



Bill of Materials

TI DESIGNS

TIDA-00405

BoosterPack BOM

BOOSTXL-3DPRINT

| Item | Qty | Reference | Value | Part Description | Manufacturer | Manufacturer Part Number |
|------|-----|---|------------|--|------------------|--------------------------|
| 1 | 1 | !PCB | n/a | Printed Circuit Board | Any | BOOSTXL-3DPRINT |
| 2 | 3 | C1, C3, C4 | 10uF | CAP, CERM, 10uF, 6.3V, +/-10%, X7R, 0805 | MuRata | GRM21BR70J106KE76L |
| 3 | 1 | C2 | 0.1uF | CAP, CERM, 0.1uF, 6.3V, +/-10%, X7R, 0603 | MuRata | GRM188R70J104KA01D |
| 4 | 1 | C5 | 0.1uF | CAP, CERM, 0.1uF, 16V, +/-10%, X5R, 0603 | MuRata | GRM188R61C104KA01D |
| 5 | 1 | C6 | 0.33uF | CAP, CERM, 0.33uF, 16V, +/-10%, X7R, 0603 | MuRata | GRM188R71C334KA01D |
| 6 | 1 | C7 | 0.1uF | CAP, CERM, 0.1uF, 16V, +/-10%, X7R, 0603 | MuRata | GRM188R71C104KA01D |
| 7 | 1 | C8 | 100uF | CAP, AL, 100uF, 16V, +/-20%, 0.024 ohm, SMD | Nippon Chemi-Con | APXE160ARA101MF80G |
| 8 | 4 | C9, C12, C15, C18 | 2.2uF | CAP, CERM, 2.2uF, 10V, +/-10%, X7R, 0603 | MuRata | GRM188R71A225KE15D |
| 9 | 4 | C10, C13, C16, C19 | 0.1uF | CAP, CERM, 0.1uF, 25V, +/-10%, X7R, 0603 | MuRata | GRM188R71E104KA01D |
| 10 | 4 | C11, C14, C17, C20 | 10uF | CAP, CERM, 10uF, 25V, +/-10%, X7R, 1206 | MuRata | GRM31CR71E106KA12L |
| 11 | 1 | D1 | Red | LED, Red, SMD | Lite-On | LTST-C170KRKT |
| 12 | 3 | D2, D3, D4 | Green | LED, Green, SMD | Lite-On | LTST-C171GKT |
| 13 | 2 | D5, D6 | Diode | DIODE GEN PURPOSE 400V 1A DO41 | Comchip | 1N4004-G |
| 14 | 6 | E0_MOTOR, J22, X_MOTOR, Y_MOTOR, Z_MOTOR1, Z_MOTOR2 | PEC04SAAN | Header, Male 4-pin, 100mil spacing, | Sullins | PEC04SAAN |
| 15 | 1 | F1 | Fuse | POLYSWITCH PTC RESET 11A HLD T/R | TE Connectivity | RGEF1100-2 |
| 16 | 1 | F2 | Fuse | FUSE PTC RESETTABLE 5A HOLD | Bourns Inc. | MF-R500 |
| 17 | 3 | FAN, HT0, HT1 | ED120/2DS | Terminal Block, 2-pin, 15-A, 5.1mm | OST | ED120/2DS |
| 18 | 3 | FID1, FID2, FID3 | n/a | Fiducial mark. There is nothing to buy or mount. | N/A | N/A |
| 19 | 2 | H1, H2 | n/a | Header, Male 2x10-pin, 100mil spacing | Sullins | PPPC102LFBN-RC |
| 20 | 1 | J1 | ED120/4DS | Terminal Block, 4-pin, 15-A, 5.1mm | OST | ED120/4DS |
| 21 | 1 | J17 | PEC02SAAN | Header, Male 2-pin, 100mil spacing, | Sullins | PEC02SAAN |
| 22 | 1 | J21 | 5027020891 | CONN, SD Card Reader | Molex | 5027020891 |

