

Evaluation Board : AEM20940



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Please follow the next steps when using the AEM20940 evaluation board



- Step 1 :** MPP configuration (DS page 12)
- Step 2 :** System configuration (DS page 11)
- Step 3 :** LDO outputs configuration (DS page 9)
- Step 4 :** ZMPPT configuration (if used) (DS page 12)
- Step 5 :** Balun for dual-cells supercapacitor (DS page 10)
- Step 6 :** Primary battery configuration (DS page 12)
- Step 7 :** Connect the storage element
- Step 8 :** Connect the primary battery
- Step 9 :** Connect the loads
- Step 10 :** Connect the source
- Step 11 :** Status

For more information : support@e-peas.com

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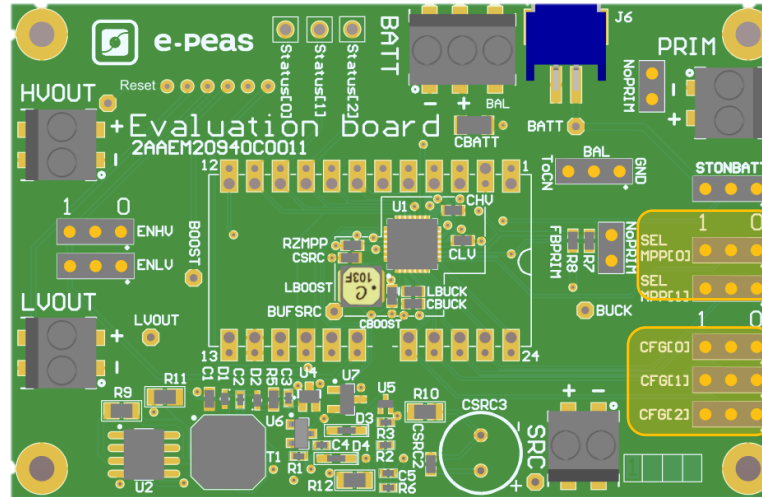
1.

SELMPP1-0	MPPT Ratio (%)
0-0	50
0-1	55
1-0	75
1-1	100

2.

CFG2-1-0	Storage element type
H-H-H	Li-ion battery
H-H-L	Solid state Battery
H-L-H	Li-ion / NiMH battery
H-L-L	Single cell supercapacitor
L-H-H	Dual cell supercapacitor
L-H-L	Dual cell supercapacitor
L-L-H	LifePo4
L-L-L	Not used

Do not leave floating jumpers



MPP configuration
(DS page 12)

1.

2.

System configuration
(DS page 11)

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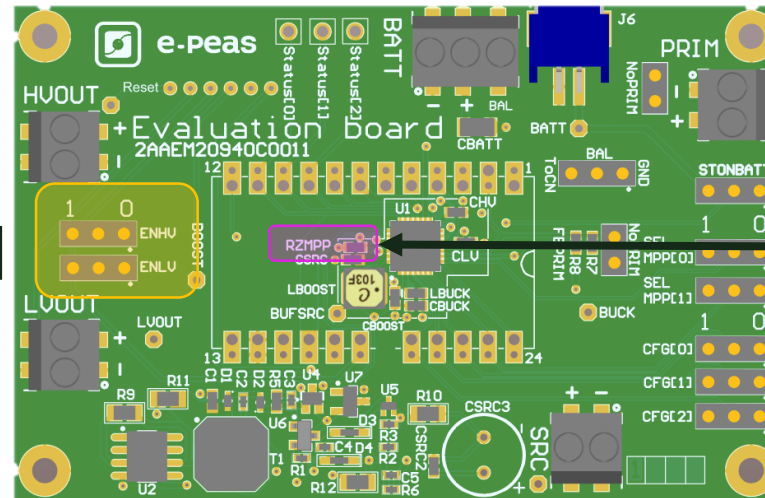
3.

