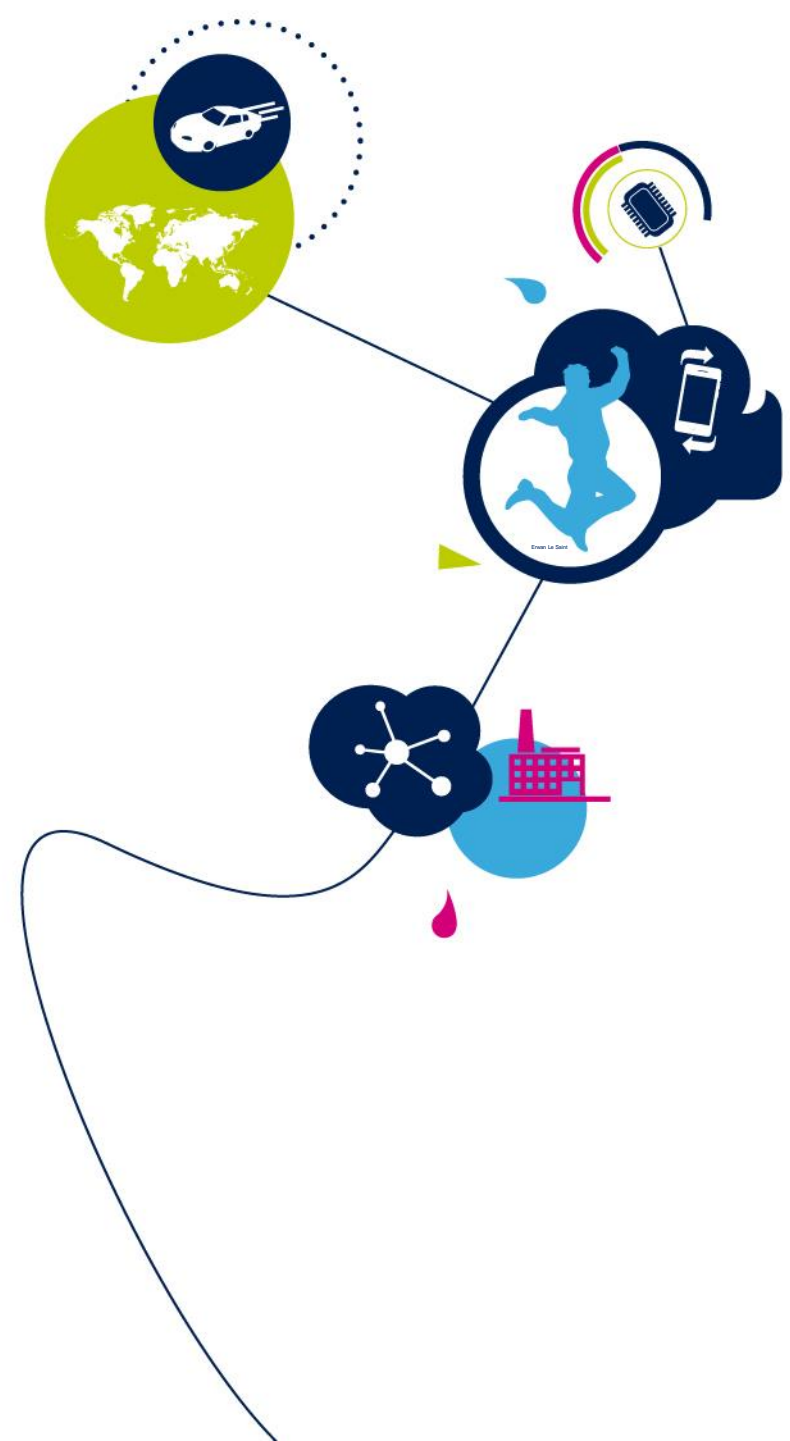# Fan Out V2 - AddOn

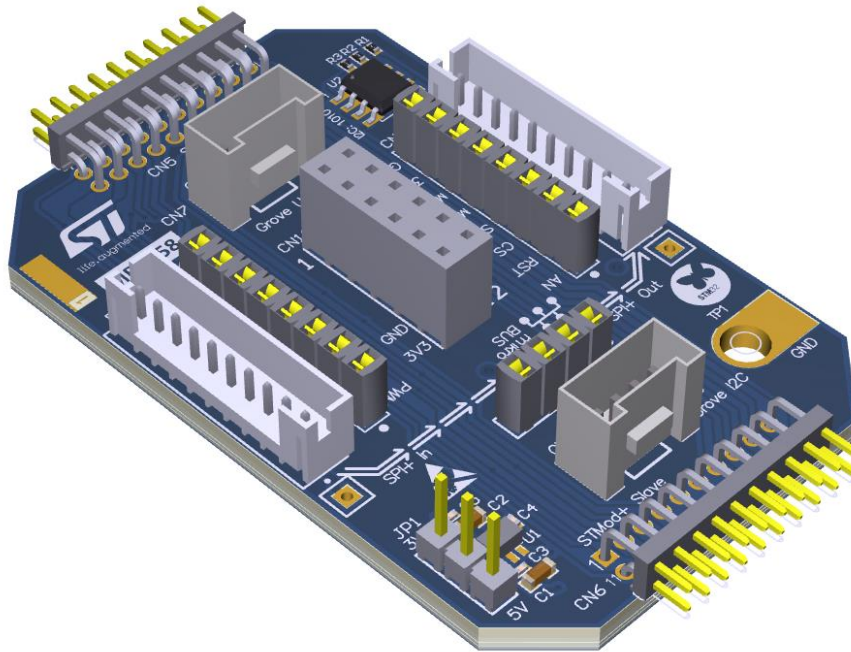2nd Jan 2020

X slides, ~ X minutes

ST life.augmented
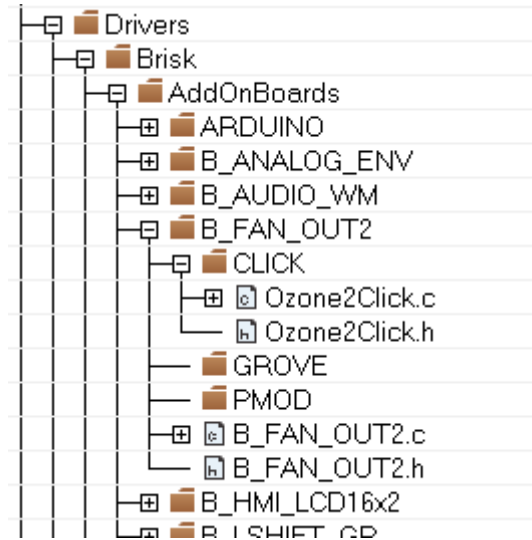
- Features:
  - Digilent PMOD connector
  - Seeedstudio Grove (1xI2C, 1xRS232)
  - Mikrobus Click board connector
  - Master to Master Board adaptor
    - Connect 2 disco board together
  - HC05/06/08 BT/BLE adaptor

- Prototype
  - 15 pcs produced (manual assy)

- Plug and Play:
  - Int ID: B_FAN_OUT2_BOARD
  - String ID: "B_FAN_OUT2"

STMod+ Master

CN5 — TMM-110-01-L-D-RA / ATOM: PH200210C-07000 — +5V

Left	Pin		Right	
STMOD#1-NSS/CTS	STMOD#1	1 — 11	STMOD#11	STMOD#11-INT
STMOD#2-MOSIp/TX	STMOD#2	2 — 12	STMOD#12	STMOD#12-RST
STMOD#3-MISOp/RX	STMOD#3	3 — 13	STMOD#13	STMOD#13-ADC
STMOD#4-SCK/RTS	STMOD#4	4 — 14	STMOD#14	STMOD#14-PWM
		5 — 15		
		6 — 16		
STMOD#7-SCL	STMOD#7	7 — 17	STMOD#17	STMOD#17-DF-D3
STMOD#8-MOSIs	STMOD#8	8 — 18	STMOD#18	STMOD#18-DF-CK3
STMOD#9-MISOs	STMOD#9	9 — 19	STMOD#19	STMOD#19-DF-D7
STMOD#10-SDA	STMOD#10	10 — 20	STMOD#20	STMOD#20-DF-CK7

