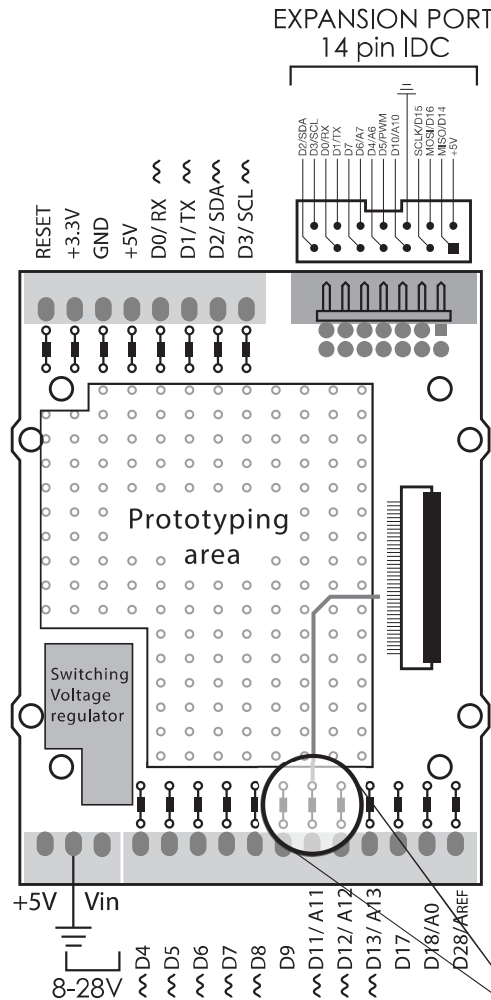


Industruino Proto

with ATSAM21G18 MCU

www.industruino.com
connect@industruino.com

PROTO BASEBOARD



POWER-IN



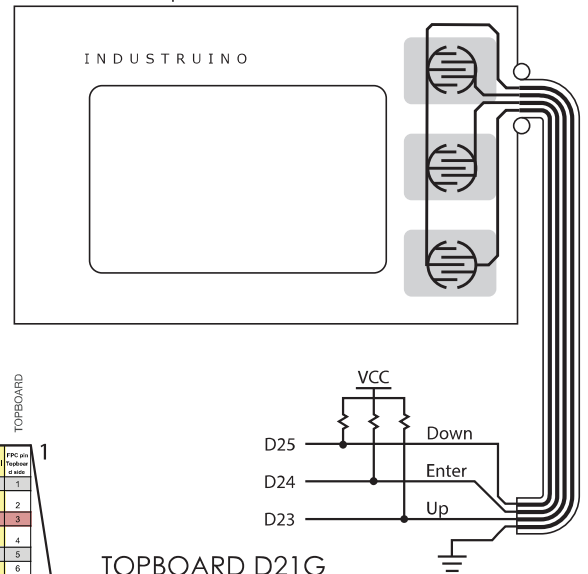
- 1) The jumpers can be removed to disconnect MCU pin from external connector.
- 2) 2 pads are available per pin; one to connect your internal components to an MCU, the other to connect your internal components to the external connectors.

40 pin FPC cable

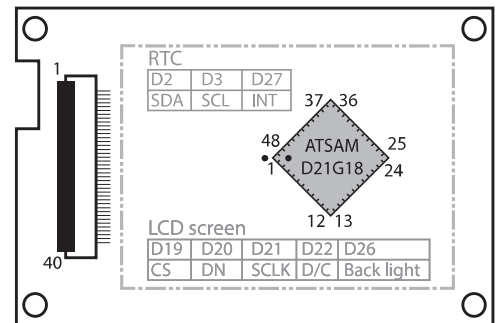
FPC pin	Pin Function	MCU Pin	Port Pin	Special Function	Digital Pin	Analog Pin	PWM Pin	Serial Pin	FPC pin
40	40c - main control bus / 14p IDC	26	PA17	I2C SCL	3		3	SCL	1
39	40c - main control bus / 14p IDC	25	PA16	I2C SDA	2		2	SDA	2
38	40c - main control bus / 14p IDC	27	PA18	Serial TX	1		1	TXD	3
37	RS485 TX / 14p IDC	28	PA19	Serial RX	0		0	RXD	4
36	RS485 RX / 14p IDC	31	PA22		17				5
35	SPI 14p IDC	32	PA23	SPI SCLK	15			SCLK	6
34	SPI 14p IDC	37	PB22	SPI MISO	14			MISO	7
33	SPI 14p IDC	38	PB23	SPI MOSI	16			MOSI	8
32	14p IDC	7	PB08		4	A4	4		9
31	14p IDC	16	PA10	Serial TX	6	A6	6	TXD1	10
30	14p IDC	8	PB09		6	A6	6		11
29	14p IDC	9	PA04		7	A7	7		12
28	24V digital input PCINT	10	PA05		8	A8	8		13
27	RS485-E	11	PA06		9	A9			14
26	14p IDC	12	PA07	Serial RX	10	A10		RXD1	15
25		13	PA08		11	A11	11		16
24		14	PA09		12	A12	12		17
23		16	PA11		13	A13	13		18
22		3	PA02	DAC	18	A0/DAC			19
21		4	PA03		28	AREF			20
20									21
19									22
18									23
17									24
16									25
15									26
14									27
13									28
12									29
11									30
10									31
9									32
8									33
7									34
6									35
5									36
4									37
3									38
2									39
1									40

GND PIN
VCC PIN
DIGITAL PIN
ANALOG PIN
PWM PIN
SERIAL PIN

BUTTON PANEL 4 pin FPC cable



TOPBOARD D21G



INDUSTRUINO



Arduino libraries are available for download on our website: www.industruino.com

Industruino is an Arduino compatible industrial controller with LCD screen, housed in a robust DIN-rail casing.

Industruino PROTO is a robust fully enclosed Arduino compatible controller.

+5V connection on bottom left 3 pin power connector is by default not connected to the internal 5V rail. This is to protect from accidental connection to Vin voltage. The 5V rail can be connected to the external connector by bridging the jumper labelled "+5V out" on the bottom side of the board.

The PROTO baseboard has 20 screw connectors that by default are connected to the MCU pins via jumpers.

Proto Baseboard

Prototyping area
8-28 Vin -> 5V/2A switching voltage regulator
TVS protected supply rail
19 digital pins (12 with PWM support)
12 analog pins (shared with digital pins).

Topboard D21G

ATSAMD21G18 MCU
Flash Memory 256 KB
SRAM 32 KB
Clock Speed 48 MHz