

GENERAL DESCRIPTION

FIPM002 is a very powerful module designed particularly to save power and time in building the full H-bridge using L298 chip particularly in DC and stepper motor driver applications.

FIPM001 key features

- Dual full-bridge driver L298 chip.
- L298 IC package with heat sink are mounted over a main board for easy maintenance and flexibility.
- Up to 36V operating motor supply voltage.
- Up to 4A total dc current.
- Over temperature protection.
- 2A fuse for over current protection.
- Fly-wheel diodes for reversed EMF.
- Red LED indicator for motor supply and Green LED indicator for control supply.
- Control signals and logic supply produced via 16pin header (Bread board pluggable).
- Motor outputs and supply are brought out via pluggable screw clamp connectors.

Figure 1. FIPM002 Real PCB view

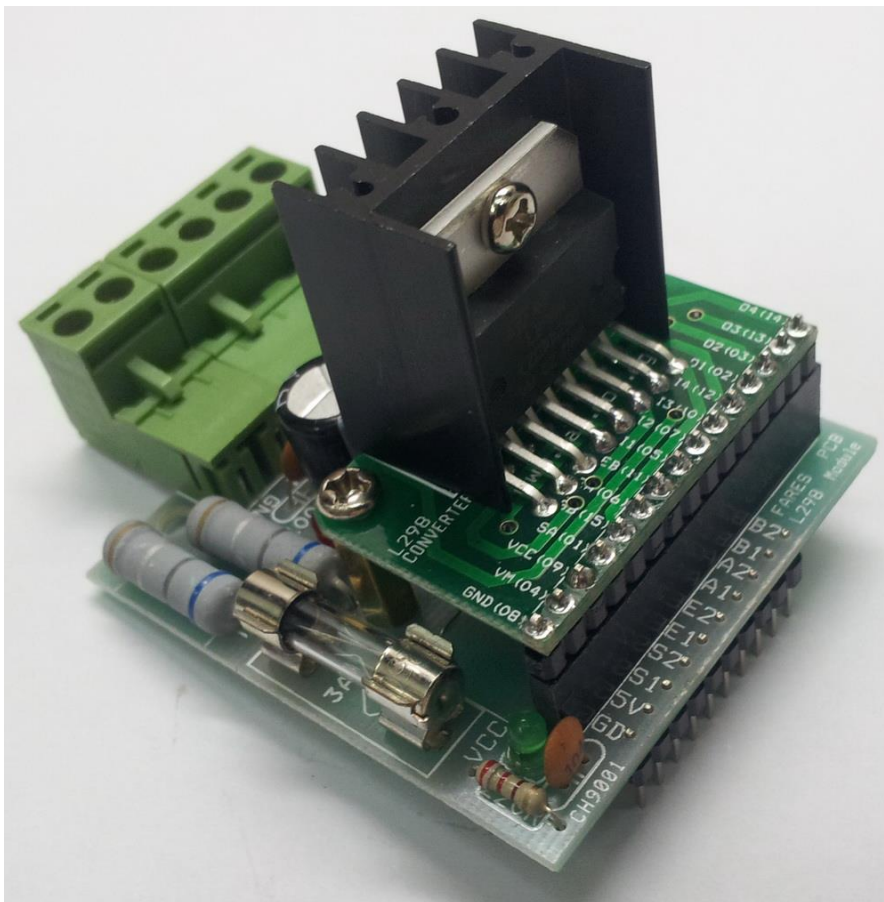


Figure 2. FIPM002 schematic view

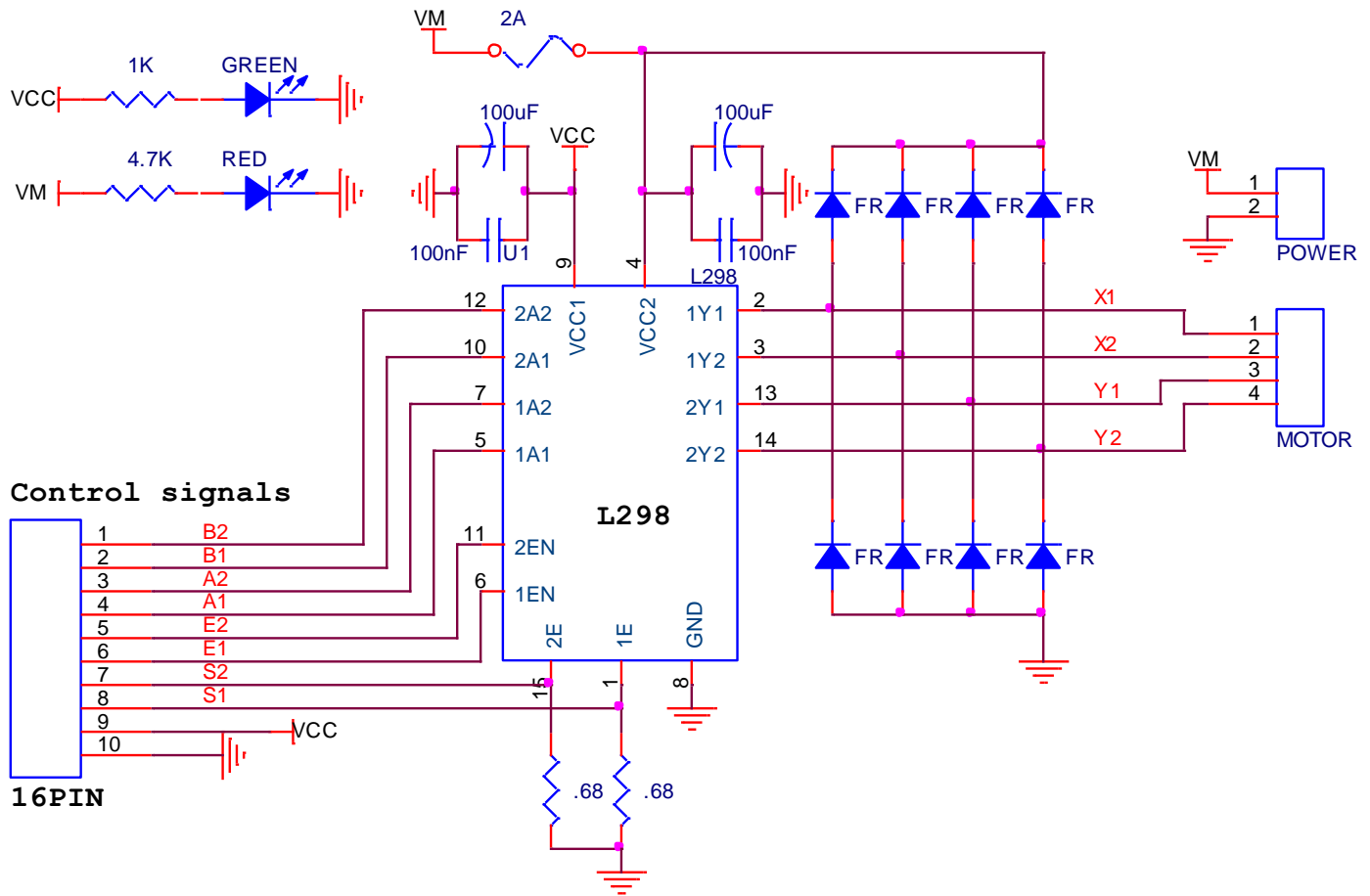


TABLE 1.

INPUTS			OUTPUTS		COMMENT
EN1	A2	A1	X2	X1	
0	x	x	HiZ	HiZ	H Bridge disabled i.e. outputs are float
1	0	0	GND	GND	Outputs are short circuited and connected to ground (i.e. motor breaking)
1	0	1	GND	VM	Current flows from X1 to X2 (i.e. motor turns in some direction)
1	1	0	VM	GND	Current flows from X2 to X1 (i.e. motor turns in opposite direction)
1	1	1	VM	VM	Outputs are short circuited and connected to VM (i.e. motor breaking)

TABLE 2.