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|------|-----|--|---------------|---|---------------------------|--------------------------|
| 23 | 3 | Q1, Q2, Q3 | 60V | MOSFET, N-CH, 60V, 50A, SON 5x6mm | Texas Instruments | CSD18534Q5A |
| 24 | 1 | R1 | 47k | RES, 47k ohm, 5%, 0.1W, 0603 | Yageo America | RC0603JR-0747KL |
| 25 | 2 | R2, R3 | 4.7k | RES, 4.7k ohm, 5%, 0.1W, 0603 | Vishay-Dale | CRCW06034K70JNEA |
| 26 | 1 | R4 | 1.00k | RES, 1.00k ohm, 0.1%, 0.1W, 0603 | Susumu Co Ltd | RG1608P-102-B-T5 |
| 27 | 3 | R5, R8, R11 | 10 | RES, 10 ohm, 5%, 0.1W, 0603 | Vishay-Dale | CRCW060310R0JNEA |
| 28 | 3 | R6, R10, R12 | 100k | RES, 100k ohm, 5%, 0.1W, 0603 | Vishay-Dale | CRCW0603100KJNEA |
| 29 | 3 | R7, R9, R13 | 1.8k | RES, 1.8k ohm, 5%, 0.1W, 0603 | Vishay-Dale | CRCW06031K80JNEA |
| 30 | 4 | R18, R31, R48, R63 | 10k | RES, 10k ohm, 5%, 0.1W, 0603 | Yageo America | RC0603JR-0710KL |
| 31 | 16 | R19, R20, R21, R22, R32, R33, R34, R35, R49, R50, R51, R52, R64, R65, R66, R67 | 10k | RES, 10k ohm, 5%, 0.1W, 0603 | Vishay-Dale | CRCW060310K0JNEA |
| 32 | 8 | R27, R28, R42, R43, R57, R58, R72, R73 | 0.25 | RES, 0.25 ohm, 1%, 0.5W, 1206 | Stackpole Electronics Inc | CSR1206FKR250 |
| 33 | 1 | RESET | Switch | Switch, Tactile, SPST-NO, 0.05A, 12V, SMT | TE Connectivity | 4-1437565-1 |
| 34 | 4 | U1, U2, U3, U4 | Motor Driver | DUAL BRIDGE STEPPER MOTOR DRIVER | Texas Instruments | DRV8846 |
| 35 | 1 | U5 | LDO | IC, Voltage Regulator, 3.3-V, 500-mA | Texas Instruments | UA78M33CDCY |
| 36 | 4 | U6, U7, U8, U9 | Potentiometer | TRIMMER 10K OHM 0.05W SMD | Murata Electronics | PVZ2A103C04R00 |
| 37 | 6 | X+, X-, Y+, Y-, Z+, Z- | PEC03SAAN | Header, Male 3-pin, 100mil spacing, | Sullins | PEC03SAAN |
| 38 | 3 | n/a | Hall Sensor | Digital omnipolar-switch hall effect sensor | Texas Instruments | DRV5033 |
| 39 | 1 | n/a | LaunchPad | MSP430F5529 USB LaunchPad Kit | Texas Instruments | MSP-EXP430F5529LP |



Bill of Materials

TI DESIGNS

TIDA-00405

LaunchPad BOM

MSP-EXP430F5529LP

| Item | Qty | Reference | Value | Part Description | Manufacturer | Manufacturer Part Number |
|------|-----|-----------|-------|---------------------------------|--------------|--------------------------|
| 1 | 1 | C101 | 470n | CAP CER 0.47UF 16V 10% X5R 0402 | Standard | 445-4976-1-ND |