STMod+ Slave

CN6 — TMM-110-01-L-D-RA / ATOM: PH200210C-07000 — +5V

Left	Pin		Right
STMOD#1	1 — 11		STMOD#11
STMOD#3	2 — 12		STMOD#12
STMOD#2	3 — 13		STMOD#13
STMOD#4	4 — 14		STMOD#14
	5 — 15		
	6 — 16		
STMOD#7	7 — 17		STMOD#17
STMOD#8	8 — 18		STMOD#18
STMOD#9	9 — 19		STMOD#19
STMOD#10	10 — 20		STMOD#20

PMod

CN10 — SSW-106-02-F-D

Left		Pin		Right
STMOD#1		1 — 2		STMOD#11
STMOD#2		3 — 4		STMOD#12
STMOD#3		5 — 6		✕
STMOD#4		7 — 8		✕
GND		9 — 10		GND
+3V3		11 — 12		+3V3

Mikrobus connectors

+3V3 / +5V

CN9 — Header 8X1_Female

Left	Pin	Signal
STMOD#13	1	AN
STMOD#12	2	RST
STMOD#1	3	CS
STMOD#4	4	SCK
STMOD#9	5	MISO
STMOD#8	6	MOSI
	7	+3.3V
	8	GND

CN11 — Header 8X1_Female

Signal	Pin	Right
PWM	1	STMOD#14
INT	2	STMOD#3
RX	3	STMOD#2
TX	4	
SCL	5	STMOD#7
SDA	6	STMOD#10
+5V	7	
GND	8	

HC-06

P3 — Header 4 — +5V

	1
RX STMOD#3	2
TX STMOD#2	3
	4

Grove connectors

CN7 — 1125S-SMT-4P — VCC

		1
RX STMOD#3		2
TX STMOD#2		3
		4

support Grove- NFC

CN8 — 1125S-SMT-4P — VCC

		1
SCL STMOD#7		2
SDA STMOD#10		3
		4

support Grove- Barometer sensor (BMP180)

U2 — M24128DWMN

+3V3 / +3V3 / +3V3

R1 10K   R2 10K

Left	Pin		Pin	Right
NC	1	E0	VCC	8
	2	E1	WC	7
	3	E2	SCL	6
	4	VSS	SDA	5

R3 — NC — GND

STMOD#7
STMOD#10

Board ID
I2C Mem Address: 1010 110R/W (R3 = N/C)
I2C Id   Address: 1011 110R/\\W (R3 = N/C)

```
├─⊟ 🔴 Drivers
│  ├─⊟ 🔴 Brisk
│  │  ├─⊟ 🔴 AddOnBoards
│  │  │  ├─⊞ 🔴 ARDUINO
│  │  │  ├─⊞ 🔴 B_ANALOG_ENV
│  │  │  ├─⊞ 🔴 B_AUDIO_WM
│  │  │  ├─⊟ 🔴 B_FAN_OUT2
│  │  │  │  ├─⊟ 🔴 CLICK
│  │  │  │  │  ├─⊞ 📄 Ozone2Click.c
│  │  │  │  │  └── 📄 Ozone2Click.h
│  │  │  │  ├── 🔴 GROVE
│  │  │  │  ├── 🔴 PMOD
│  │  │  │  ├─⊞ 📄 B_FAN_OUT2.c
│  │  │  │  └── 📄 B_FAN_OUT2.h
│  │  │  ├─⊞ 🔴 B_HMI_LCD16x2
│  │  │  └─⊟ 🔴 B_LSHIFT_GR
```

B_FAN_OUT2

50 bare PCB produced.
To test the MCD Rousset Lab assy facilities, 15 boards were manually assembled