INPUTS			OUTPUTS		COMMENT
EN2	B2	B1	Y2	Y1	
0	x	x	HiZ	HiZ	H Bridge disabled i.e. outputs are float
1	0	0	GND	GND	Outputs are short circuited and connected to ground (i.e. motor breaking)
1	0	1	GND	VM	Current flows from Y1 to Y2 (i.e. motor turns in some direction)
1	1	0	VM	GND	Current flows from Y2 to Y1 (i.e. motor turns in opposite direction)
1	1	1	VM	VM	Outputs are short circuited and connected to VM (i.e. motor breaking)

Note:

- "0" represents zero volt.
- "1" represents 5 volt.
- "X" represents don't care.
- "HiZ" means high impedance i.e. float.
- "VM" means motor voltage.
- "VCC" means 5 volt.

The main applications of L298 are DC motor and stepper motor control.

- Figure 3 shows stepper motor control application using L298 module and L297 chip.
- Figure 4 shows DC motor control using L298 module and microcontroller.
- Figure 5 shows DC motor control using L298 module and arduino uno kit. A simple arduino C code is implied as an example for testing dc motor control.

Figure 3. L298 stepper motor driving

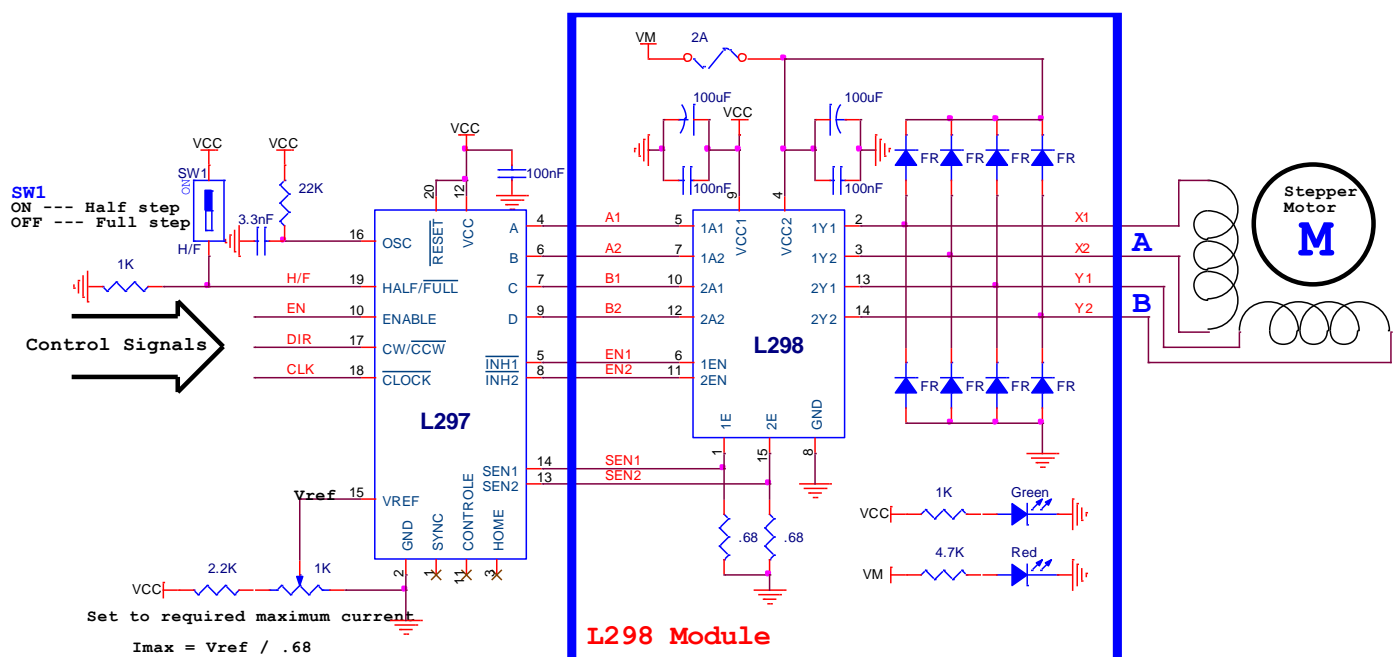


Figure 4. L298 DC motor driving (PIC microcontroller interfacing)

