GRAPHITE® EDGE CONTROLLER

Compact and Scalable for All Industrial Environments

OPTIMIZE YOUR CAPITAL INVESTMENT

Connecting equipment to a common communications backbone can be a challenging task. The Graphite Edge Controller allows you to connect your equipment's proprietary protocols to modern, open standards like OPC UA, DNP3, Modbus and many more. By unlocking the data available in disparate devices, Red Lion's protocol driver library assures our customers that their capital investment will stay relevant and connected for years to come. The drag-and-drop simplicity of protocol conversion in our Crimson software enables you to quickly respond in a rapidly changing world without significant and costly redevelopment.

POWERFUL INTEGRATED FEATURES

- Ethernet, USB and serial ports make communication simple
- Built-in data logging enhances troubleshooting and helps meet regulatory requirements
- Robust web server provides remote visualization, access and control to reduce costly site visits

RUGGED ENVIRONMENTAL SPECIFICATIONS

- Wide -40 to 70°C operating temperature
- High shock and vibration tolerance
- CE, UL/cUL and UL/cUL hazardous approvals

CONNECT TO YOUR PROCESS FROM ANYWHERE

The Graphite Edge Controller can be easily scaled for large applications using Red Lion Graphite Expansion Racks. The expansion racks allow up to 24 additional modules to be added to an Edge Controller. Modules provide expanded capabilities including analog and digital I/O, PID control, and additional specialized communication options such as CAN, J1939, DeviceNet™ and PROFIBUS DP.

EXPAND
YOUR HORIZONS

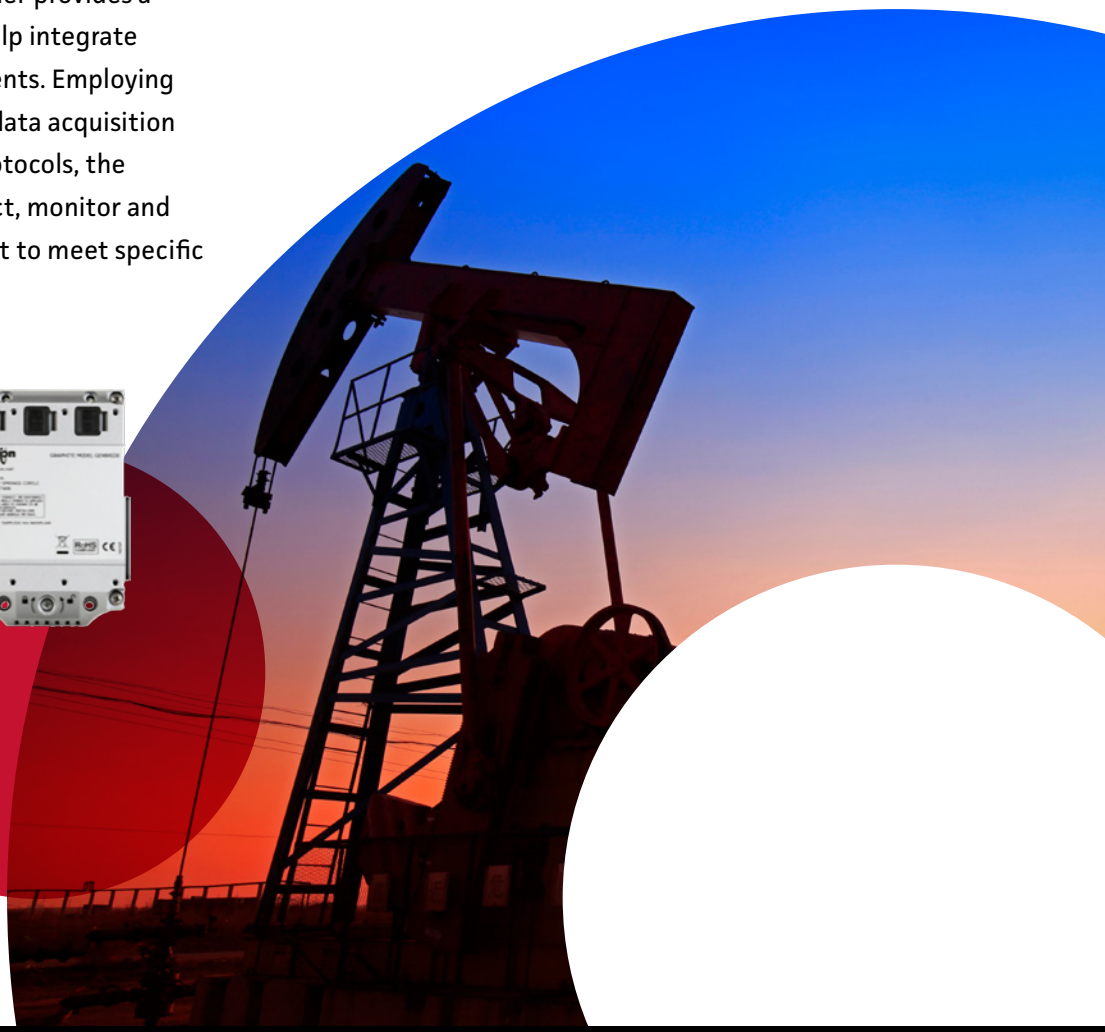
No matter what is being monitored, the ability to collect and control critical parameters, effortless interoperability and increased uptime are all key to delivering meaningful outcomes.

