMI Series features the most on-board communications ports of any HMI available, and lets you web- and network-enable many different types of hardware using integrated Ethernet. Control multiple devices including PLCs, PCs, drives, PID controllers and more—at speeds up to 115 kBaud. Three serial ports are standard, and with an inexpensive expansion card, the G3 HMI integrated protocol converter can communicate with as many as five different device types. No HMI offers that kind of connectivity at any price. And the best news is, the G3 HMIs actually cost *LESS* than many HMIs with far fewer features.

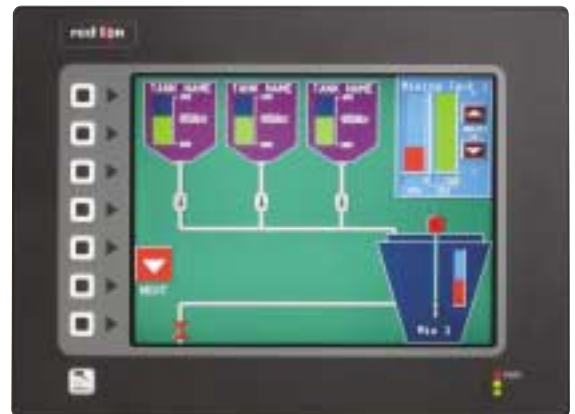
Three affordable models deliver the most value of any HMI. G3 HMIs are available in three models to meet your machine requirements. Each model combines unique capabilities normally expected from high-end units, yet at a very affordable price. One RS422/485 port and two RS232 ports are standard, and each port is format and Baud rate programmable up to 115,200 Baud. One each RS232 and RS422/485 ports are available with an option card, providing up to five comms ports per G3 HMI.



■ The **G303** operator interface terminal offers a 3.2" graphic LCD surrounded by a durable 32-key membrane keypad including five navigation keys, 10+2 numeric keys, 4 dedicated keys, 8 user-legendable keys and 3 soft keys for on-screen menus. Features backlit display, 3 user-programmable LEDs, and 4MB of on-board Flash memory. The compact G303 panel measures 5.85" x 7.45" (148.6 x 189.2 mm), requiring only 2.1" (52 mm) depth.



■ The **G308** operator interface touchscreen terminal offers a 7.7" DSTN passive matrix VGA color display with an integrated seven-key programmable membrane keypad. The resistive analog touchscreen is built to withstand the demands of daily use. The unit also includes 3 user-programmable LEDs, and 8MB of on-board Flash memory. The G308 measures 8.18" x 10.32" (207.8 x 262 mm) and requires a depth of only 2.2" (56 mm).



■ The **G310** operator interface touchscreen terminal offers the same features as the G308 in a larger 10.4" active matrix VGA color display size. The G310 includes an eight-key programmable membrane keypad, 3 user-programmable LEDs, and 8MB of on-board Flash. The expansive G10 panel measures 9.50" x 12.83" (241.3 x 325.8 mm) and occupies a depth of only 2.2" (56 mm).

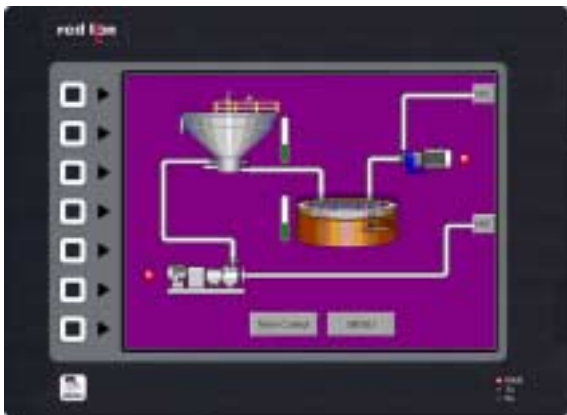
The newest additions to the G3 series.



■ The **Data Station Plus** was designed to provide all of the features of the G3 series HMIs, without a display. Now features such as data logging, protocol conversion and remote machine monitoring and control can be added to any equipment.



