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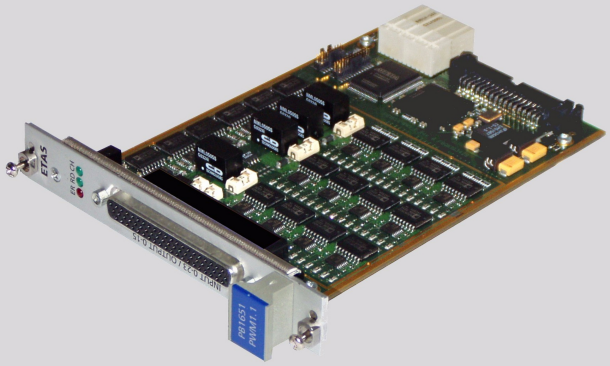
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Find the *ETAS PB1651PWM1* at our website: *Click HERE*

ETAS
Engineering Tools

PB1651PWM1

PWM I/O Module (24/16-CH)



Key Features

- 24 input and 16 output channels
- 1 low side and 2 high side switches for each output supplied by 2 external output reference voltages via the front panel
- 2 external output reference voltages as a threshold for each input via the front panel
- fmax > 10 kHz@0.02% resolution or 100 kHz@0.2%
- Protection against ±60 V for every input channel
- Protection against +60 V for every output channel

Application

The PB1651PWM1 provides PWM, level generation and measurement channels.

The outputs can be configured with active or inactive levels, where each level can be open, ground, or an external output reference 1 or 2.

The inputs are measured to two input reference voltages provided via the front panel.

The threshold is set permanently to input ext. ref.*0.5. The PB1651PWM1 I/O Module fits into the connection ports available on the VMEbus Carrier Board (ES1651) and VXIbus Carrier Board (ES4350).

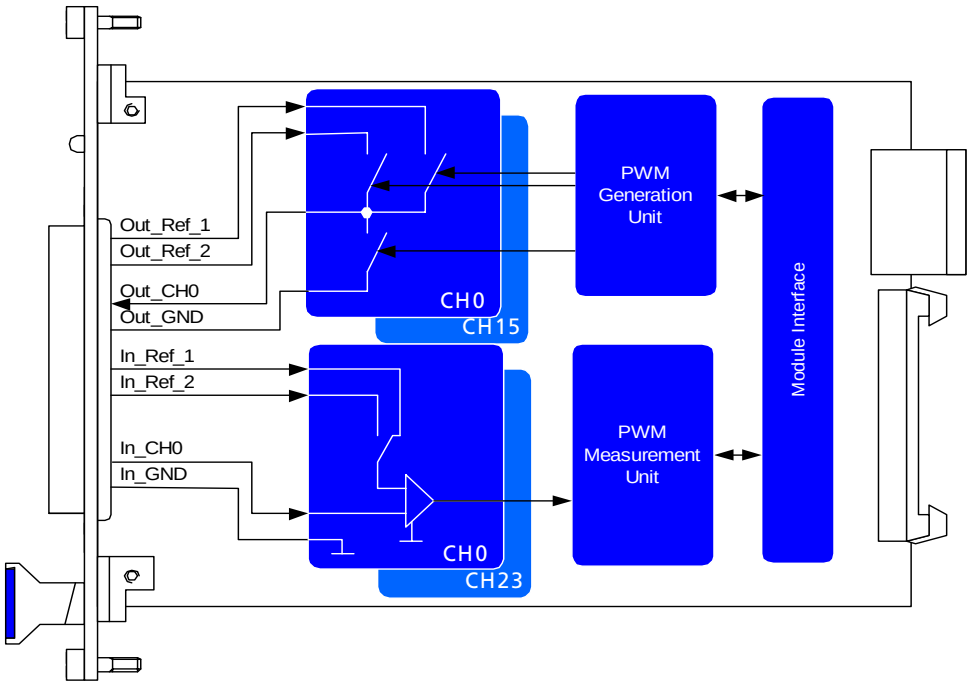
This approach corresponds to the LABCAR ST/XT strategy, where LABCAR ST applications can be extended if necessary with LABCAR XT functionality. This is achieved by plugging LABCAR XT modules on a LABCAR ST carrier board.

Software Control Interface

The PB1651PWM1 I/O Module is completely configurable and controllable by software. This software control interface, LABCAR-RTC (Real-Time Execution Connector) is supported by LABCAR-OPERATOR V2.0 and higher.

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Block Diagram



Technical Specifications

Names	Features
Outputs	
Number of channels	16
Output voltage V_{out} referring to Out_GND when switched to external reference voltage	U_Out_Ref - 1 V ...U_Out_Ref
External supply voltages 1 + 2	0 V...+60 V
Output voltage V_{out} referring to Out_GND when switched to Out_GND	Out_GND...Out_GND + 1 V
Output overvoltage protection	+60 V
Output current supplied by external references 1 + 2	0....100 mA
Resistance between GND and Out_GND	1 kΩ...∞
Frequency range	0...100 kHz
Accuracy at 0...10 kHz	0.02%
Accuracy at 0...100 kHz	0.2%
Frequency resolution	0.012 Hz
Duty cycle resolution	8 Bit at 100 kHz, 16 Bit at 500 Hz
Clock frequency for PWM generation	20 ns
Inputs	
Number of channels	24
Input voltage range	0 V...+36 V
Input reference voltage range	+5 V...+60 V
Input impedance	1 MΩ, 10 pF
Max. input frequency	100 kHz
Input overvoltage protection	±60 V
Hysteresis of input signals	1...1.5 V
Resistance between GND and In_GND	1 kΩ...∞
Counter width for PWM low/high time	31 Bit
Clock frequency for PWM generation	20 ns

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I/O Pin Connection

Front Panel Connector (DSUB62HD, female)

Pin	Description	Pin	Description	Pin	Description
1	Out_CH0	22	NC	43	In_CH0
2	Out_CH1	23	NC	44	In_CH1
3	Out_CH2	24	In_Ref_1	45	In_CH2
4	Out_CH3	25	In_Ref_1	46	In_CH3
5	Out_CH4	26	Out_Ref_1	47	In_CH4
6	Out_CH5	27	Out_Ref_1	48	In_CH5
7	Out_CH6	28	Out_Ref_2	49	In_CH6
8	Out_CH7	29	Out_Ref_2	50	In_CH7
9	Out_CH8	30	In_Ref_2	51	In_CH8
10	Out_CH9	31	In_Ref_2	52	In_CH9
11	Out_CH10	32	Out_GND	53	In_CH10
12	Out_CH11	33	Out_GND	54	In_CH11
13	Out_CH12	34	In_GND	55	In_CH12
14	Out_CH13	35	In_GND	56	In_CH13
15	Out_CH14	36	NC	57	In_CH14
16	Out_CH15	37	NC	58	In_CH15
17	NC	38	NC	59	In_CH16
18	In_CH20	39	NC	60	In_CH17
19	In_CH21	40	NC	61	In_CH18
20	In_CH22	41	NC	62	In_CH19
21	In_CH23	42	NC		

Ordering Information

Order Name	Short Name	Order Number
PB1651PWM1 I/O Module (24/16-CH)	PB1651PWM1	F-00K-103-427

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