

# Lattice MachXO2 based modules

|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|--------------------------------------------------|--------------------------|------------|------------------------------|------|------|--|--|--|--|-----|------|---|-----|----|----|----|----|----|----|----|----|----|--|--|--|--|--|
|                                                  |                          |            |                              |      |      |  |  |  |  | TE  | 0003 | - | 03  | -  | 5  | D  | I  | 2  | 1  | -  | A  | S  |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  | 1 2 | 3456 | 7 | 8 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |  |  |  |  |  |
| Module type                                      |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| TEL                                              | Trenz Electronic         |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| Module name                                      |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  | 0006                     | 0007       | 0008                         |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| Module Revision                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| 01                                               | PCB Revision 1 (initial) |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| Device name - Series / IO Count / Supply Voltage |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| (LCMX02) / (-/U) / (C/E)                         |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| A                                                | B                        | D          | F                            |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| LCM XO2 -C                                       | LCM XO2 -E               | LCM XO2 UC | LCM XO2 UE                   |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| Size                                             |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| A                                                | B                        | D          | F                            | G    | H    |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| 256                                              | 640                      | 1200       | 2000                         | 4000 | 7000 |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| Speed / Power / Performance                      |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| (1/2/3/4/5/6) / (Z/H)                            |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| 1                                                | 2                        | 3          | 4                            | 5    | 6    |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| 1Z                                               | 2Z                       | 3Z         | 4H                           | 5H   | 6H   |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| DDR memory                                       |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| 0                                                | Not populated            |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| Flash memory                                     |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| 0                                                | Not populated            |            |                              |      |      |  |  |  |  | -   |      |   |     |    |    | -  |    |    |    |    |    | -  |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| eMMC                                             |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| -                                                | Not present              |            |                              |      |      |  |  |  |  | -   |      |   |     |    |    | -  |    |    |    |    |    | -  |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| Other options (Connectors, custom options)       |                          |            |                              |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| Module                                           | Variation                |            | Description                  |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
| All                                              | A                        |            | Standard connector height    |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |
|                                                  | L                        |            | Low profile connector height |      |      |  |  |  |  |     |      |   |     |    |    |    |    |    |    |    |    |    |  |  |  |  |  |

|                    |                    |                                                      |  |  |
|--------------------|--------------------|------------------------------------------------------|--|--|
|                    | C                  | Standard connector height                            |  |  |
|                    | D                  | Low profile connector height                         |  |  |
|                    | ...                | Custom assembly variant, look additional table below |  |  |
| Additional options |                    |                                                      |  |  |
| Blank              | No extra options   |                                                      |  |  |
| S                  | Starter Kit        |                                                      |  |  |
| K                  | With heat spreader |                                                      |  |  |
| P                  | Prototype          |                                                      |  |  |

Other assembly variations (position 17)

| Module | Variation | Description |
|--------|-----------|-------------|
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