Do not leave floating jumpers

ENLV	ENHV	LVOUT	HVOUT
1	1	Enabled	Enabled
1	0	Enabled	Disabled
0	1	Disabled	Enabled
0	0	Disabled	Disabled

LDO outputs
configuration
(DS page 9)

3. →



4.

ZMPPT configuration
(DS page 12)

4.

Connect a resistor on RZMPPT if ZMPP feature used
Else **do not connect** any resistor



Please see DS page 12

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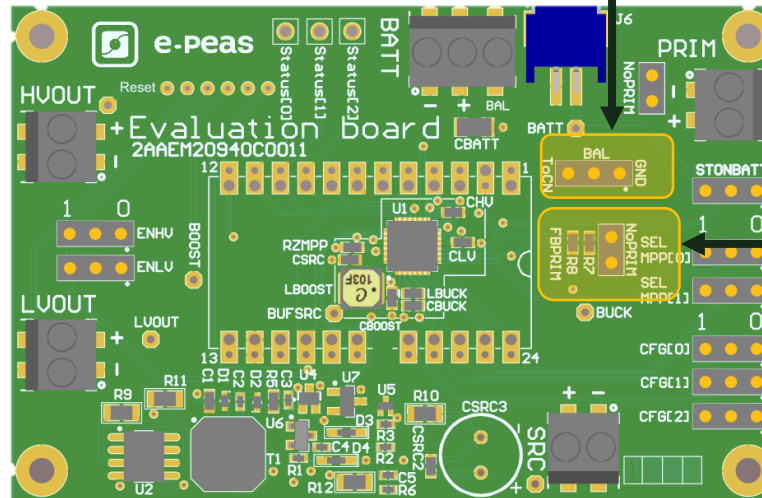
5.

If dual-cell supercapacitor :
BAL connected to the node
between the supercapacitors
BAL = ToCN

If not :
BAL = GND

Do not leave floating jumpers

5. Balun for dual-cells supercapacitor
(DS page 10)



6.

Primary battery configuration
(DS page 12)

6.
Connect the jumpers « *NoPRIM* » if no primary battery
else

$$100 \text{ k}\Omega \leq R_P = R_7 + R_8 \leq 500 \text{ k}\Omega$$

V_{PRIM_MIN} = minimum voltage on PRIM

$$R_7 = \left(\frac{V_{PRIM_MIN}}{4} * R_P \right) / 2.2 \text{ V}$$

$$R_8 = R_P - R_7$$

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7.

8.

If no primary battery, please connect the jumpers "NoPRIM"

Circuit

LVOUT

10.

Source

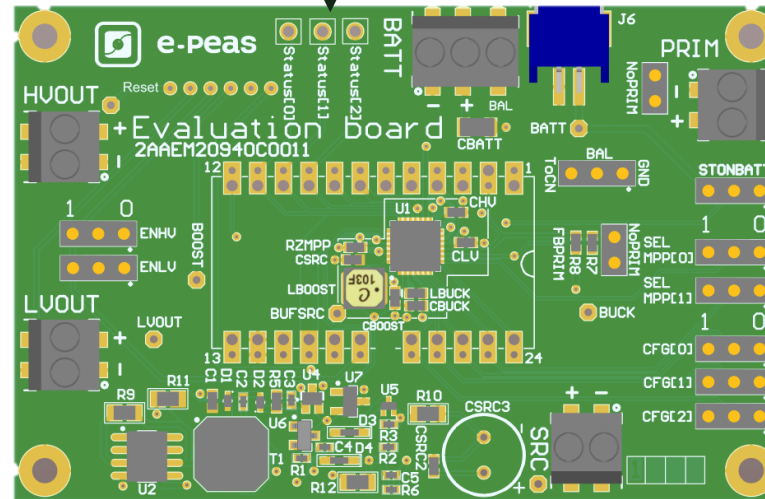
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11. AEM Status



10.

STATUS0 = Asserted when the LDOs can be enabled

STATUS1 = Asserted if the battery voltage falls under Vovdis

STATUS2 = Asserted when the AEM performs the MPP tracking

For more information : support@e-peas.com

Visit us on

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