

# FMC DIO 5CH

## FMC Digital I/O - 5 channels TTLA

FmcDIO5chTTLA is a 5-bit port digital IO card in FMC form-factor. Each single-bit port can be configured individually as input or output. The I/Os that are on LEMO 00 connectors are TTL compatible.

It has been designed as the most generic board of the White Rabbit project and can be used in a wide brand of application when it is plugged within an FMC carrier (i.e. SPEC board). It is used in the SPEC starting kit.

The Fmc DIO 5ch can be used as follow:

- It can control other equipment at distance by sending digital output.
- It can retrieve input level between  $V_{ih}=1V$  to  $V_{ih}=5V$  by using programmable threshold.
- One of the inputs is capable of driving a global clock net in the carrier's FPGA

**Output**

<b>Levels</b>	LVTTTL, capable of driving +3.3 V over a 50-Ohm load.
<b>States</b>	At power-up the outputs are in Hi-Z state (V1-2 and higher)
<b>Rise/fall</b>	Output Rise/fall times: max. 2 ns

**Input**

<b>Levels</b>	Any logic standard from $V_{ih} = 1\text{ V}$ to $V_{ih} = 5\text{ V}$ (programmable threshold)
<b>Thresholds</b>	Programmable 50-Ohm input termination in each channel
<b>Bandwidth</b>	Input bandwidth: min. 200 MHz
<b>Protection</b>	Protected against +15V pulses with a pulse width of up to 10us @ 50Hz

**Others**

<b>Connector</b>	5 LEMO-00 connectors
<b>Carriers</b>	<ul style="list-style-type: none"> <li>LVDS I/O on the carrier side</li> <li>One of the inputs is capable of driving a global clock net in the carrier's FPGA</li> </ul>

**Certifications**

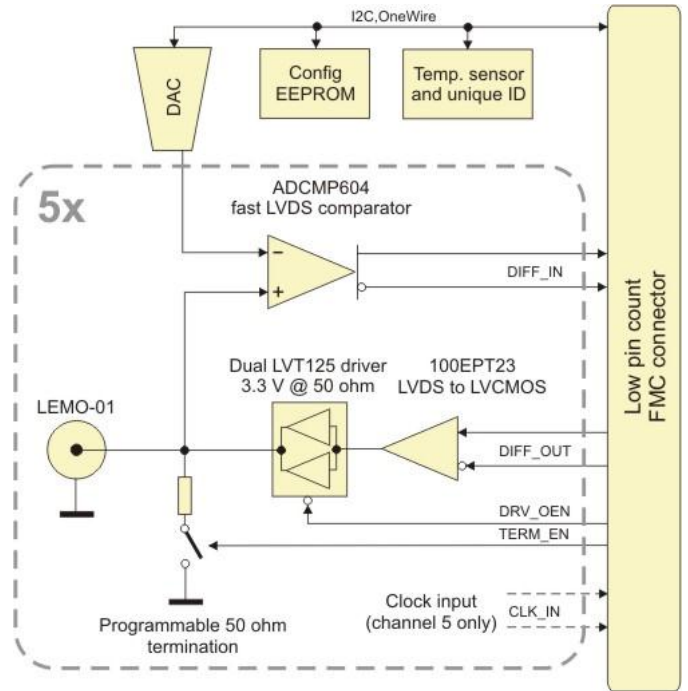
<b>Soldering</b>	IPC- 610 Rev E Class 2
<b>Others</b>	ISO-9001, ISO-14001, CE, RoHS

**Physical Specification**

<b>Dimension</b>	85,5x69 mm
<b>Weight</b>	

**Environmental Conditions**

<b>Temperature</b>	-10°C ~ +50°C
<b>Humidity</b>	0% ~ 90% RH



**FMCs**

**SPEC (Carrier board)**

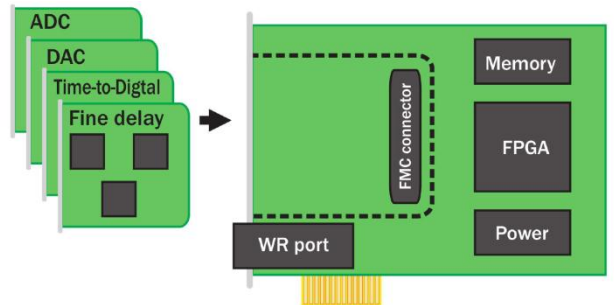
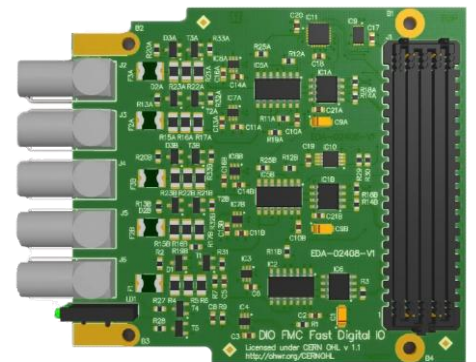
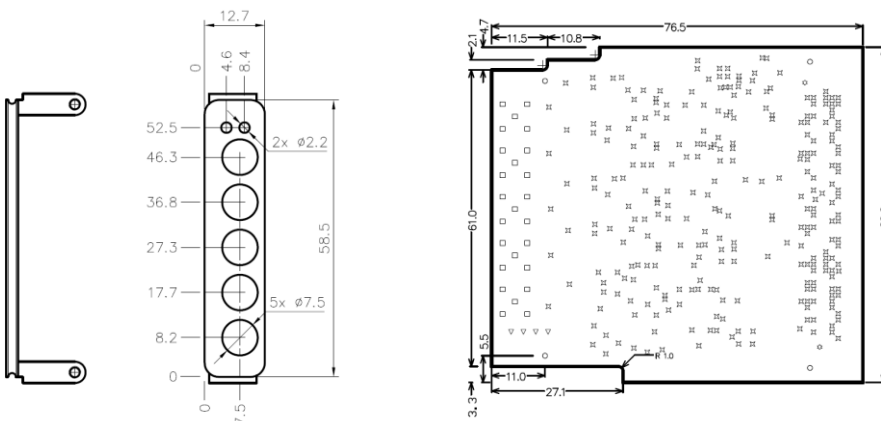


Illustration of the connection of SPEC with FMCs



info@sevensols.com  
(+34) 958 285 024

C/ Baza, parcela 19, nave 3  
Polígono Industrial Juncaril,  
18210 Peligros (Granada), SPAIN.

