BAS-DSA Gateway Server with embedded DGLUX5

General description

Vector BAS-DSA is a programmable HMI-Server with fully embedded DGLUX5. It features multiple protocols, uses flash memory and runs on Linux on a DSA framework.

The BAS-DSA features a 1.2 GHz 64-bit quad-core ARMv8 CPU with an 802.11n wireless LAN, 1 GB RAM and 4 USB ports.

Programming is browser based, drag and drop and easy to learn.

Meanwhile it also provides advanced functionality such as supervision, data logging, alarming, scheduling and network management functions with internet connectivity and web-serving capabilities.

Application / Operational area

The Vector BAS-DSA is designed as a high power server for connection to Ethernet bus systems.

The device is designed for control and regulation of building services. Via the integrated Ethernet bus system, the integration in modern buildings is used efficiently in central as well as in decentralized information focuses. Across the broad range of connectable Vector communicating devices, the scalable controllers can be extended at any time concerning the individual project requirements.

About the free programmability a maximum of flexibility and comfort is guaranteed. As a result, the projects are ideally suited to the particular requirements both in the modernization of existing installations as well as for implementing current and future automation projects.

DGLUX5

DGLUX5 is a modern toolset to design real-time, data-driven applications and dashboards with drag and drop configuration. It runs on a browser and enables faster communication through real-time, data-driven dashboards for web, desktop and mobile devices. It is cost effective because, there is no special software or tool needed, no PC required on site and no certification classes necessary.

Licensing

Licensing is based solely on data being utilized in the interfaces built with DGLux5. This is achieved by keeping track of the number of topics a DGLux5 project employs when end users navigate through various pages and components. All DGLux5 licenses include unlimited user seats and projects on a single host device (embedded, personal or server).

Topics

A topic is defined as a unique interaction with the server such as a subscription to a data point, an executed query, or a command like a set value. For example: a page with 3 gauges showing one unique value per gauge, a chart displaying two trends, and a graphic of a fan displaying and allowing control of fan status, would equate to 7 topics.

Ordering

Item	Item code	DGLUX5 License	Description
BAS-DSA-100	40-12 0008	100 topics	
BAS-DSA-200	40-12 0008-2	200 topics	
BAS-DSA-300	40-12 0008-3	300 topics	
BAS-DSA-400	40-12 0008-4	400 topics	Gateway Server, 10/100 Ethernet, Wi-Fi 2.4 GHz 802.11n, 4 x USB 2.0 ports
BAS-DSA-500	40-12 0008-5	500 topics	
BAS-DSA-1000	40-12 0013	1000 topics	
BAS-DSA-1500	40-12 0009	1500 topics	

Important notice and safety advice

This device is for use as operating controls. It is not a safety device! Where a device failure endangers human life and/or property, it is the responsibility of the client, installer and system designer to add additional safety devices to prevent a system failure caused by such a device failure. Ignoring specifications and local regulations may cause equipment damage and endangers life and property. Tampering with the device and misapplication will void warranty.

Technical specifications

Power supply	Power requirements	5 V DC (2.5 A)
	Power consumption	Max. 12.5 VA
	Max. back-up fuse	2.5 A
Microprocessor and memory	CPU	1.2GHz 64-bit quad score ARMv8
	RAM memory	1 GB
	Flash memory	8 GB microSD card
	Clock	battery buffered real time clock
	Watchdog	Hardware-Watchdog
Interfaces	Fast ethernet	1 x 10/100 BaseT (RJ45) with LED display
	Wi-Fi	2.4 GHz Wireless LAN 802.11n
	USB	4 x USB 2.0
Ratings	FCC	Part 15 class A
	CE	
Enclosure	Dimensions (W x D x H)	90.5 mm x 71.3 mm x 62 mm
	Material	Plastic
	Mounting	On Standard mounting rail 35 mm
	Protection class	IP 20
	Cooling	No fan; by convection
	Temperature range	0…50°C
	Connection	Ethernet, HDMI, USB 2.0

Installation

The assembly is to be executed following installation standards by trained personnel. The installation of the device takes place on standard (norm) DIN rail 35 mm in electrical cabinets. For the assembly in intermediate ceilings suitable housings have to be used. If necessary, inspection openings have to be provided.

When installing it is important to make sure that the open parts of the device are free from pollution.

Software

The device is delivered without a loaded program. A suitable program for the purpose must be loaded by trained personnel.

Commissioning

Commissioning has to be performed by a licensed and trained professional. Local rules and regulations have to be observed.

Service / Maintenance

The BAS-DSA is maintenance-free.

The program is saved in flash memory and is saved during power blackout. The BAS-DSA features an internal UPS which keeps the device running for 2 minutes after removal of power. After 2 minutes the device will perform a save shut down.

The power backup serves additionally to maintain the system time. At initial power up, the battery needs to be charged for 4 hours before power backup operation works reliably.