| Item | Qty | Reference | Value | Part Description | Manufacturer | Manufacturer Part Number |
|------|-----|-----------|-------|---------------------------------|--------------|--------------------------|
| 2 | 1 | C102 | 220n | CAP CER 0.22UF 16V 10% X5R 0402 | Standard | 445-4972-1-ND |
| 3 | 1 | C103 | 100n | CAP CER 0.1UF 10V 20% X5R 0402 | Standard | 445-4984-1-ND |
| 4 | 1 | C104 | 10u | CAP TANT 10UF 10V 20% 1206 | Standard | 493-2351-1-ND |
| 5 | 1 | C107 | 220n | CAP CER 0.22UF 16V 10% X5R 0402 | Standard | 445-4972-1-ND |
| 6 | 1 | C110 | 10p | CAP CER 10PF 50V NPO 0402 | Standard | 445-1235-1-ND |
| 7 | 1 | C111 | 10p | CAP CER 10PF 50V NPO 0402 | Standard | 445-1235-1-ND |
| 8 | 1 | C112 | 1n | CAP CER 1000PF 50V 10% X7R 0402 | Standard | 445-1256-1-ND |
| 9 | 1 | C113 | 100n | CAP CER 0.1UF 10V 20% X5R 0402 | Standard | 445-4984-1-ND |
| 10 | 1 | C121 | 100n | CAP CER 0.1UF 10V 20% X5R 0402 | Standard | 445-4984-1-ND |
| 11 | 1 | C122 | 33p | CAP CER 33PF 50V 5% NPO 0402 | Standard | 445-1241-1-ND |
| 12 | 1 | C123 | 33p | CAP CER 33PF 50V 5% NPO 0402 | Standard | 445-1241-1-ND |
| 13 | 1 | C14 | 100n | CAP CER 0.1UF 10V 20% X5R 0402 | Standard | 445-4984-1-ND |
| 14 | 1 | C15 | 220n | CAP CER 0.22UF 16V 10% X5R 0402 | Standard | 445-4972-1-ND |
| 15 | 1 | C16 | 220n | CAP CER 0.22UF 16V 10% X5R 0402 | Standard | 445-4972-1-ND |
| 16 | 1 | C17 | 1n | CAP CER 1000PF 50V 10% X7R 0402 | Standard | 445-1256-1-ND |
| 17 | 1 | C18 | 470n | CAP CER 0.47UF 16V 10% X5R 0402 | Standard | 445-4976-1-ND |
| 18 | 1 | C19 | 100n | CAP CER 0.1UF 10V 20% X5R 0402 | Standard | 445-4984-1-ND |
| 19 | 1 | C20 | 100n | CAP CER 0.1UF 10V 20% X5R 0402 | Standard | 445-4984-1-ND |
| 20 | 1 | C21 | 100n | CAP CER 0.1UF 10V 20% X5R 0402 | Standard | 445-4984-1-ND |
| 21 | 1 | C23 | 10p | CAP CER 10PF 50V 5%NPO 0402 | Standard | 445-1235-1-ND |
| 22 | 1 | C24 | 10p | CAP CER 10PF 50V 5% NPO 0402 | Standard | 445-1235-1-ND |
| 23 | 1 | C25 | 12p | CAP CER 12PF 50V 5% NPO 0402 | Standard | 445-1236-1-ND |
| 24 | 1 | C26 | 12p | CAP CER 12PF 50V 5% NPO 0402 | Standard | 445-1236-1-ND |
| 25 | 1 | C27 | 4u7 | CAP TANT 4.7UF 10V 10% 1206 | Standard | 493-4142-1-ND |
| 26 | 1 | C28 | 100n | CAP CER 0.1UF 10V 20% X5R 0402 | Standard | 445-4984-1-ND |
| 27 | 1 | C29 | 100n | CAP CER 0.1UF 10V 20% X5R 0402 | Standard | 445-4984-1-ND |
| 28 | 1 | C30 | 10u | CAP TANT 10UF 10V 20% 1206 | Standard | 493-2351-1-ND |
| 29 | 1 | C31 | 100n | CAP CER 0.1UF 10V 20% X5R 0402 | Standard | 445-4984-1-ND |
| 30 | 1 | C401 | 1u | CAP CER 1UF 10V 10% X7R 0805 | Standard | 587-1284-2-ND |
| 31 | 1 | C402 | 100n | CAP CER 0.1UF 10V 20% X5R 0402 | Standard | 445-4984-1-ND |
| 32 | 1 | C403 | 4u7 | CAP TANT 4.7UF 10V 10% 1206 | Standard | 493-4142-1-ND |
| 33 | 1 | C404 | 1u | CAP CER 1UF 10V 10% X7R 0805 | Standard | 587-1284-2-ND |
| 34 | 1 | C405 | 22p | CAP CER 22PF 50V 5% NPO 0402 | Standard | 445-1239-1-ND |
| 35 | 1 | C406 | 22p | CAP CER 22PF 50V 5% NPO 0402 | Standard | 445-1239-1-ND |
| 36 | 1 | C407 | 100n | CAP CER 0.1UF 10V 20% X5R 0402 | Standard | 445-4984-1-ND |
| 37 | 1 | C408 | 100n | CAP CER 0.1UF 10V 20% X5R 0402 | Standard | 445-4984-1-ND |
| 38 | 1 | C409 | 22p | CAP CER 22PF 50V 5% NPO 0402 | Standard | 445-1239-1-ND |
| 39 | 1 | C410 | 22p | CAP CER 22PF 50V 5% NPO 0402 | Standard | 445-1239-1-ND |