Graphite expansion racks allow up to 25 modules to appear as a single node on a network and can monitor up to 200 I/O.

Simply drag and drop module data to virtually any PLC's registers in seconds without writing tedious code. In addition, with easy-to-use, direct wiring terminations and storage of each module's configuration on the controller itself, downtime for module replacement is dramatically decreased.

BUILD THE IDEAL SOLUTION

Red Lion's Graphite Edge Controller provides a scalable all-in-one platform to help integrate complex multi-vendor environments. Employing modules to address PID control, data acquisition and specialty communication protocols, the platform enables users to connect, monitor and control a wide array of equipment to meet specific application requirements.



PID CONTROLLER MODULES

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MODEL NUMBER	INPUTS	INPUT TYPE	CONTROL OUTPUTS	ANALOG OUTPUT	OPTION
GMP1RA00	Single PID Loop	0/4 to 20 mA, 0 to 10 V, Thermocouple or RTD	3 Relays	+/-10 V or 0/4 to 20 mA	-
GMP1RM00	Single PID Loop	0/4 to 20 mA, 0 to 10 V, Thermocouple or RTD	3 Relays	-	Heater Current Monitor
GMP1SA00	Single PID Loop	0/4 to 20 mA, 0 to 10 V, Thermocouple or RTD	4 SSR	+/-10 V or 0/4 to 20 mA	-
GMP1SM00	Single PID Loop	0/4 to 20 mA, 0 to 10 V, Thermocouple or RTD	4 SSR	-	Heater Current Monitor
GMP2R000	Dual PID Loop	0/4 to 20 mA, 0 to 10 V, Thermocouple or RTD	4 Relays	-	-
GMP2RM00	Dual PID Loop	0/4 to 20 mA, 0 to 10 V, Thermocouple or RTD	4 Relays	-	Heater Current Monitor
GMP2S000	Dual PID Loop	0/4 to 20 mA, 0 to 10 V, Thermocouple or RTD	4 SSR	-	-
GMP2SM00	Dual PID Loop	0/4 to 20 mA, 0 to 10 V, Thermocouple or RTD	4 SSR	-	Heater Current Monitor

Please review module specifications and certifications before ordering.

COMMUNICATION MODULES

Expand Graphite Edge controller functionality with communication modules that support protocol-specific functions for integration into J1939, CAN and DeviceNet networks. In addition, install the high-speed HSPA+ cellular module to add remote monitoring and control to any application.

MODEL NUMBER	FUNCTION
GMCAN000	CAN Communication
GMJ19390	J1939 Communication
GMDN0000	DeviceNet Communication
GMPBDP00	PROFIBUS DP Communication
GMHSPA00	HSPA+ Cellular Communication

Please check with your cellular carrier to determine if 3G/HSPA+ is available in your area.

DATA ACQUISITION MODULES

Monitoring and controlling remote devices is easy and intuitive with Graphite data acquisition modules. With Digital I/O, universal, analog and thermocouple/RTD modules, easily connect any device or sensor to the Graphite Edge controller. Inputs are isolated from outputs and are independently configurable for high or low active status.

MODEL NUMBER	INPUTS	INPUT TYPE	CONTROL OUTPUTS	ANALOG OUTPUT
GMDIOR00	8 Digital	DC Inputs or Switch Closures	6 Relays	-
GMDIOS00	8 Digital	DC Inputs or Switch Closures	6 SSR	-
GMINI800	8 DC Current	0/4 to 20 mA Inputs	-	-
GMINV800	8 DC Volt	+/-10 V Inputs	-	-
GMOUT400	-	-	4 Analog	+/-10 V or 0/4 to 20 mA
GMTC8000	8 Thermocouple	T, E, J, K, R, S, B, N, C and Millivolt	-	-
GMRTD600	6 RTD	585, 592, 428, 672 and Ohms	-	-
GMSG10R0	1 Strain Gage	±20 mV, ±33 mV or ±200 mV	3 Relays	+/-10 V or 0/4 to 20 mA
GMSG10S0	1 Strain Gage	±20 mV, ±33 mV or ±200 mV	3 SSR	+/-10 V or 0/4 to 20 mA
GMSG11R0	2 Strain Gage	±20 mV, ±33 mV or ±200 mV	3 Relays	+/-10 V or 0/4 to 20 mA
GMSG11S0	2 Strain Gage	±20 mV, ±33 mV or ±200 mV	3 SSR	+/-10 V or 0/4 to 20 mA
GMUIN400	4 Universal	0/4 to 20 mA, 0 to 10 V, Thermocouple or RTD	-	-

Please review module specifications and certifications before ordering.

EXPANSION RACKS AND USB CABLES

Graphite expansion racks come in wide and standard sizes, each supporting up to three plug-in modules. At least one wide expansion rack, which doubles as a power supply for connected modules is required when tethering via USB versus direct connection to the Graphite Edge Controller.

