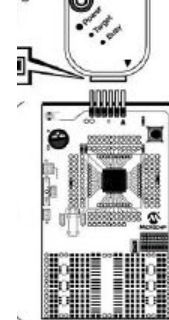
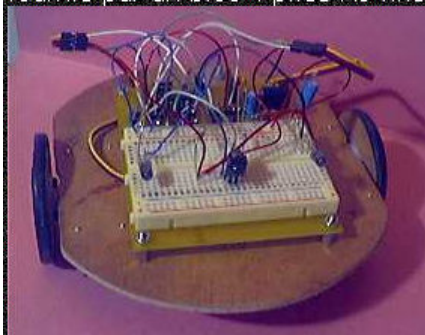
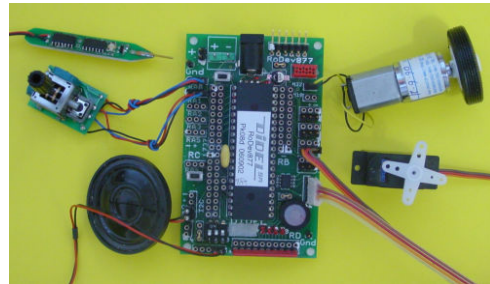


## Microdule - Easy microcontroller development for PICs and AVR

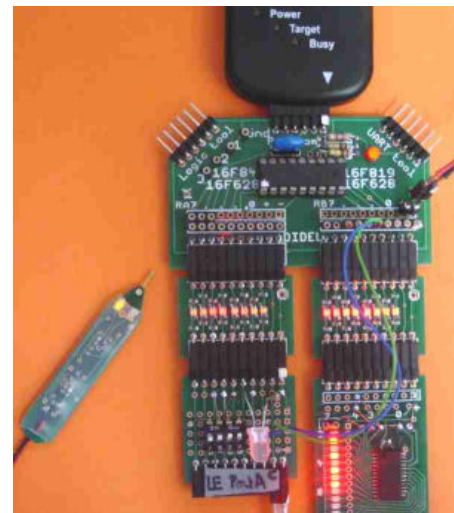
One find on the market evaluation and development boards which have two drawbacks : the wiring is messy and the processor cannot be easily re-used for another application.



Didel's Dev877 is optimized for several pot, servo motors, making the connection easy. Universal connectors are provided for special applications.

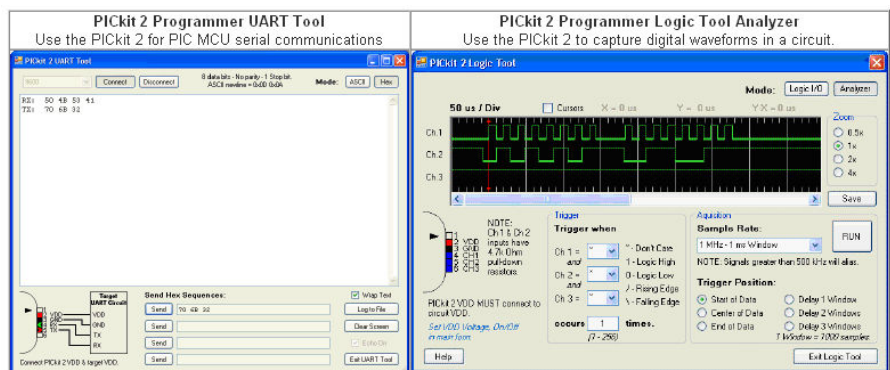


**Microdules** are a set of cards, a kind of meccano, that allows to change easily the processor and the interface modules to configure any application with a minimum of special wiring. The objective is to develop the hardware and software in an environnement where it is easy to adapt to the needs of changing the hardware and adding debugging helps.



When the schematic and software is debugged, the final PCB is developed and fewer faster steps are required toward the final product.

Processeurs cards have one to three connectors compatible with the programmer PicKit2, which also has two added fonctionnalities that are processor independant : uart et logic analyser.