■ The **BFD (Big Flexible Display)** was designed to provide at-a-glance machine and production status across an entire factory floor. Any of the G3s can be used as a master to the BFD. This allows the programmer to use the G3 as a means to collect machine data, runtime, efficiency, etc. and easily have that information sent to the BFD.



■ The **G310S OUTDOOR** visible operator interface is identical to the standard G310, but offers a super bright 10.4" TFT display that is easily viewable in sunlight. With its special UV resistant overlay and full 0° to 50°C operational temperature range, the G310S is truly designed for the rigors of the outdoors.



■ The **G308A** operator interface touchscreen terminal is the newest of the G3 series HMIs. Based on the proven G308 platform, the G308A offers a significantly larger and brighter 8.4" TFT color VGA display. The G308A measures 8.18" x 10.32" (207.8 x 262 mm) and requires a depth of only 2.6" (66 mm).

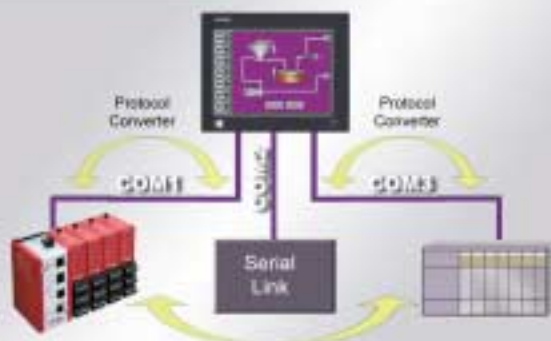


■ The **G306** operator interface touchscreen terminal is perfect for applications that have limited space. With its 5.7" ultra-DSTN quarter VGA display, the G306 offers an easy-to-view display in a smaller package. With its four key programmable keypad, the G306 can utilize pop-up menus to make the most of the limited display size. The G306 measures 7.08" x 8.83" (179.8 x 224.3 mm) and requires a depth of only 2.3" (58.4 mm).

