



## Bill of materials

Table 1. X-NUCLEO-DOL10A1 bill of materials

| Item | Q.ty | Ref.                         | Part/Value                                      | Description                                | Manufacturer           | Order code                 |
|------|------|------------------------------|-------------------------------------------------|--------------------------------------------|------------------------|----------------------------|
| 1    | 6    | C1 C2 C3 C4, C5, C6          | 100nF, 0603 (1608 Metric), 16V, +/-10%          | CAPACITOR CERAMIC SMD 0603                 | Würth Electronics Inc. | 885012206046               |
| 2    | 1    | C7                           | 0.1uF, 0805 (2012 Metric), 100V, +/-10%         | CAP CER 0.1UF 100V X7R 0805                | Würth Electronics Inc. | 885012207128               |
| 3    | 3    | C8, C9, C10                  | 4.7uF, 0805 (2012 Metric), 10V, +/-10%          | CAP CER 4.7UF 10V X7R 0805                 | Würth Electronics Inc. | 885012207025               |
| 4    | 0    | C11, C12, C13, C14, C15, C16 | 4700pF, 1825 (4564 Metric), 3000V (3kV), +/-10% | CAP CER 4700PF 3KV X7R 1825 (not mounted)  | Vishay Vitramon        | HV1825Y472KXHATHV          |
| 5    | 3    | C17, C18, C19                | 470pF, 0603, 16V                                |                                            | Würth Electronics Inc. | 885012006061               |
| 6    | 3    | C20, C21, C22                | 4.7nF, 0603, 16V                                |                                            | Würth Electronics Inc. | 885012206038               |
| 7    | 3    | C23, C24, C25                | 47nF, 0603, 16V                                 |                                            | Würth Electronics Inc. | 885012206044               |
| 8    | 4    | C26, C27, C28, C32           | 2.2uF, 1210 (3225 Metric), 100V, +/-10%         | CAP CER 2.2UF 100V X7R 1210                | Würth Electronics Inc. | 885012209071               |
| 9    | 1    | C29                          | 15nF, 0805, 100V, +/-10%                        |                                            | Würth Electronics Inc. | 885012207123               |
| 10   | 1    | C30                          | 47pF, 0603 (1608 Metric), 16V                   | CAPACITOR CERAMIC SMD 0603                 | Würth Electronics Inc. | 885012006021               |
| 11   | 1    | CN1                          | 3 ways screw connector                          |                                            | Würth Electronics Inc. | 691214110003               |
| 12   | 1    | CN3                          | 2 ways screw connector, 7.4X7 pitch 3.5         | TERM BLK 2POS SIDE ENT 3.5MM PCB           | Würth Electronics Inc. | 691214110002               |
| 13   | 1    | CN5                          | SSQ-110-04-F-S                                  | CONN RCPT 10POS 0.1 GOLD PCB               | Samtec Inc.            | SSQ-110-04-F-S             |
| 14   | 2    | CN6, CN9                     | SSQ-108-04-F-S                                  | CONN RCPT 8POS 0.1 GOLD PCB                | Samtec Inc.            | SSQ-108-04-F-S             |
| 15   | 0    | CN7, CN10                    | SSQ-119-04-L-D                                  | CONN RCPT 38POS 0.1 GOLD PCB (not mounted) | Samtec Inc.            | SSQ-119-04-L-D             |
| 16   | 1    | CN8                          | SSQ-106-04-F-S                                  | CONN RCPT 6POS 0.1 GOLD PCB                | Samtec Inc.            | SSQ-106-04-F-S             |
| 17   | 1    | DC1                          | PES1-S5-D5-M, 10-SMD Module, 6 Leads            | DC DC CONVERTER +/-5V 1W                   | CUI Inc.               | PES1-S5-D5-M-TR            |
| 18   | 1    | D1                           | STPS1H100A, DO-214AC, SMA, 1A                   | DIODE SCHOTTKY 100V 1A SMA                 | ST                     | <a href="#">STPS1H100A</a> |
| 19   | 1    | D2                           | BAT41ZFILM, SOD-123, 200 mA                     | DIODE SCHOTTKY 100V 0.2A SOD-123           | ST                     | <a href="#">BAT41ZFILM</a> |
| 20   | 2    | D3, D4                       | 150060RS75000, 0603 (1608 Metric), 20mA         | LED RED CLEAR 0603 SMD                     | Würth Electronics Inc. | 150060RS75000              |