| Item | Qty | Reference | Value | Part Description | Manufacturer | Manufacturer Part Number |
|------|-----|-----------|-----------------|------------------------------------|-------------------|--------------------------|
| 40 | 1 | C411 | 22p | CAP CER 22PF 50V 5% NP0 0402 | Standard | 445-1239-1-ND |
| 41 | 1 | C412 | 22p | CAP CER 22PF 50V 5% NP0 0402 | Standard | 445-1239-1-ND |
| 42 | 1 | IC401 | n/a | IC 4-PORT HUB FOR USB 32-QFN | Texas Instruments | TUSB2046BIRHBR |
| 43 | 1 | J1 | n/a | 20POS .100" DUAL, FEMALE | Standard | CNT-F254-2*10-GS-850-9 |
| 44 | 1 | J10 | PWR | CONN HEADER 3POS .100" SNGL TIN | Standard | SAM1075-03-ND |
| 45 | 1 | J3 | PWR | CONN HEADER 3POS .100" SNGL TIN | Standard | SAM1075-03-ND |
| 46 | 1 | J401 | ZX62R-B-5P | CONN RCPT MICRO USB B SMD R/A | Standard | H11574CT-ND |
| 47 | 1 | J5 | n/a | 20POS .100" DUAL, FEMALE | Standard | CNT-F254-2*10-GS-850-9 |
| 48 | 1 | JP1 | +5V | CONN HEADER 2POS .100" SNGL TIN | Standard | SAM1075-02-ND |
| 49 | 1 | JP2 | +3V3 | CONN HEADER 2POS .100" SNGL TIN | Standard | SAM1075-02-ND |
| 50 | 1 | JP3 | GND | CONN HEADER 2POS .100" SNGL TIN | Standard | SAM1075-02-ND |
| 51 | 1 | JP4.1 | SBWTCK | CONN HEADER 2POS .100" SNGL TIN | Standard | SAM1075-02-ND |
| 52 | 1 | JP4.2 | SBWTDIO | CONN HEADER 2POS .100" SNGL TIN | Standard | SAM1075-02-ND |
| 53 | 0 | JP4.3 | SBWDAT (dnp) | CONN HEADER 2POS .100" SNGL TIN | Standard | SAM1075-02-ND |
| 54 | 1 | JP6.1 | TXD | CONN HEADER 2POS .100" SNGL TIN | Standard | SAM1075-02-ND |
| 55 | 1 | JP6.2 | RXD | CONN HEADER 2POS .100" SNGL TIN | Standard | SAM1075-02-ND |
| 56 | 1 | JP6.3 | CTS | CONN HEADER 2POS .100" SNGL TIN | Standard | SAM1075-02-ND |
| 57 | 1 | JP6.4 | RTS | CONN HEADER 2POS .100" SNGL TIN | Standard | SAM1075-02-ND |
| 58 | 1 | JP8 | LED1_PWR | CONN HEADER 2POS .100" SNGL TIN | Standard | SAM1075-02-ND |
| 59 | 1 | L401 | 2.2uH | INDUCTOR 2.2UH 20% SMD | Taiyo Yuden | NR3010T2R2M |
| 60 | 1 | LED1 | Red | LED RED CLEAR 0603 SMD | Standard | 160-1181-1-ND |
| 61 | 1 | LED101 | Red | LED RED CLEAR 0603 SMD | Standard | 160-1181-1-ND |
| 62 | 1 | LED102 | Green | LED GREEN CLEAR 0603 SMD | Standard | 160-1183-1-ND |
| 63 | 1 | LED2 | Green | LED GREEN CLEAR 0603 SMD | Standard | 160-1183-1-ND |
| 64 | 1 | MSP101 | MSP430F5528IRGC | IC MCU 16BIT 128KB FLASH 64VQFN | Texas Instruments | MSP430F5528IRGC |
| 65 | 1 | Q101 | PIEZO | CER RESONATOR 4.00MHZ SMD | Murata | CSTCR4M00G15L99 |
| 66 | 1 | Q2 | 32.768kHz | MS3V-T1R 32.768kHz CL 12pF +-20ppm | Microcrystal | MS3V-T1R |
| 67 | 1 | Q4 | PIEZO | CER RESONATOR 4.00MHZ SMD | Murata | CSTCR4M00G15L99 |
| 68 | 1 | Q401 | PIEZO | CER RESONATOR 6.00MHZ SMD | Murata | CSTCR6M00G15L99 |
| 69 | 1 | R101 | 470 | RES 470 OHM 1/16W 1% 0402 SMD | Standard | 311-470LRCT-ND |
| 70 | 1 | R102 | 390 | RES 390 OHM 1/16W 1% 0402 SMD | Standard | 311-390LRCT-ND |
| 71 | 1 | R103 | 27 | RES 27 OHM 1/16W 5% 0402 SMD | Standard | 311-27JRCT-ND |
| 72 | 1 | R104 | 27 | RES 27 OHM 1/16W 5% 0402 SMD | Standard | 311-27JRCT-ND |
| 73 | 1 | R105 | 1k4 | RES 1.33K OHM 1/16W 1% 0402 SMD | Standard | 311-1.33KLRCT-ND |
| 74 | 1 | R106 | 1M | RES 1.00M OHM 1/16W 1% 0402 SMD | Standard | 311-1.00MLRCT-ND |
| 75 | 1 | R109 | 47k | RES 47.0K OHM 1/16W 1% 0402 SMD | Standard | 311-47.0KLRCT-ND |
| 76 | 1 | R121 | 220k | RES 220K OHM 1/16W 1% 0402 SMD | Standard | 311-220KLRCT-ND |
| 77 | 1 | R122 | 220k | RES 220K OHM 1/16W 1% 0402 SMD | Standard | 311-220KLRCT-ND |