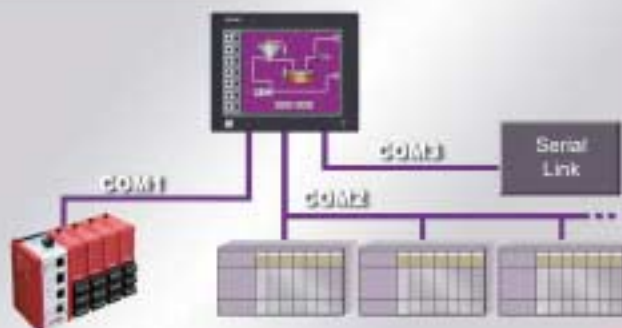
G3 HMI Communication Examples

SERIAL COMMUNICATION

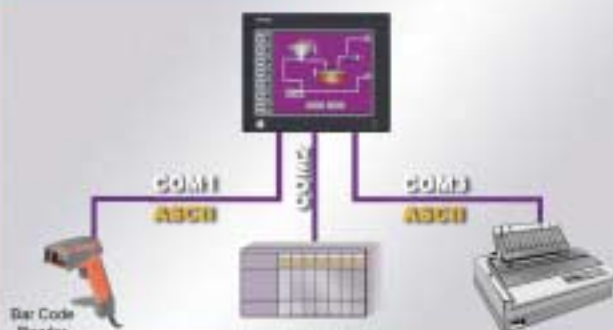
Point to Point



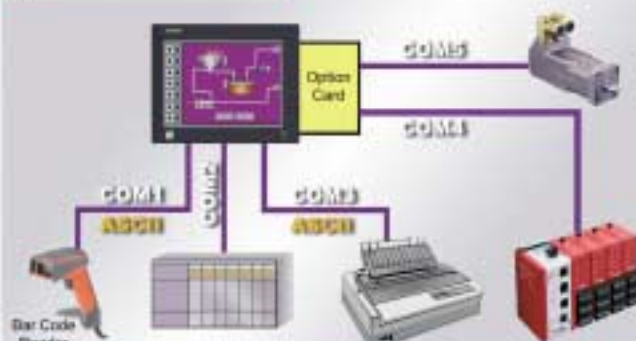
Multi-Points



Raw Port

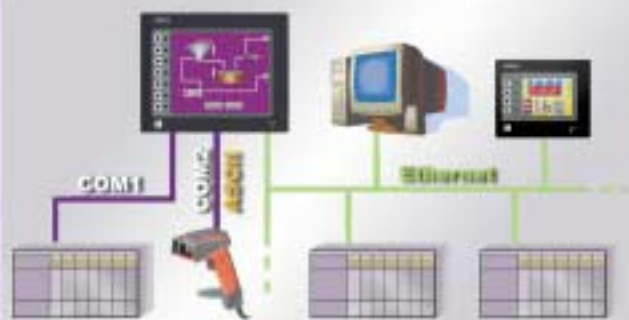


Option Card

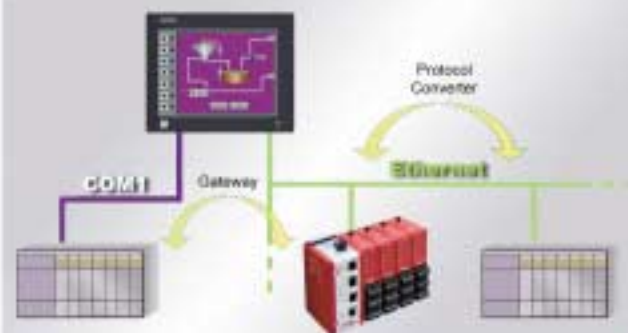


ETHERNET COMMUNICATION

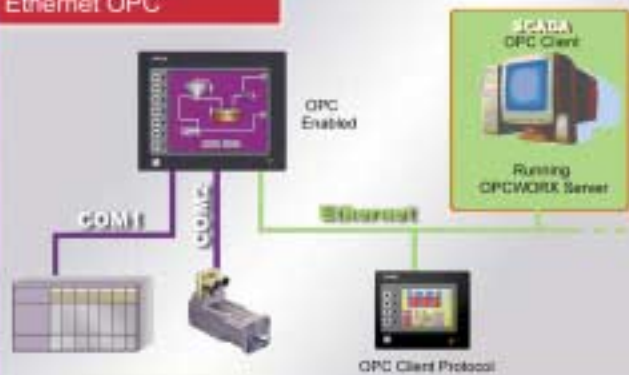
Comm. Ethernet



Ethernet Gateway



Ethernet OPC

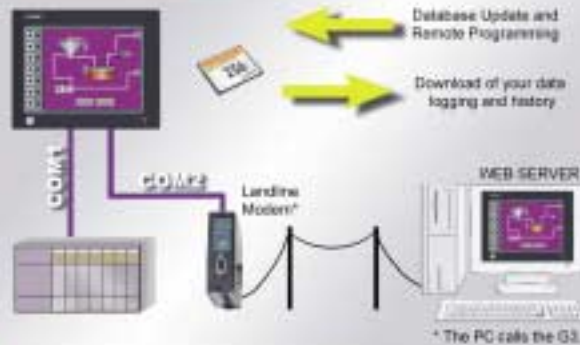


Ethernet Web Server



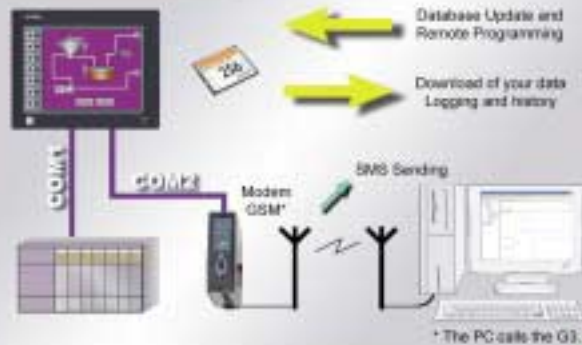
COMMUNICATION AND MODEM

Landline Modem



* The PC calls the G3.

GSM Modem



* The PC calls the G3.

Modem GPRS



* The G3 is permanently connected or on demand.

* The G3 calls the network.

