FLEXEDGE® DA50A 1-Sled
Scalable IIoT Gateway

RED LION®

◢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)

UKCA CE Ex c(UL)us LISTED IND.CONT. EQ. E317425

HDMI™ HIGH-DEFINITION MULTIMEDIA INTERFACE

◢ 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.

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

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 μADC 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 mm^2) 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.
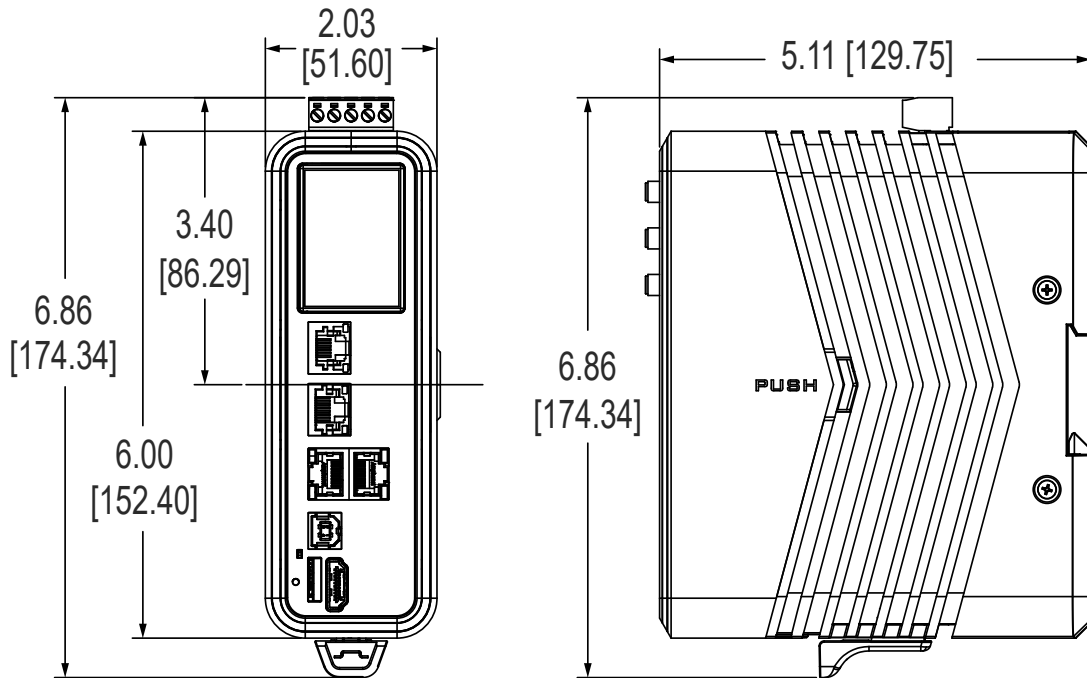Specifications are subject to change.
Visit www.redlion.net for more information.

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

◢ **Dimensions** In inches [mm]

2.03 [51.60]

3.40 [86.29]

6.86 [174.34]

6.00 [152.40]

5.11 [129.75]

6.86 [174.34]

PUSH

www.redlion.net
contact us

©2024 Red Lion Controls, Inc. All Rights Reserved. The terms Red Lion, the Red Lion logo, Crimson and FlexEdge are registered trademarks of Red Lion Controls. All other marks are the property of their respective owners.

LD1008D 05 2024