

**Revision History**

| Revision | Date       | Description         |
|----------|------------|---------------------|
| V001     | 2025/04/11 | Preliminary version |

## **Chip Programming Wiring Guide**

### **Resistor in series at PA5 pin**

- **Document Version** : V001

- **Applicable Chips** :

PMS150G / PMS152G / PMS154G / PMS134G

- **Applicable Programming Software Versions** :

PMS152G / PMS154G / PMS134G → FPPA IDE / Writer Ver1.02C4 or later

- **Applicable Hardware Writer Models** :

5S-P-003 / 5S-P-003B / 5S-P-003B2 / 5S-P-003C

## **1. Foreword**

For certain chips programmed on semi-automatic machines, programming stability may be affected by noise interference from the equipment or the working environment, leading to reduced yield or even damage to IC pins during programming. This APN provides countermeasures to address these issues.

## **2. Description and improved response**

Taking PMS150G-S08 as an example, to improve the stability and reliability of batch programming, a 100Ω resistor must be connected in series to the PA5 pin on the JP2 header of the Writer before programming. Refer to Figure 1 for the connection method:

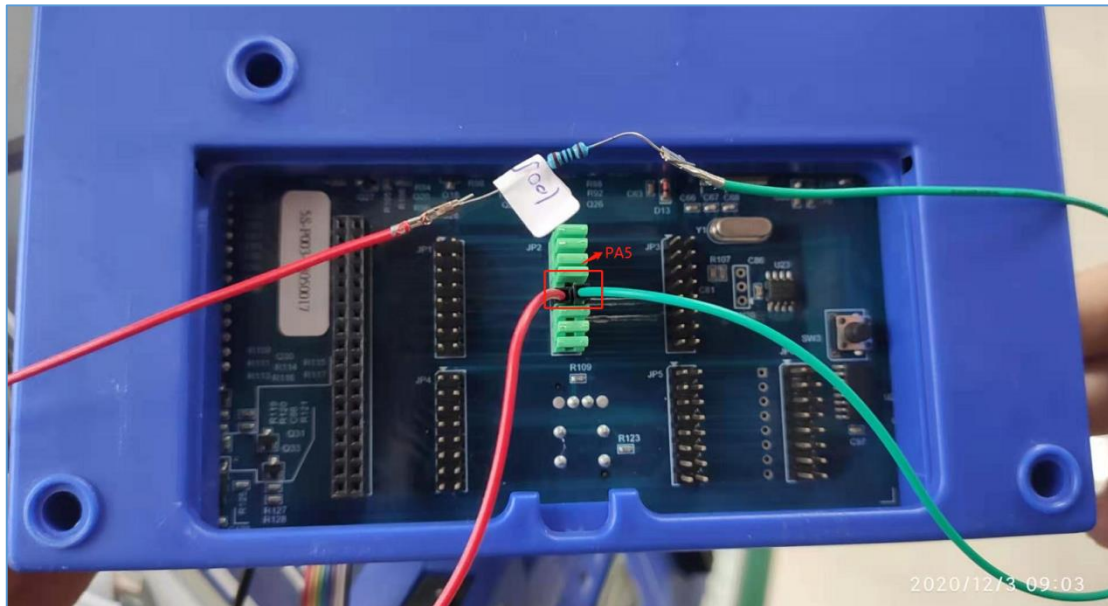


Figure 1: JP2 Connection Diagram with 100Ω Resistor

For U06-packaged ICs, connect a 100Ω resistor to the PA5 pin on JP7. Refer to Figure 2:

