

FLEXEDGE® DA50A 1-Sled Scalable IIoT Gateway



▲ FLEXEDGE® Intelligent Edge Automation Platform

CLOUD, EDGE, WIRED, OR WIRELESS, DESIGN YOUR IDEAL INDUSTRY 4.0 OR IIOT APPLICATION WITH EASE.

- ▲ Modular architecture allows for easy addition of communication capabilities including cellular, Wi-Fi, serial and USB
- ▲ Advanced networking support offers routing, NAT, firewall, and VPN support to ensure data security
- ▲ On-board I/O with configurable AI/DI and DO to monitor and control local sensors
- ▲ Field upgradeable software to enhance capability of gateway if application changes
- ▲ Supports up to 10 simultaneous protocol conversions between over 300 industrial drivers (optional)
- ▲ Real-time data logging to microSD card or via FTP (optional)
- ▲ Industrial construction for reliable operation
- ▲ Intuitive LED status ring
- ▲ HDMI™-enabled option (Group 3/4 only)



▲ Ordering Guide

MAIN UNIT

PART NUMBER	DESCRIPTION	SW GROUP
DA50A0BNN0000010	FlexEdge 1-Sled Mixed Serial Networking Gateway	Group 1
DA50A0BNN0000020	FlexEdge 1-Sled Mixed Serial Protocol Gateway	Group 2
DA50A0BNN0000030	FlexEdge 1-Sled Mixed Serial Adv IIoT Gateway	Group 3
DA50A1BNN0000030	FlexEdge 1-Sled Mixed Serial Adv IIoT Gateway w/HDMI	Group 3
DA50A0BNN0000040	FlexEdge 1-Sled Mixed Serial Adv Automation Controller	Group 4
DA50A1BNN0000040	FlexEdge 1-Sled Mixed Serial Adv Automation Controller w/HDMI	Group 4

ACCESSORIES

PART NUMBER	DESCRIPTION
DAS00CL9C1SAZ000	4G LTE (CAT1) Cellular Sled for AUS (Telstra)
DAS00CL9C4SAM000	4G LTE (CAT4) Cellular Sled for AMER (AT&T, Generic)
DAS00CL9C4SEU000	4G LTE (CAT4) Cellular Sled for EMEA, SAARC, APAC
DAS00CL9C4SVZ000	4G LTE (CAT4) Cellular Sled for AMER (Verizon)
DAS00PN1EE200000	Dual Ethernet Sled
DAS00PN2221IS000	Dual RS232 Ports Sled (Isolated)
DAS00PN2442IS000	Dual RS485 Ports Sled (Isolated)
DAS00PN2245IS000	Mixed RS232/RS485 Ports Sled (Isolated)
DAS00PN40U400000	1 Port USB 2.0 Host Sled
DAS00PN8CA6IS000	DA Series, CAN Protocol Interface Sled
DAS00PN8J16IS000	DA Series, J1939 Protocol Interface Sled
DAS00WF10N0AM000	802.11n Wi-Fi Sled

See software manual for details on sled operation.

DA50A Ordering Guide Cont. and Specifications

SOFTWARE GROUPS

	GROUP 1 NETWORKING	GROUP 2 PROTOCOL	GROUP 3 ADV IIOT	GROUP 4 CONTROLLER
CONFIGURATION				
Web GUI	Y	Y	Y	Y
Crimson®	Y	Y	Y	Y
NETWORKING				
Firewall	Y	Y	Y	Y
RADIUS Auth.	Y	Y	Y	Y
Routing	Y	Y	Y	Y
NAT	Y	Y	Y	Y
IP Fallback	Y	Y	Y	Y
VPN Client/Server	Y	Y	Y	Y
AUTOMATION				
300+ Drivers		Y	Y	Y
IIoT Connectors		Y	Y	Y
OPC UA		Y	Y	Y
SQL Sync			Y	Y
Data Logging			Y	Y
Virtual HMI			Y	Y
Advanced Web Server			Y	Y
IEC CONTROL				
Crimson Control				Y

Specifications

Power Requirements

Supply Voltage: 12-24 VDC +/-15%, Class 2 source

INPUT VOLTAGE	12 V	24 V
Typ. Power DA50A Gateway Only	2.5 W	2.6 W
Max Power DA50A Gateway Only	3.0 W	3.1 W
Max Power DA50A Gateway, with Sled	5.6 W	5.7 W

Battery

3 V Lithium coin cell.

Memory

On Board User Memory: 1 GB of non-volatile Flash memory.
Memory Card: microSD slot accepts Class 5 or better microSD cards up to 256 GB capacity. FAT32, industrial grade.

Communication Properties

USB Device Port: One (1) Isolated USB Type B Port Complies with USB Specification 2.0 (Full Speed)

Ethernet Ports: Two (2) 10BaseT / 100BaseTX RJ45 ports (1500 Vrms Network Isolation)

Serial Ports: Two Serial Ports with Individual Port Isolation

One (1) RS232 Serial RJ12 115200 Bps

One (1) RS485/RS422 Serial RJ45 115200 Bps

HDMI Port: HDMI™ Connector. Supports 1080p@24 Hz as specified in HDMI 1.4

Digital Output (DOUT)

Configuration: Open Collector, reference to ground

Absolute Maximum IDC: 500 mADC (Vce = 750 mVDC)

Absolute Maximum VDC: 30 VDC (open circuit)

Absolute Minimum VDC: -0.4 VDC (open circuit)

Digital Input (DIN)

Configuration: Unisolated level detection, reference to ground

Active level: 2.5 VDC to 30 VDC

Inactive level: 0 VDC to 1.3 VDC

Absolute Minimum VDC: -0.3 VDC

Absolute Maximum VDC: 33 VDC

Leakage IDC at 5 VDC: 150 µADC

▲ DA50A Specifications Cont.