Connection options

The BAS-DSA is appropriate for the application in the building technology environment. With its extensive features of standard communication interfaces and protocols, it is also able to link a large variety of external devices besides Vector's. Available as interfaces are the serial interfaces (RS485), as well as connections for the Ethernet network. Wired or Wi-Fi.
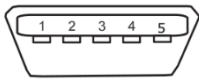
Dimensions mm (inch)
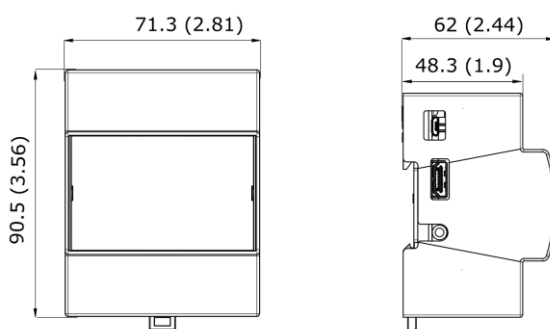
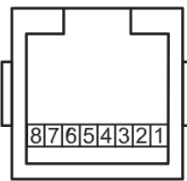# Terminal configuration / Display and control elements
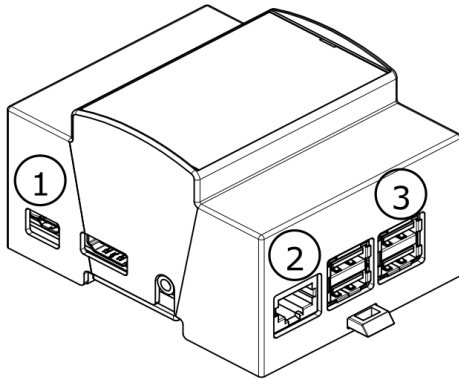
USB Power Interface

Plug Pin	Function
① USB MICRO	
1	Ground
2	Mode Detection (ID)
3	Data +
4	Data -
5	+5 V DC

Network (LAN)

Plug Pin	Function
② Ethernet RJ 45	
1	Tx +
2	Tx -
3	Rx +
4	-
5	-
6	Rx -
7	-
8	-

USB serial interface (4x)
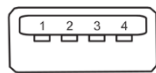
Plug Pin	Function
③ USB V2.0	
1	+5 V DC
2	Data -
3	Data +
4	Ground

Operating and status LEDs
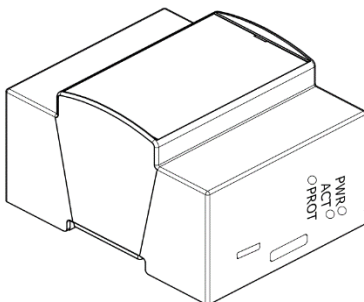
LED	Name	Function
1	PROT	If the BAS-DSA is running in power protected mode, the PROT-LED flashes white. The PROT-LED is steady on, if the BAS-DSA is booting or shutting down.
2	ACT	The ACT-LED flashes green, during SD cart activity. The ACT-LED is steady on, if no SD card during boot.
3	PWR	If the BAS-DSA is powered, the PWR-LED is steady on (red).

After switching on the power supply, all LEDs will light up for a few seconds.

User manual

Introduction

Vector BAS-DSA is a programmable HMI-Server with fully embedded DGLUX5. It features multiple protocols, uses flash memory and runs on Linux on a DSA framework.

Get Started with BAS DSA

1) Set up BAS-DSA

    a. Connect the BAS DSA with a router via an ethernet cable

    b. Power BAS DSA with micro USB power supply

2) Sign into BAS DSA

    a. Open browser on a computer connected with the same router

    b. Type IP address of DSA (default: 192.168.170.151)

    c. Login with

        i. Username: dgSuper

        ii. Password:
old version: dglux1234
From 2019-03: @Dglux1234
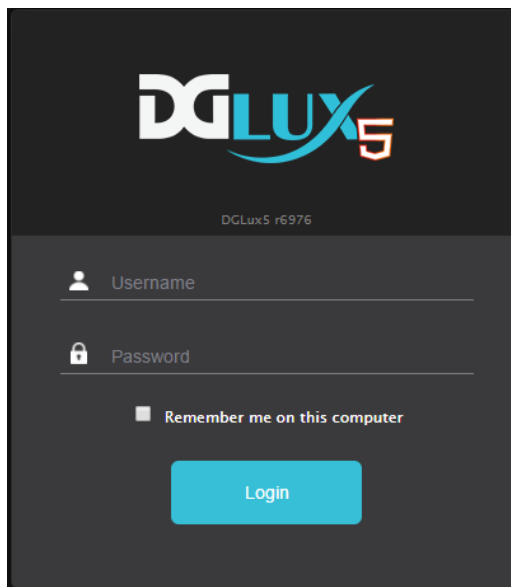
Note: To ensure your connection to GSM DSA runs smoothly, please use the following browsers.
- Chrome
- Firefox
- Safari: 5.0 or later
- Internet Explorer: 8.0 or later