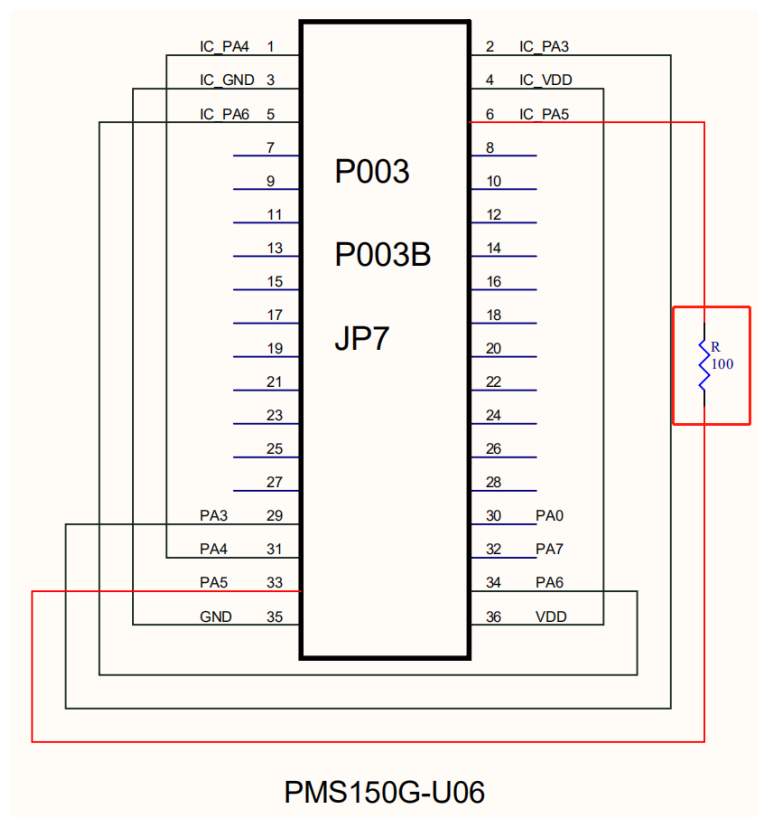


Figure 2: JP7 Jumper Board Schematic for U06 Package

### 3. Applicable Writer Models

5S-P-003, 5S-P-003B(x) and 5S-P-003C must be connected in series with resistors as described above.

### 4. PDK File Download Notice

When downloading PDK programming files to the hardware programmer for PMS150G / PMS152G / PMS154G / PMS134G series chips, a prompt will appear indicating that a resistor must be connected to the PA5 signal, as shown in the figure below.

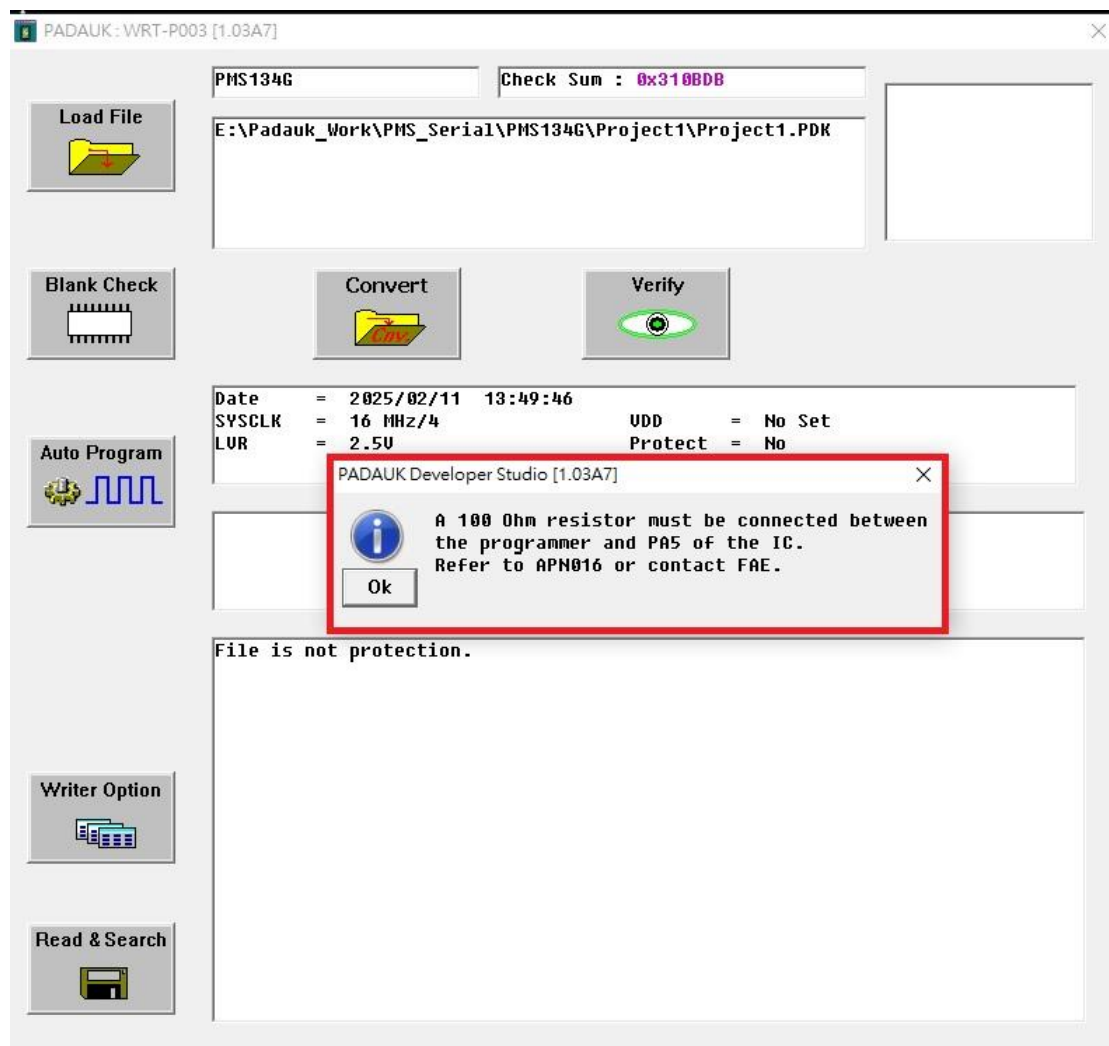


Figure 3: Programming Connection Prompt During PDK File Download

## 5. PMS150G-100R Programming Adapter Board

The P-003B2 and P-003C programmers include a PMS150G-100R programming adapter board. This PCBA is compatible with most PMS152G / PMS154G / PMS134G chip packages.

