

# Galaxy Pulsar Edge

GCP841A\_0I6R\_USB\_S Controller (150043558)



## Overview

The Global Power System Galaxy Pulsar Edge controller delivers large system intelligence in a small form factor. The Pulsar Edge is a family of controllers that function as a network interface controller (NIC) and as a full-featured power system controller for the J2014001 family of Global Power (GP) shelves and associated peripherals.

Its thin modular plug-in form factor minimizes shelf space consumption allowing maximum power module and distribution capabilities providing similar features found in controllers used in larger power systems ranging up to 20k amps (1MW). The GCP841A\_0I6R\_USB\_S controller is one specific member of the Galaxy Pulsar Edge family.

The Pulsar Edge GCP841A\_0I6R\_USB\_S controller is utilized in both integrated cabinet and bulk power applications in data centers and enterprise applications. Ethernet connectivity with SNMP facilitates remote network management and access through its front-accessible USB is aided by the EasyView2 graphical user interface as well as a web interface.

As a battery system controller, it provides a complete set of features utilizing a half-duplex isolated RS485 bus for management and control of rectifiers, smart batteries, and distribution components. A flexible set of configurable inputs allow the GCP841A to monitor a wide variety of system equipment and incorporate appropriate state information enabling a centralized point of management.

The controller utilizes standard network management protocols allowing for advanced network supervision from standard network management systems. ABB Critical Power Galaxy Manager™ software is the centralized visibility and control component of a comprehensive power management system designed to meet engineering, operations, and maintenance needs. The Galaxy Manager client-server architecture enables remote access to system controllers across the power network.

## Advantages

- Fully integrated Ethernet controller supporting variety of protocols
- 1U in height and resides on shelf Edge leaving room for maximum number of power modules
- No active controller parts on shelf back-plane
- Hot insertable/removable
- Modular with connections built into shelf not requiring disconnect
- Accessible remotely and locally
- Remote software upgrade
- Operates over a broad temperature range (-40°C through +75°C)

## Applications

- Enterprise Networks - Voice, Data, PoE
- Telecommunications networks
- Transmission equipment
- Fiber in the loop
- Routers/switches
- ABB Edge cabinets
- Data networks
- 48V<sub>dc</sub> Distributed Power Architectures

## Key Features

### Remote Access and Features

- Integrated 10/100Base-T Ethernet Network
  - TCP/IP (IPv6 and IPv4 compatible)
  - SNMP (V3, V2c, V1) for management
  - SMTP for email
  - Telnet/SSH for command line interface
  - DHCP for plug-n-play
  - FTP/SFTP for rapid backup and upgrades
  - HTTP/HTTPS for standard web pages and browsers
  - NTP for clock synchronization
  - Compatible with Galaxy Manager and other management packages
  - Shielded RJ-45 interface referenced to chassis ground
- Password protected security levels: User, Super-User, and Administrator for all access
- Ground-referenced RS232 system port
- ANSI T1.317 command-line interface Modem access support
  - Remote via external modem- Callback security EasyView2, Windows-based
- GUI software for local terminal or Modem access

### Standard System Features

- Monitor and control of more than 64 connected devices
  - Maximum of 40 rectifiers
  - Maximum of 16 battery modules
  - 6 distribution control cards
  - Robust RS485 system bus
- Standard and user defined system alarms
  - Alarm test
  - Assignable alarm severity: Critical, Major, Minor, Warning, and Record-only
- Rectifier management features
  - Automatic rectifier restart
  - Active Rectifier Management (Energy efficiency)
  - Remote rectifier (on/off)

- Reserve Operation
- Automatic rectifier sequence control
- N + X redundancy check
- Multiple Low Voltage Load and Low Voltage Battery Disconnect thresholds (4)
- Configuration, statistics, and history
  - All stored in non-volatile memory
  - Remote/local backup and restore of configuration data
- Industry standard defaults
  - Customer configurations available
- Remote/ local software upgrade (controller and specific rectifiers)
- Basic, busy hour, and trend statistics
- Detailed event history
- User defined events and derived channels

### Standard Battery Management Features

- Float/boost mode control
  - Manual boost
  - Manual timed boost locally and remotely
  - Auto boost terminated by time or current
- Battery discharge testing
  - Manual (local/remote)
  - Periodic
  - Plant Battery Test (PBT) input driven
  - Configurable threshold or 20% algorithm
  - Graphical discharge data
  - Rectifiers on-line during test
- Slope thermal compensation (STC)
  - High, Low and Step temperature
  - STC Enable/Disables
  - Configurable mV/°C slopes
- State of charge indication
- High temperature disconnect setting
- Reserve-time prediction
- Recharge current limit
- Emergency Power-Off input