Analog Input (Shared with Digital Input)

Configuration: Unisolated input, reference to ground
Resolution: 4096 (ADC 12-bit)
VDC per step: 9.483 mVDC (full scale level: 38.8 V)
Accuracy: 2%
Zero level: 0 VDC
Absolute Minimum VDC: -0.3 VDC
Absolute Maximum VDC: 33 VDC
Leakage IDC at 5 VDC: 265.96 μ ADC typical

Networking Capabilities

Tunneling: IPsec, GRE and Open VPN
IP: NAT, port forwarding, dynamic DNS, DHCP Stateful inspection
firewall, IP fallback and IP transparency
Routing Protocols: VRRP Encapsulation Protocols

Environmental

Without HDMI:

Operating Temperature Range: -40 to 75 °C T_{AMB}
Storage Temperature Range: -40 to 85 °C T_{AMB}

With HDMI Video:

Operating Temperature Range: -20 to 75 °C T_{AMB}
Storage Temperature Range: -20 to 85 °C T_{AMB}

Operating and Storage Humidity: 0 to 85% max. RH non-condensing

Vibration to IEC 60068-2-6: Operational 5-500 Hz, 2 g

Shock to IEC 60068-2-27: Operational 15 g

Altitude: Up to 2000 meters

Installation Category II, Pollution Degree 2 as defined in IEC/EN 60664-1.

Certification & Compliance

CE Approved

EN 61326-1 Immunity to Industrial Locations

Emission CISPR 11 Class A

IEC/EN 61010-1

RoHS Compliant

ATEX Approved

Ⓜ II 3 G Ex ec IIC T4 Gc
DEMKO 20 ATEX 2268X

IECEX Approved

IECEX UL 20.0007X

UKEX Approved

UL22UKEX2576X

UL Hazardous: File # E317425

Rugged IP30 enclosure

Connections

Wire Strip Length: 0.3" (7.5 mm)

Wire Gauge Capacity: 12 to 24 AWG (3.31 to 0.20 mm²) copper wire only

Construction

Polycarbonate enclosure with IP30 rating.

Weight:

Without HDMI Port: 13 oz (404.3 g)

With HDMI Port: 14.74 oz (417.87 g)

Mounting

DIN Rail: Attaches to standard "T" profile DIN rail according to EN50022 - 35 x 7.5 and 35 x 15

Warranty

3 years on design and manufacturing defects.

Specifications are subject to change.

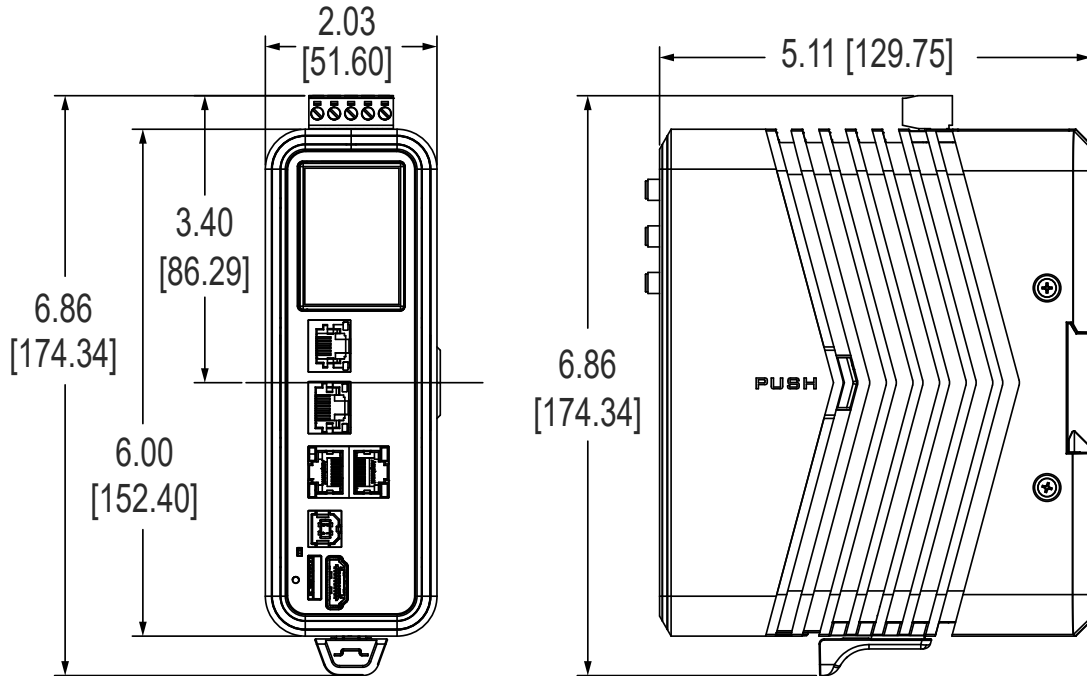
Visit www.redlion.net for more information.

Trademark Acknowledgments

The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc

▲ DA50A Dimensions

▲ Dimensions In inches [mm]



For over 50 years, Red Lion has strived to be THE Industrial Data Company™. The company empowers industrial organizations around the world to unlock the value of data by developing and manufacturing innovative solutions to access, connect and visualize their information. Red Lion products make it easy for companies to gain real-time data visibility that drives productivity. Red Lion is part of Spectris plc, the experts in providing insight through precision measurement. For more information, please visit www.redlion.net.

www.redlion.net
[contact us](#)

©2020-2023 Red Lion Controls, Inc. All rights reserved. Red Lion, the Red Lion logo, Crimson, FlexEdge and THE Industrial Data Company are trademarks of Red Lion Controls, Inc. All other company and product names are trademarks of their respective owners.