MODEL NUMBER	FUNCTION
GEXRACK2	Graphite Standard Expansion Rack for Modules
GEXRACK1	Graphite Wide Expansion Rack for Modules with power supply
CBLUSBM2	USB Tethering Cable, 2 m, Metal Jacketed
CBLUSBM1	USB Tethering Cable, 1 m, Metal Jacketed
CBLUSBM0	USB Tethering Cable, 0.5 m, Metal Jacketed

Red Lion products give users freedom to select the best components for a given application, regardless of vendor.

HARNESS THE VALUE OF INDUSTRIAL INFORMATION

TREND VIEWER

- Deliver operational insights directly to the plant floor
- Monitor productivity from anywhere
- Display trends in real time

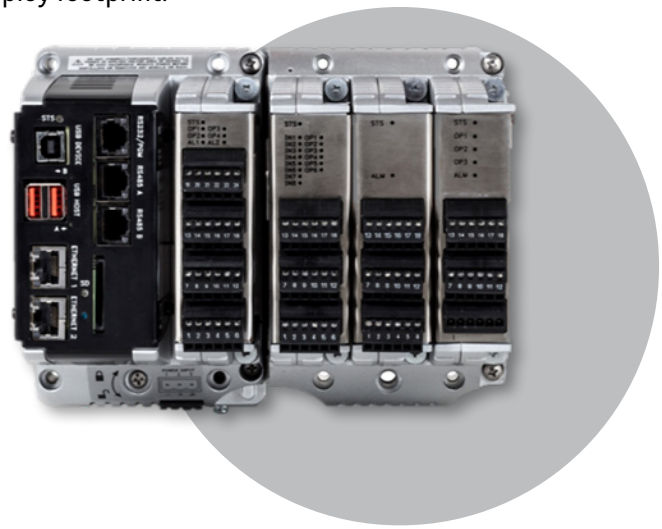
DATA LOGGING

- Collect statistics on any Crimson data tag and deliver to upstream systems for reporting
- Address regulatory requirements
- Enhance troubleshooting and improve uptime

SQL SYNC & QUERIES

- Sync data to system servers for long-term storage
- Simplify batch and recipe management to ensure repeatable quality

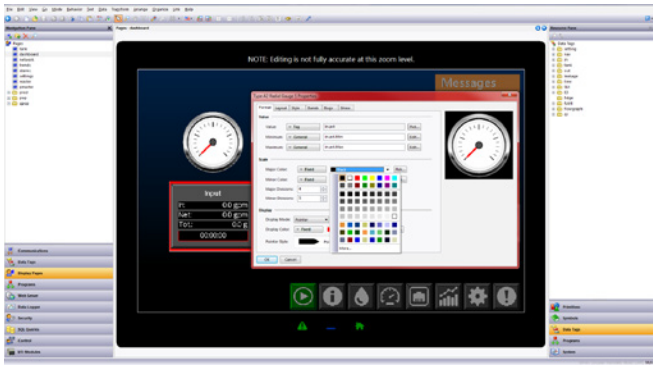
The compact, rugged Graphite® Edge Controller offers highly scalable I/O and combines networking and data visualization with industry-standard IEC 61131 control capabilities in a small, easy-to-deploy footprint.



CRIMSON CONTROL

- Intuitive drag-and-drop GUI for easy configuration
- Use industry-standard IEC 61131 programming languages such as ladder logic, function block, structured text and instruction list
- Map over 300 drivers to other devices without the need for special gateways
- All-in-one environment eliminates need for third-party software

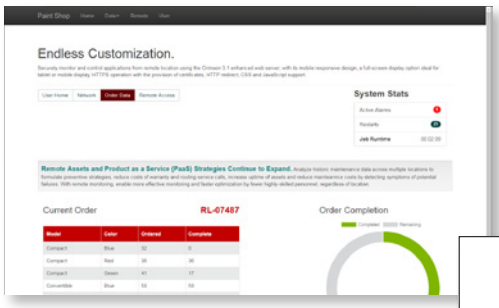
ENGAGE AND INFORM, ANYWHERE



With our powerful and easy-to-use Crimson software, remote monitoring and control is made simple. Crimson's software gauges can dynamically adjust to virtually any application need; practically every feature, including bands, bugs and colors can be assigned data tags that change as processes change – keeping the user experience consistent with a lower total cost of ownership for machine builders and plant operators alike.

Crimson web server enables customers to securely monitor and control applications from remote locations. It features a mobile responsive design with a full-screen display option ideal for tablet or mobile display, HTTPS operation with the provision of certificates, HTTP redirect, CSS and JavaScript support.

Crimson offers simple to use advanced design capabilities, 3D symbols, industry-leading point-and-click protocol conversion, optional data logging and an advanced web server for secure, remote monitoring and control.



red lion®

THE TRUSTED SOLUTION FOR INDUSTRIAL AUTOMATION AND NETWORKING

CONNECT. MONITOR. CONTROL.

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ADLD0487 092018