Routing



OTHER COMMUNICATION FEATURES

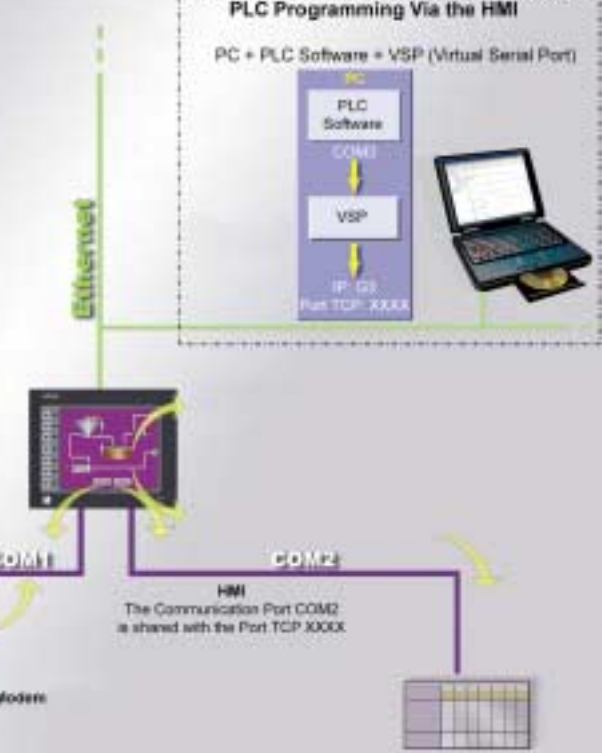
Communication BUS



Communication BUS:

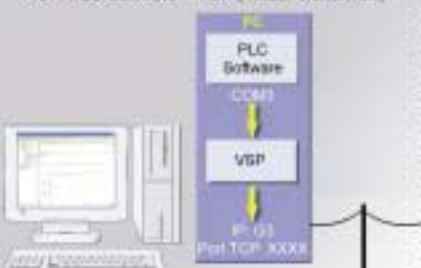
- CAN Open
- Profibus
- Devicenet

Pass Through



Programming Via the HMI

PC + PLC Software + VSP (Virtual Serial Port)



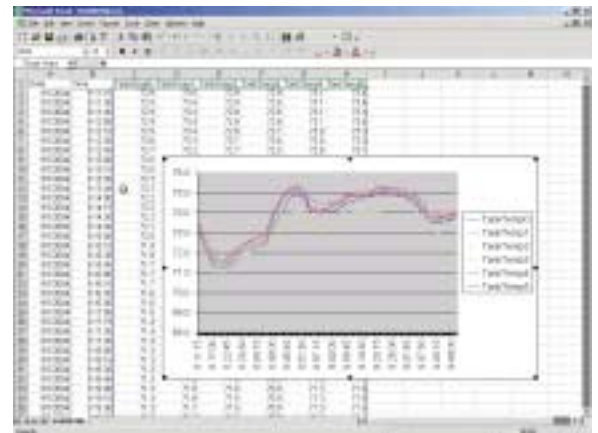
HMI
The Communication Port COM2
is shared with the Port TCP XXXX

Use software applications you already own.



Reduce software and support costs. Use common office applications that you and your customer already have. Internet Explorer or Netscape is all that you need to access the G3, avoiding the cost and administration of added software.

Immediately provides usable production data. Why should IT managers need plug-ins or converters to gather process data? By storing logged data in CSV file format, applications such as Microsoft Excel or Access can open and analyze process information. The G3 series stores data in a format that IT managers can immediately use.



Lower manpower and travel costs. Why check up on equipment performance manually when you can have the process notify you of pending failure? The G3 series can connect via Ethernet, landline modems, or even cellular modems to reach you anywhere in the world. With built-in email and text messaging functions, the G3 allows you to focus only on the areas of concern.

The only HMI that web-enables any device for remote operation across your LAN or the internet.

Red Lion's G3 HMI Series is not only the first to communicate with up to five different types of serial devices simultaneously, but lets you access, monitor and control these devices *remotely*—from across your network, or around the globe.



