# VARAN Demo Board VEB 021



# Versatile Automation Random Access Network

The VARAN VEB 021 demo board provides VARAN users and sensor/actuator manufactures with simple hardware so that they can implement this bus system in their products quickly and easily.

The VEB 011 client board is simply connected to the demo board and the VARAN bus to RJ45 socket!

#### Caution!

When operating the demo board, the user must be grounded through an armband or something similar! Otherwise, the electronics can be destroyed by electrostatic discharge!

Digital outputs		
Number of outputs	8	
Output to connect	a yellow LED per output	
Supply voltage LEDs	+3V3	
Output current	typically 3mA per output	

#### Relay output (for signal switch)

Number	1
Relay type	1x converter
Relay	NA-5W-K
Supply	+5V / typically 30mA
Minimum switch current	10mA
Switch time	maximum 10ms
Switch area	4V - 6V
Switch power	0.5A / 30V DC

Digital inputs			
	Number		

Number	8
Input type	switched via DIP switch
Input voltage	typically + 3V3
Input current	typically 1mA
Status display	no

## Controller for analog I/Os

Controller	PSoC CY8C24223A
Clock speed	24MHz
Storage (On-Board)	4kBytes Flash 256bytes SRAM
Communication	via I <sup>2</sup> C-interface
Software requirements	the analog I/Os are read / written via the I²C bus.

## Analog inputs

 P	
Number	3
Resolution	12bit
Measurement range	0 +3.3V
Reference voltage for AI3	+3.3V
Sensor type at AI2	KTY10-6
Analog measurement precision	±0,2%

## Analog ouput

Number	1	
Output voltage	0 +3.3V	
Resolution	6bit	
Analog channel precision	T.B.D	
Maximum output current	20mA	

## **Electrical requirements**

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Supply voltage	10 - 30V DC	
Supply of external power supply	+12V for internal supply (optional)	
Supply of VARAN bus	+24V for internal supply	
Current consumption on the VARAN bus (+24V supply)	typically 70mA	maximum 100mA
Current consumption on external power supply (+12V supply)	typically 140mA	maximum 200mA
Status display	Power-LED	



## Article number and miscellaneous

Article number	16-081-021
Hardware version	1.x