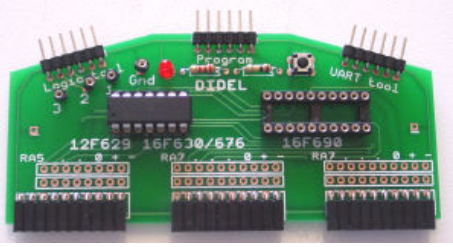
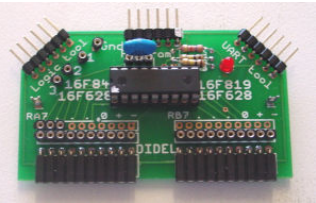
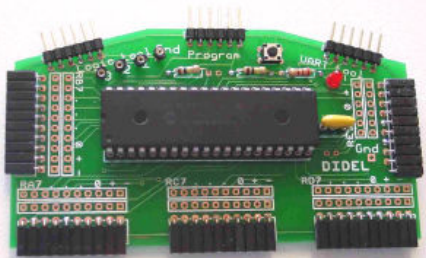
## Microdule catalogue (December 2009)

See for more details <http://www.didel.com/08micro/Microdules.pdf>

Price list : <http://www.didel.com/08micro/Micro.xls>

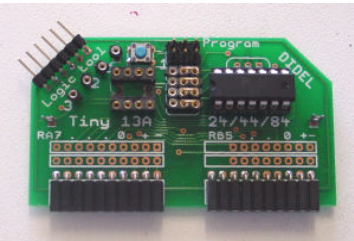
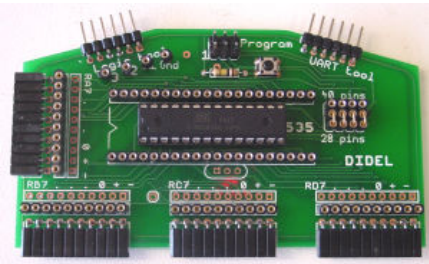
Starter kit for a 16F628 only 100 CHF : <http://www.didel.com/08micro/M18Eval.xls>

### Microchip microcontrollers

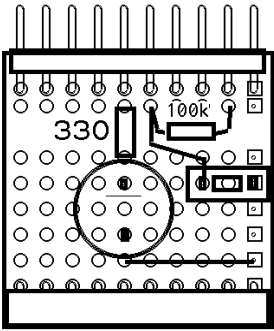
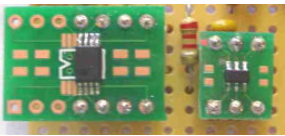
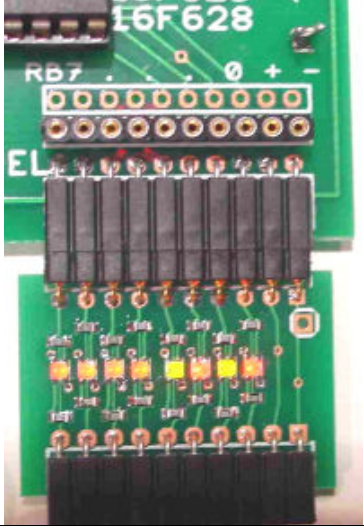
M20 kit 14.- CHF	M18 kit 14.- CHF	M2840 kit 16.- CHF
 <p>For 8-pins Pics (plus 10F20x SOT23) 12F508/509 12F629/675 For 14-pins Pics 12F505 16F630/676 For 20-pins Pics 16F690 16F</p>	 <p>For 18-pins Pics 16F84/84A 16F88 16F628 18F1220</p>	 <p>For 28-pins Pics 16F870/873/876 16F737 16F882 18F2220 etc For 40-pins Pics 16F871/874/877/877A 16F884 18F4220 etc</p>

<p><b>New</b></p> <p>The missing piece for debugging more complex programs</p>		<p>16F946 with 7 ports. 1 or 2 for your application. 5 to show variables, state diagrams, counters.</p> <p>This is not a development tool for 16F946, but for 10F202, 16F630, etc.</p>
--	---	--

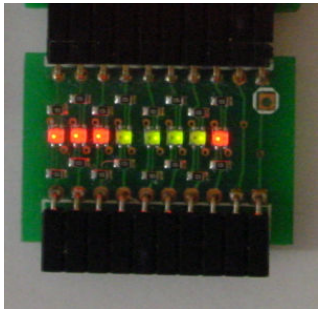
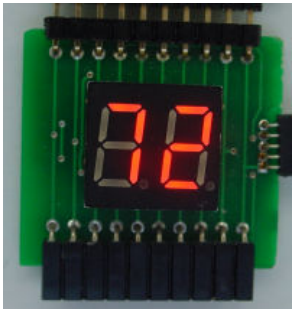
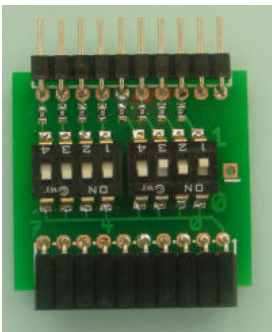
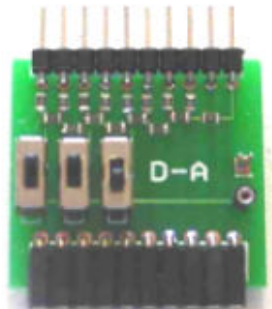
### AVR microcontroller