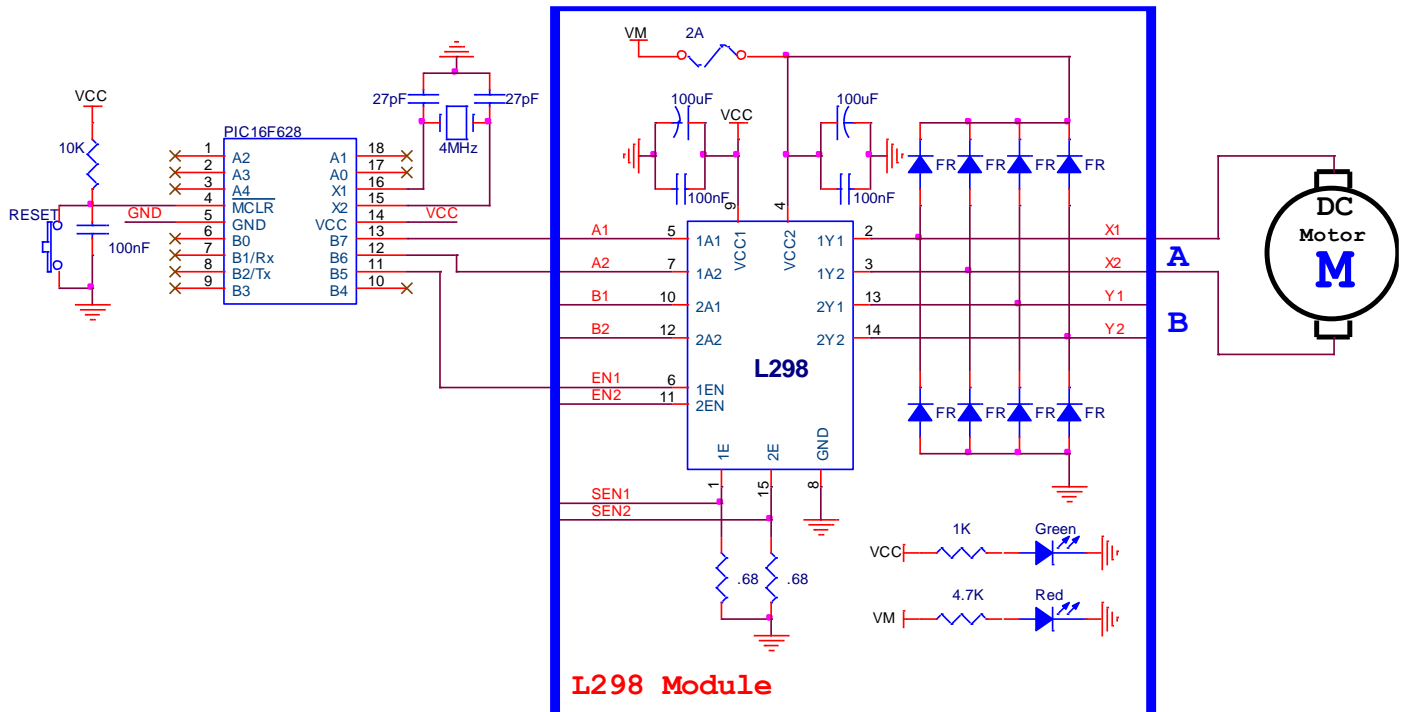
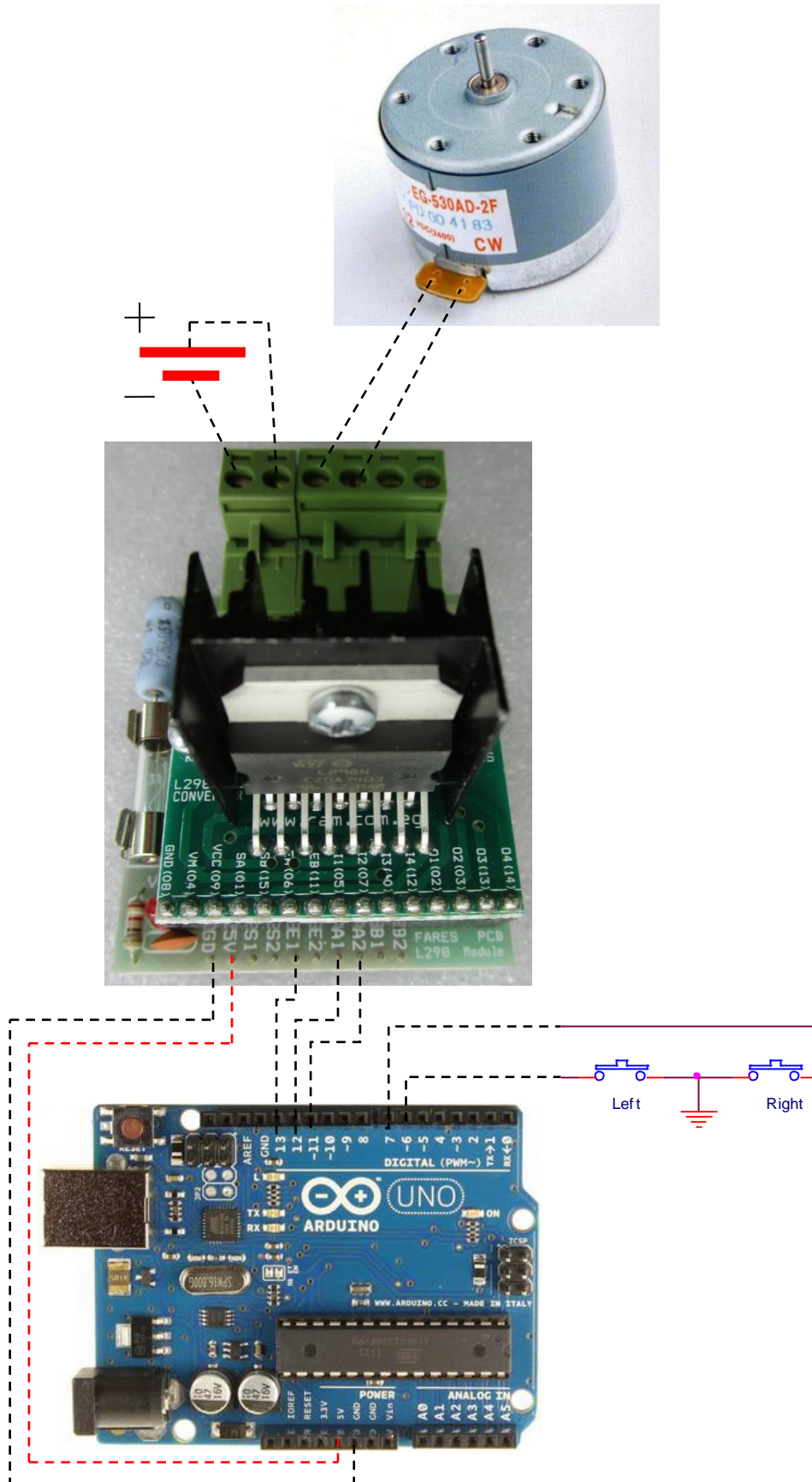