Intermittent Remote PC:
– Customer Support
– Uploading/Downloading
– Performance Monitoring



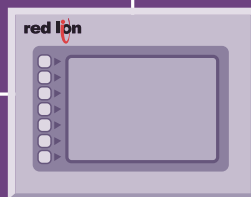
Remote PC:
– “Virtual Panel”
– Operation
– Monitoring
– Data Logging
– Analysis



10 Base T/100 Base-TX Ethernet

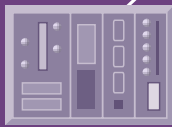


USB Connection
– Rapid Uploading/Downloading



Compact Flash Card
– Trending
– Data Logging
– Non-Volatile Parameter Storage

– Up to Five RS232/422/485 Ports
– Integrated Gateway/Protocol Converter



Device #1



Device #2



Device #3



Device #4



Device #5

Communicate/control multiple devices:

- PLCs
- PCs
- Drives
- PID controllers
- ...and more



The easiest and most flexible software. And it's free.

Red Lion's remarkable Crimson 2 software is a powerful programming platform that gives the G3 Series a number of exclusive functions. Its sophistication also makes all the complex capability of the G3 manageable, with user friendly drag and drop data mapping. Crimson is universal to all Red Lion HMIs. And unlike competitive HMIs that charge you extra for what is often very cumbersome and difficult proprietary software, the initial set up of Crimson is very easy and virtually self-explanatory.

Crimson includes an extensive library of device drivers to quickly establish communications between the G3 and virtually any device. *Once communication is established, anything the G3 can communicate with is now Ethernet-enabled via the built-in gateway and protocol converter.* This capability is unavailable in any other HMI Panel.



Best of all, Crimson is free. As are software updates, support, cabling instructions and communication drivers. In fact, if a specific device driver does not exist, Red Lion will write one for you. *Try finding this level of support and value with any other HMI!*

Integrated protocol converter has them all talking.

Crimson features a built in gateway that converts any attached device's serial protocol to 10 Base T/100 Base-TX Ethernet and automatically web-enables the device. Disparate serial devices now speak the same language, and unlike other HMIs that require you to purchase a protocol converter for up to \$1,000 additional— on the G3 Series, it's standard.

Built-in web server offers remote access and control.

The Crimson web server is capable of providing remote access to the G3 via a number of mechanisms. First, you can use Crimson to automatically generate web pages that contain lists of tags—each formatted according to the tag's properties. You can also create a custom web site, using a third party HTML editor such as Microsoft FrontPage, with code that instructs Crimson to insert live tag values for realtime monitoring. And finally, you can enable Crimson's Virtual Panel, a unique remote access and control feature, which allows a web browser to not only view the G3's display in realtime, but control its keypad and operate any of its Ethernet-enabled devices remotely. This feature is only available in the G3 HMI Series.



atures.

Multi-device data logging capabilities.

Crimson allows users to quickly set up any number of devices in a control application, collect performance data, display it, store it for evaluation, or trigger PLC functions with one panel—either live or remotely. Data may be recorded as quickly as once per second and can be acquired from one or all connected devices. Values are stored in CSV (comma separated variable) files that can easily be imported into applications such as Microsoft Excel. Unique to the G3 HMI, Crimson's web server can be used to expose various data via the G3 panel's Ethernet port, allowing remote access to diagnostic information, or to the values recorded by the data logger.

Virtually unlimited data storage with CompactFlash.

An integrated CompactFlash slot accommodates inexpensive and readily available Type I and II CompactFlash cards that lets you collect, retain and transfer data easily. If you need to update the database within a machine that is already installed at a customer's site, Crimson allows you to save a copy of the database to a CompactFlash card, ship that card to your customer, and have the G3 load the database from that card.



Faster data transfer and downloading with USB.

The G3 HMI Series features a convenient USB port for fast downloads of configuration files from a PC as well as trending and data logging uploads to your PC for analysis.

Powerful processing.

The G3 HMI Series features an onboard 32-bit processor for unmatched computing capability. The full-featured Crimson software contains a built in "C" compiler to create custom programs for complex applications, recipe handling, realtime scheduling, math expression evaluation and much more.

Faster configuration and programming.