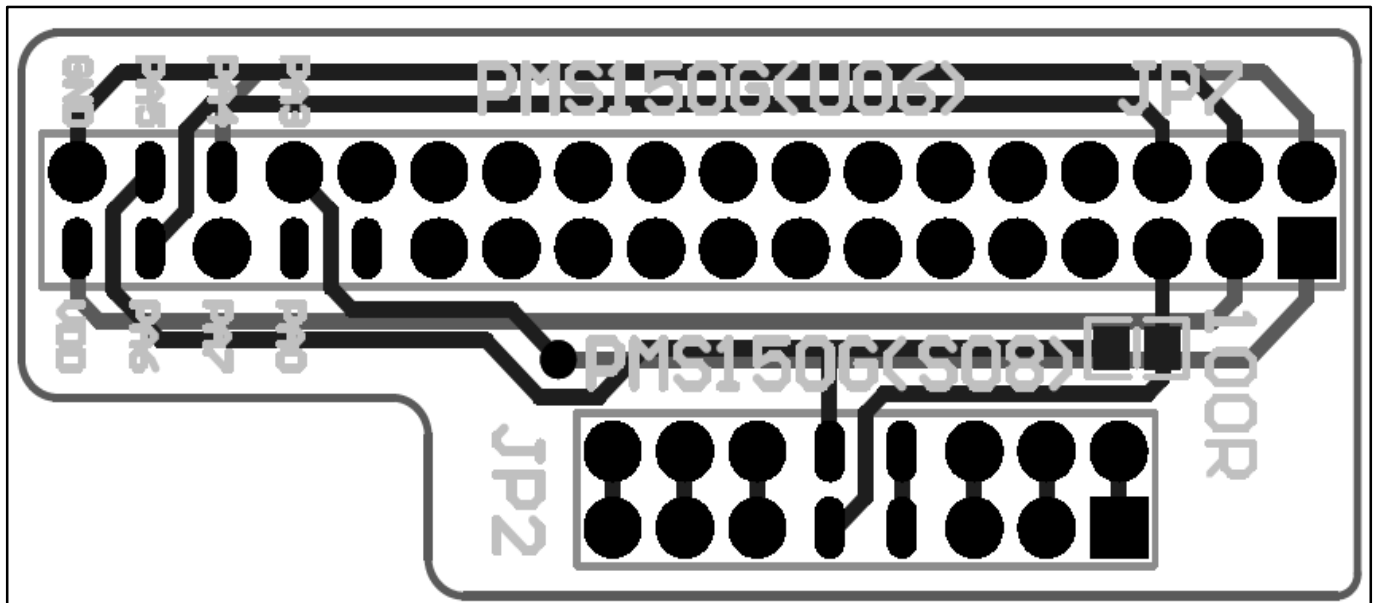


Figure 4: PMS150G-100R Adapter Board PCB Layout



Figure 5: PMS150G-100R Programming Adapter Board

**6. PMS150G-100R Adapter Board Compatibility List:**

| Number             | Package  | Jumper Adapter     | Socket shift |
|--------------------|----------|--------------------|--------------|
| PMS150G            | S08      | PMS150G-100R → JP2 | Shift 4      |
|                    | U06      | PMS150G-100R → JP7 | No Shift     |
| PMS152G<br>PMS154G | S16      | PMS150G-100R → JP2 | No Shift     |
|                    | S14      | PMS150G-100R → JP2 | Shift 1      |
|                    | M10      | PMS150G-100R → JP2 | Shift 3      |
|                    | S08      | PMS150G-100R → JP2 | Shift 4      |
|                    | U06      | PMS150G-100R → JP7 | No Shift     |
|                    |          |                    |              |
| PMS134G            | S16A/S14 | PMS150G-100R → JP2 | Shift 4      |
|                    |          |                    |              |

The above packages are compatible with the PMS150G-100R adapter board. For other package types, use the dedicated JP7-100R adapter board. Contact our FAE team for schematic and PCB files of the JP7-100R adapter board.

If you have any questions to the application, please consult our agent at your nearest location or contact us at [fae@padauk.com.tw](mailto:fae@padauk.com.tw).