Figure 5. L298 DC motor driving (Arduino UNO kit interfacing)



Copyright © 2019 by FARESPCB

For our full range of products see our website at <http://www.fares-pcb.com>

If you have any technical questions about our products, e-mail us at
www.support@fares-pcb.com

FARES_{PCB} co. (Head office)

**164 Tahrir st,
Bab El-Louq,
Cairo,
Egypt.
Tel: +202-23904484
Mob:+201000652977**

FARES_{PCB} co. (Branch office)

**4 El-Shabrawy st,
Road El-Farag,
Cairo,
Egypt.
Tel: +202-24577118
Mob:+201022457902**

FARES_{PCB} Co reserves the right to make changes in circuit design, software and/or specifications at any time without prior notification. For the most up-to-date information, please visit our web site at <http://www.fares-pcb.com>

Information furnished by FARESPCB is believed to be accurate and reliable. However, FARESPCB assumes no responsibility arising from the use of the specifications described.

Warrantee: FARESPCB[™] warrants its products against defects in materials and workmanship for a period of 30 days. If you discover a defect, we will, at our option, repair or replace your product or refund your purchase price. This warrantee does not cover products that have been physically abused or misused in any way.

Distributor:

**RAM Electronics
32 El Falaky St. Bab El Louk
Tahrir, Cairo
Egypt.
Tel: +202-27960551
www.ram.com.eg
Sales@ram-electronics.com**