Crimson 2 is a powerful set of icon-based, configuration, display, control and data logging tools designed specifically to take full advantage of the G3 HMI Series architecture. The majority of simple applications can be quickly set up using the a step-by-step process to configure communications protocols, define the data tags to be accessed, and create the user interface. A full set of drag and drop graphical items make creation of the interface easy while yielding professional results. More advanced features, such as programming, data logging and configuring the G3's web server, are intuitive and easily enabled.



The lowest priced, full-featured HMIs.

For less than many stripped-down HMIs, you can add the powerful capabilities and ease of use found only in the G3 HMI Series. The G3 Series HMIs start as low as \$599, and come standard with three serial comms, Ethernet, protocol converter, USB, and CompactFlash slot. And at no extra charge, you get full-featured Crimson 2 software with drag and drop configuration and data tagging, easy-to-use interface tools, flexible programming environment, powerful data logging, and our exclusive Virtual Panel and web server capabilities for remote access and control.

Learn more at www.redlion.net/G3

The power, flexibility, ease-of-use and value offered by the G3 HMI Series is unparalleled. Learn how you can add total integration, data logging, trending, remote access and more to your machines quickly and easily with a G3 HMI and Crimson. For your local representative, call (717) 767-6511, or go to www.redlion.net/G3.

red lion
trust+innovation®

G3 HMI Series Specifications



MODEL G303—

Graphic LCD Operator Interface Terminal

- Configured using Crimson software (version 2.0 or later)
- Two (2) RS-232 and one (1) RS-422/485 communication ports on board
(Optional communications card adds one (1) RS-232 and one (1) RS422/485)
- 10 Base T/100 Base-TX Ethernet port to network units and host web pages
- USB Port to download the unit's configuration from a PC or for data transfers to a PC
- 4 MB Flash non-volatile memory for storage of unit configuration
- CompactFlash® socket to increase memory capacity
- 3.2-inch 128x64 pixel LCD with yellow LED backlight, able to support text and simple graphics
- Rugged 32-button membrane keypad with user-identifiable navigational, numeric, menu, and other key functions
- Sunlight visible outdoor unit with UV rated overlay available
- Three user programmable front panel LEDs
- Power unit from 24VDC ±20% supply
- Footprint: 5.85" x 7.45" x 2.1"
(148.6 x 189.2 x 52 mm)



MODEL G308 and G310—

Graphic LCD Operator Interface Touchscreen Terminals

- Configured using Crimson software (version 2.0 or later)
- Two (2) RS-232 and one (1) RS-422/485 communication ports on board
(Optional communications card adds one (1) RS-232 and one (1) RS422/485)
- 10 Base T/100 Base-TX Ethernet port to network units and host web pages
- USB Port to download the unit's configuration from a PC or for data transfers to a PC
- 8 MB Flash non-volatile memory for storage of unit configuration
- CompactFlash® socket to increase memory capacity
- LCD Module: *G308* 7.7-inch DSTN Passive Matrix 256 Color VGA 640x480 pixel LCD module
G310 10.4-inch TFT 256 Color VGA 640x480 pixel LCD module
- Resistive analog touchscreen
- Sunlight visible outdoor unit with UV rated overlay available
- Rugged 7-button membrane keypad for on-screen menus (8-button keypad on G310)
- Three user programmable front panel LEDs
- Power unit from 24VDC ±20% supply
- Footprint: *G308* 8.18" x 10.32" x 2.2"
(207.8 x 262 x 56 mm)
G310 9.50" x 12.83" x 2.2"
(241.3 x 325.8 x 56 mm)



MODEL BFD—Big Flexible Display

Panoramic Status Monitor for the Plant Floor

- Large external monitor presents the display information on a G303 HMI to the plant floor
- Panoramic 38.5" x 19" red LED display with 0.2" diameter pixels
- 128 x 64 dot resolution visible up to 250 feet
- Displays the graphic images or text on the G303 HMI
- Connects to the RS485 port of a G303 HMI
- Field replaceable display boards
- Variable display intensity with flash & blanking commands
- Rugged steel construction with flexible 4 eyebolt mounting
- Universal AC power input (85 - 265 VAC, 50 / 60 Hz)
- Optional NEMA 4 cooling kit available