## Integrated Monitoring Inputs/Outputs

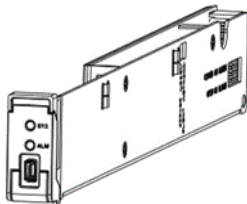
- One system plant voltage (accuracy  $\pm 0.5\%$ , resolution 0.01V)
- One shunt monitor (accuracy  $\pm 1\%$  full scale, resolution 1A)
  - Battery or load
  - Mounted in the return side of DC bus
- Up to 15 binary inputs (controller dependent)
  - Six inputs close/open to battery
  - Three input close/open to return
  - User assignable/configurable
- Up to 6 user assignable Form-C output alarms (60VDC @ .5A)
- 1-Wire™ bus devices
  - Up to 16 battery temperature probes (QS873) (Probes not required with ABB smart batteries)
  - Up to 2 Ext ambient temperature probes (QS873)
  - Up to 6 mid-string voltage monitors (ES771)

## General

Operating Voltage	$\pm 24 V_{dc}$ , $\pm 48 V_{dc}$ (Range: $\pm 18$ to $\pm 60 V_{dc}$ )
Input Power	Less than 7W
Operating Temperature Range	-40°C to +75°C (-40°F to 167°F)
Storage Temperature Range	-40°C to +85°C (-40°F to 185°F)
Operating Relative Humidity	0 - 95% (non-condensing)
Physical Specifications	1.75 in. H, 0.75 in. W, 8.00 in. D; 0.5lb 45mm H, 20mm W, 204mm D; 227g
Part Number	07023643 (ABB Number CC109145331)

## Signal Interface in Edge Power System

- Front accessible USB mini connector J1 provides local craft interface



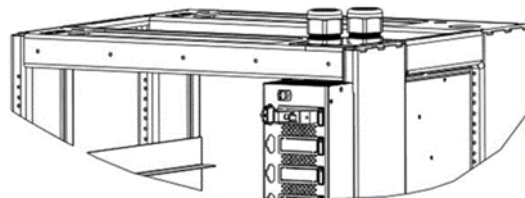
## Galaxy Manager Compatible

- Centralized web server and database with multiple user access to live or managed data with drill down to problem details
- Monitor and control of more than 150 connected systems
- Management information from polling or alarms received from alarm traps from multiple sites are available on one screen via the inter/intranet
- Trend user selected data over time
- Automatic or manual report generation
- Standard engineering tools like reserve time calculators and cable voltage drop analyzer

## AGENCY CERTIFICATIONS

Radiated Emissions	European Directive 2014/30/EU; EN55032, (CISPR22) Class B, EN55035 (CISPR24)
Safety	ANSI/UL 62368-1 and CAN/CSA C22.2 No. 62368-1 Recognized, DIN VDE 0868-1/A11:2017 (EN62368-1:2014/A11:2017)
RoHS	Compliant to RoHS EU Directive 2002/95/EC RoHS 6/6
EMC	European Directive 2014/30/EU; EN55032, Class B, EN55035; FCC, Class B; GR1089-CORE
ESD	EN 61000-4-2 level 4

- Edge Power Cabinet rear accessible RJ45 connector J5 provides LAN/Ethernet connectivity.



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## Reliability

- Delivers decades of service
- High availability architecture

## Intelligence

- Industry leading programmable
- digital smart monitor
- Visual, audible and remote alarms

## Investment Protection

- Backward compatibility
- Flexible upgrade options

## On Time Delivery

- 24/7 technical support
- Standard building blocks

## Management Visibility

Galaxy Manager\* software is the centralized visibility and control component of a comprehensive power management system designed to meet engineering, operations and maintenance needs. The Galaxy Manager client-server architecture enables remote access to system controllers across the power network.

- Dashboard display with one-click access to management information database
- Trend analysis
- Scheduled or on demand reports
- Fault, configuration, asset, and performance management

## Training

ABB offers on-site and classroom training options based on certification curriculum. Technical training can be tailored to individual customer needs. Training enables customers and partners to more effectively manage and support the power infrastructure. We have built our training program on practical learning objectives that are relevant to specific technologies or infrastructure design objectives

## Service & Support

ABB field service and support personnel are trusted advisors to our customers always available to answer questions and help with any project, large or small. Our certified professional services team consists of experts in every aspect of power conversion with the resources and experience to handle large turnkey projects along with custom approaches to complex challenges. Proven systems engineering and installation best practices are designed to safely deliver results that exceed our customers' expectations.

## Warranty

ABB is committed to providing quality products and solutions. We have developed a comprehensive warranty that protects you and provides a simple way to get your products repaired or replaced as soon as possible.

For full warranty terms and conditions please go to [abbpowerconversion.com](http://abbpowerconversion.com)

## Contact Us

For more information, call us at

1-877-546-3243 (US)

1-972-244-9288 (Int'l)

# Change History (excludes grammar & clarifications)

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Version	Date	Description of the change
1.2	12/30/2021	Updated as per template

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**ABB**

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