| Item | Qty | Reference | Value | Part Description | Manufacturer | Manufacturer Part Number |
|------|-----|-----------|----------------|----------------------------------|-------------------|--------------------------|
| 78 | 1 | R124 | 240k | RES 240K OHM 1/16W 1% 0402 SMD | Standard | 311-240KLRCT-ND |
| 79 | 1 | R125 | 150k | RES 150K OHM 1/16W 1% 0402 SMD | Standard | 311-150KLRCT-ND |
| 80 | 1 | R14 | 100R | RES 100 OHM 1/16W 1% 0402 SMD | Standard | 311-100LRCT-ND |
| 81 | 1 | R15 | 1k4 | RES 1.33K OHM 1/16W 1% 0402 SMD | Standard | 311-1.33KLRCT-ND |
| 82 | 1 | R16 | 1M | RES 1.00M OHM 1/16W 1% 0402 SMD | Standard | 311-1.00MLRCT-ND |
| 83 | 1 | R27 | 47k | RES 47.0K OHM 1/16W 1% 0402 SMD | Standard | 311-47.0KLRCT-ND |
| 84 | 1 | R28 | 0R | RES 0.0 OHM 1/16W 0402 SMD | Standard | 311-0.0JRTR-ND |
| 85 | 1 | R29 | 470R | RES 470 OHM 1/16W 1% 0402 SMD | Standard | 311-470LRCT-ND |
| 86 | 1 | R30 | 470R | RES 470 OHM 1/16W 1% 0402 SMD | Standard | 311-470LRCT-ND |
| 87 | 1 | R31 | 27R | RES 27 OHM 1/16W 5% 0402 SMD | Standard | 311-27JRCT-ND |
| 88 | 1 | R32 | 27R | RES 27 OHM 1/16W 5% 0402 SMD | Standard | 311-27JRCT-ND |
| 89 | 1 | R401 | 33R | RES 33 OHM 1/16W 5% 0402 SMD | Standard | 311-33JRCT-ND |
| 90 | 1 | R402 | 10k | RES 10.0K OHM 1/16W 1% 0402 SMD | Standard | 311-10.0KLRCT-ND |
| 91 | 1 | R403 | 1k5 | RES 1.50K OHM 1/16W 1% 0402 SMD | Standard | 11-1.50KLRCT-ND |
| 92 | 1 | R404 | 47k | RES 47.0K OHM 1/16W 1% 0402 SMD | Standard | 311-47.0KLRCT-ND |
| 93 | 1 | R405 | 22R | RES 22 OHM 1/16W 5% 0402 SMD | Standard | 311-22JRCT-ND |
| 94 | 1 | R406 | 22R | RES 22 OHM 1/16W 5% 0402 SMD | Standard | 311-22JRCT-ND |
| 95 | 1 | R407 | 1k5 | RES 1.50K OHM 1/16W 1% 0402 SMD | Standard | 311-1.50KLRCT-ND |
| 96 | 1 | R408 | 15k | RES 15.0K OHM 1/16W 1% 0402 SMD | Standard | 311-15.0KLRCT-ND |
| 97 | 1 | R409 | 15k | RES 15.0K OHM 1/16W 1% 0402 SMD | Standard | 311-15.0KLRCT-ND |
| 98 | 1 | R410 | 22R | RES 22 OHM 1/16W 5% 0402 SMD | Standard | 311-22JRCT-ND |
| 99 | 1 | R411 | 22R | RES 22 OHM 1/16W 5% 0402 SMD | Standard | 311-22JRCT-ND |