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|------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------|
| 21   | 1    | D5                                                                                                                                                                                                                                                                    | 150060VS75000,<br>0603 (1608 Metric),<br>20mA       | LED GREEN CLEAR 0603 SMD                                                                                                                                                                                                                                                            | Würth Electronics<br>Inc. | 150060VS75000     |
| 22   | 40   | J1, J2, J3, J4,<br>J5, J10, J11,<br>J12, J13, J14,<br>J15, J16, J17,<br>J18, J19, J20,<br>J21, J22, J23,<br>J24, J101,<br>J102, J103,<br>J104, J105,<br>J106, J107,<br>J108, J109,<br>J110, J111,<br>J112, J113,<br>J114, J115,<br>J116, J117,<br>J118, J119,<br>J120 | jumper_0603_drop                                    | DROP JUMPER 0603,<br><br>OPEN: J1, J4, J10, J11, J12, J13,<br>J15, J16, J17, J19, J20, J21, J22,<br>J23, J105, J107, J108, J109,<br>J111, J115, J116, J117, J119<br><br>CLOSE: J2, J3, J5, J14, J18, J24,<br>J101, J102, J103, J104, J106,<br>J110, J112, J113, J114, J118,<br>J120 |                           |                   |
| 23   | 1    | L1                                                                                                                                                                                                                                                                    | 74476406, 6.8uH,<br>0.18A, +/-10%                   | INDUCTOR, 6.8UH, 10%, 0.18A,<br>43MHZ                                                                                                                                                                                                                                               | Würth Electronics<br>Inc. | 74476406          |
| 24   | 0    | R1                                                                                                                                                                                                                                                                    | 4.7kΩ, 0603 (1608<br>Metric), 0.1W, 1/10W,<br>+/-1% | RES SMD 4.7K OHM 1% 1/10W<br>0603 (not mounted)                                                                                                                                                                                                                                     | YAGEO                     | SR0603FR-7T4K7L   |
| 25   | 1    | R2                                                                                                                                                                                                                                                                    | 4.7kΩ, 0603 (1608<br>Metric), 0.1W, 1/10W,<br>+/-1% | RES SMD 4.7K OHM 1% 1/10W<br>0603                                                                                                                                                                                                                                                   | YAGEO                     | SR0603FR-7T4K7L   |
| 26   | 1    | R3                                                                                                                                                                                                                                                                    | 12kΩ, 0603 (1608<br>Metric), 0.1W, 1/10W,<br>+/-1%  | RES SMD 12K OHM 1% 1/10W<br>0603                                                                                                                                                                                                                                                    | RHOM                      | SFR03EZPF1202     |
| 27   | 3    | R5, R7, R9                                                                                                                                                                                                                                                            | 1kΩ, 0603, 0.1W,<br>+/-1%                           | RES SMD 1K OHM 1% 0.1W<br>0603                                                                                                                                                                                                                                                      | YAGEO                     | RC0603FR-101KL    |
| 28   | 6    | R4, R6, R8,<br>R10, R11, R12                                                                                                                                                                                                                                          | 10kΩ, 0603, 0.1W,<br>+/-1%                          | RES SMD 10K OHM 1% 1/10W<br>0603                                                                                                                                                                                                                                                    | YAGEO                     | RC0603FR-0710KA   |
| 29   | 1    | R13                                                                                                                                                                                                                                                                   | 47kΩ, 0603 (1608<br>Metric), 0.1W, 1/10W,<br>+/-1%  | RES SMD 47K OHM 1% 1/10W<br>0603                                                                                                                                                                                                                                                    | YAGEO                     | RT0603FRE0747KL   |
| 30   | 4    | R14, R15, R16,<br>R17                                                                                                                                                                                                                                                 | 100kΩ, 0603, 0.1W,<br>+/-1%                         | RES SMD 100K OHM 1% 1/10W<br>0603                                                                                                                                                                                                                                                   | VISHAY                    | RCA0603100KFKEC   |
| 31   | 3    | R18, R19, R20                                                                                                                                                                                                                                                         | 220kΩ, 0603 (1608<br>Metric), 0.1W, 1/10W,<br>+/-1% | CHIP RESISTOR SMD 1%<br>1/10W 0603                                                                                                                                                                                                                                                  | BURNS                     | CR0603-FX-2203ELF |
| 32   | 13   | SW1, SW2,<br>SW3, SW4,<br>SW5, SW6,<br>SW7, SW8,<br>SW9, SW10,<br>SW11, SW12,<br>SW13                                                                                                                                                                                 | jumper_0603_3pin_dr<br>op                           | DROP JUMPER 0603 3pin,<br><br>SW1 to SW10: CLOSE 1-2<br>SW11 to SW12: CLOSE 2-3<br>SW13: all open                                                                                                                                                                                   |                           |                   |
| 33   | 10   | TP1, TP2, TP3,<br>TP4, TP5, TP6,<br>TP7, TP8, TP9,<br>TP10                                                                                                                                                                                                            | 5001, 0.100" Dia x<br>0.180" L (2.54mm x<br>4.57mm) | TEST POINT PC MINI .040"D<br>BLACK                                                                                                                                                                                                                                                  | Keystone<br>Electronics   | 5001              |
| 34   | 1    | U1                                                                                                                                                                                                                                                                    | IPS1050LQ QFN32L<br>(6x6 mm) , 60V / 5A             | Single Channel Low Side IPS                                                                                                                                                                                                                                                         | ST                        | IPS1050LQ         |

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|------|------|------------|-----------------------------------------|-----------------------------------------------------------------------|--------------|----------------------------|
| 35   | 2    | U2, U7     | SM15T39CA, SMC, 1.5kW                   | TVS surge suppressor                                                  | ST           | <a href="#">SM15T39CA</a>  |
| 36   | 3    | U3, U4, U5 | STISO620, 8-SOIC (0.268", 6.81mm Width) | Dual Channel Digital Isolator                                         | ST           | <a href="#">STISO620</a>   |
| 37   | 1    | U6         | LDO40LPURY, DFN8                        | 400 mA, 38 V low-dropout regulator, with 45 $\mu$ A quiescent current | ST           | <a href="#">LDO40LPURY</a> |

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