A814 kit 14.- CHF	A2840 kit 16.- CHF
 <p>Tiny13A, Tiny24, 44, 84</p>	 <p>Atmega168</p>

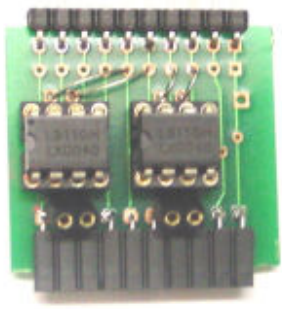
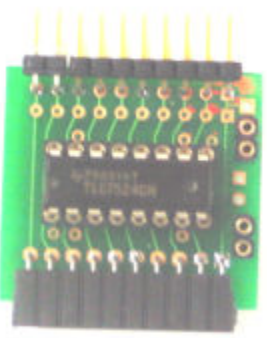
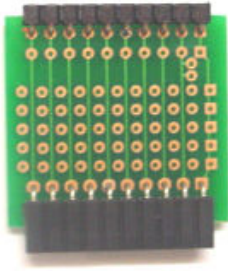
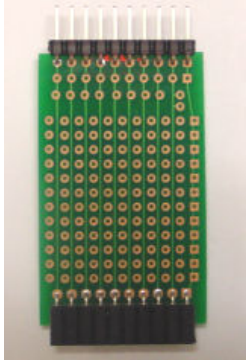
## Debug modules concept

 	<p>Microdebugs are specially interesting due to their set of standard and configurable modules that can be connected for a given development, and reused for another design.</p> <p>Need to display the status of a port - connect Microdebug 8-bicolor Led display.</p> <p>Need to connect a switch and a buzzer on a port - wire it on an universal board.</p> <p>Need to control a motor – use our motor driver.</p> <p>Problem with a SMD device - see our adapters.</p>	
Connectors included. Only SMD parts soldered		

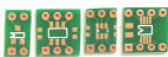
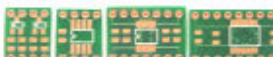
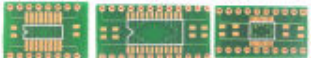
### Debug I/O

<b>Lb8 9.- CHF</b>	<b>Lx8 16.- CHF</b>	<b>Sw8 8.- CHF</b>	<b>Da8 10.- CHF</b>
			
Display logic state 0, 1 and input (both Leds on)		8 switches to set state 0 (100 kOhm pull-up state 1)	D-A converter 8, 6 or 4 bits

### Motor drivers, proto boards

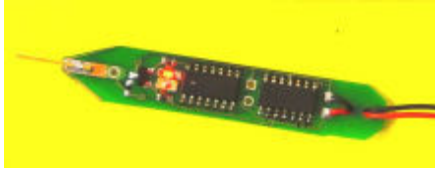
<b>L9110 8.- CHF</b>	<b>L293 12.- CHF</b>	<b>P30 4.- CHF</b>	<b>P50 5.- CHF</b>
			
Two H-bridges 3-6V 0.5A	Two H-bridges 6-12V 1A	5 rows of 8 holes	12 rows of 8 holes

### SMD adapters (pictures from preliminary test set)

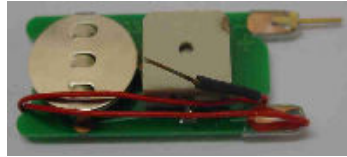
SMD components are soldered on adapters compatible with the 2.54mm grid of the universal boards	<b>10 p S1 4 CHF</b> 	<b>6 p S2 4 CHF</b> 	<b>5 p S3 5 CHF</b> 
---	---	---	--

## Accessories

**Logic pen LP 16 CHF**



**Continuity tester BZ 6CHF**



**Soldering kit SK 65CHF**



Adjustable soldering Iron 20.-

### Strips – you will need more for your tests

**MC07-40** male 0.7mm 90° 40 pins 1.50  
**FC07-40** female 0.7mm 90° 40 pins 3.00  
**M07-40** male 0.7mm straight 40 pins 1.00

**M05-40** male 0.5/0.6mm 40 pins 1.00  
**M05S-40** male 0.5mm short 40 pins 1.00  
**F05-40** female 0.5mm 40 pins 1.50