| 100 | 1 | R412 | 15k | RES 15.0K OHM 1/16W 1% 0402 SMD | Standard | 311-15.0KLRCT-ND |
| 101 | 1 | R413 | 15k | RES 15.0K OHM 1/16W 1% 0402 SMD | Standard | 311-15.0KLRCT-ND |
| 102 | 1 | R414 | 15k | RES 15.0K OHM 1/16W 1% 0402 SMD | Standard | 311-15.0KLRCT-ND |
| 103 | 1 | R415 | 15k | RES 15.0K OHM 1/16W 1% 0402 SMD | Standard | 311-15.0KLRCT-ND |
| 104 | 1 | R416 | 22R | RES 22 OHM 1/16W 5% 0402 SMD | Standard | 311-22JRCT-ND |
| 105 | 1 | R417 | 22R | RES 22 OHM 1/16W 5% 0402 SMD | Standard | 311-22JRCT-ND |
| 106 | 1 | R418 | 15k | RES 15.0K OHM 1/16W 1% 0402 SMD | Standard | 311-15.0KLRCT-ND |
| 107 | 1 | R419 | 15k | RES 15.0K OHM 1/16W 1% 0402 SMD | Standard | 311-15.0KLRCT-ND |
| 108 | 1 | S1 | SPST | SWITCH TACTILE SPST-NO 0.02A 15V | Standard | P80795TB-ND |
| 109 | 1 | S2 | SPST | SWITCH TACTILE SPST-NO 0.02A 15V | Standard | P80795TB-ND |
| 110 | 1 | S3 | SPST | SWITCH TACTILE SPST-NO 0.02A 15V | Standard | P80795TB-ND |
| 111 | 1 | S5 | SPST | SWITCH TACTILE SPST-NO 0.02A 15V | Standard | P80795TB-ND |
| 112 | 0 | U401 | TPS2041B_DBV_5 | IC PWR DIST SWITCH SNGL SOT23-5 | Texas Instruments | TPS2041BDBVR |
| 113 | 1 | U402 | TPS62237DRY | IC REG BUCK SYNC 3.3V 0.5A 6SON, | Texas Instruments | TPS62237DRYT |
| 114 | 0 | U403 | TPS2041B_DBV_5 | IC PWR DIST SWITCH SNGL SOT23-5 | Texas Instruments | TPS2041BDBVR |
| 115 | 1 | U404 | TPD2E001DRLR | IC ESD-PROT ARRAY 2CH SOT-5 | Texas Instruments | TPD2E001DRLR |

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|------|-----|-----------|-----------------|--------------------------------|-------------------|--------------------------|
| 116 | 1 | U6 | MSP430F5529IPNR | IC MCU 16BIT 128K FLASH 80LQFP | Texas Instruments | MSP430F5529IPNR |

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TI has specifically designated certain components as meeting ISO/TS16949 requirements, mainly for automotive use. In any case of use of non-designated products, TI will not be responsible for any failure to meet ISO/TS16949.