

## Chordata K-Ceptor R2 BOM

| Item # | Ref Des    | Qty | Manufacturer        | Manufacturer Part # | Description / Value   | Package              | Type | Notes  |
|--------|------------|-----|---------------------|---------------------|---|----------------------|------|--|
| 1      | U1         | 1   | ST microelectronics | LSM9DS1TR           | TFLGA 3.5X3X1 24LiNEMO inertial module, 3D magnetometer, 3D accelerometer, 3D gyroscope, I2C, | TFLGA 3.5X3X1 24L    | SMD  | Critical to pcb design, Cannot be substituted without changes on the PCB.  |
| 2      | U2         | 1   | Linear Technology   | LTC4316CMS#PBF      | Single I2C/SMBus Address Translator   | 10-Lead Plastic MSOP | SMD  | Critical to pcb design, Cannot be substituted without changes on the PCB. Other accepted part # are: LTC4316CMS#TRPBF, LTC4316IMS#PBF and LTC4316IMS#TRPBF |
| 3      | C1, C2, C3 | 3   | WURTH ELEKTRONIK    | 885012208030        | SMD Multilayer Ceramic Capacitor, 0.1 µF, 16 V, ± 10%, X7R                                    | 1206 [3216 Metric]   | SMD  | Non critical component. Vendor and P/N can be determined by cost and local availability. Minimal Voltage is 16V. Minimal tolerance is 10%                  |
| 4      | C4         | 1   | WURTH ELEKTRONIK    | 885012208041        | SMD Multilayer Ceramic Capacitor, 10 µF, 16 V, ± 10%, X7R                                     | 1206 [3216 Metric]   | SMD  | Non critical component. Vendor and P/N can be determined by cost and local availability. Minimal Voltage is 16V. Minimal tolerance is 10%                  |
| 5      | C5         | 1   | WURTH ELEKTRONIK    | 885012208026        | SMD Multilayer Ceramic Capacitor, 0.01 µF, 16 V, ± 10%, X7R                                   | 1206 [3216 Metric]   | SMD  | Non critical component. Vendor and P/N can be determined by cost and local availability. Minimal Voltage is 16V. Minimal tolerance is 10%                  |
| 6      | U3         | 1   | MICROCHIP           | 24LC04B             | EEPROM, I2C, 4 Kbit, 2 BLK (256K x 8bit), 400 kHz, DIP, 8 Pin                                 | 8pin DIP             | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability.   |
| 7      | R1, R2, R3 | 3   | TE CONNECTIVITY     | LR0204F10K          | Through Hole Resistor, 10 kohm, LR Series, 250 mW, ± 1%, Axial Leaded, 200 V                  | Axial leaded         | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability.   |
| 8      | R4         | 1   | MULTICOMP           | MCF 0.5W 1K         | Through Hole Resistor, 1 kohm, MCF Series, 500 mW, ± 5%, Axial Leaded, 350 V                  | Axial leaded         | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability.   |
| 9      | J1, J2     | 2   | MOLEX               | 95501-2661          | Modular Connector, RJ12, Jack, 6 Contacts, 6 Ways, 95501 Series, Cat3                         | --                   | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability.   |
| 10     | J5         | 1   | MULTICOMP           | 2214S-06SG-85       | Board-To-Board Connector, 2.54 mm, 6 Contacts, Receptacle, 2214S Series, Through Hole, 2 Rows | --                   | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability.   |
| 11     | D1         | 1   | KINGBRIGHT          | L-964QBDL-D         | KINGBRIGHT LED, Blu, Foro Passante, T-1 (3mm), 20 mA, 3.3 V, 465 nm                           | T-1 (3mm)            | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability.   |



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## Chordata Hub R1 BOM

| Item # | Ref Des    | Qty | Manufacturer     | Manufacturer Part # | Description / Value   | Package                    | Type | Notes  |
|--------|------------|-----|------------------|---------------------|---|----------------------------|------|--|
| 1      | U1         | 1   | NXP              | PCA9548AD,112       | Translating Switch, Bidirectional, 8 Inputs, 2.3V to 5.5V Supply, 25mA Out, 0.3ns Delay       | SOIC-24                    | SMD  | Critical to pcb design, Cannot be substituted without changes on the PCB.                |
| 2      | U3         | 1   | NEXPERIA         | 74HC1G04GW          | Inverter, 74HC1G04, 1 Input, 2.6 mA, 2 V to 6 V, SOT-353-5                                    | SOT-353                    | SMD  | Non critical component. Vendor and P/N can be determined by cost and local availability. |
| 3      | U2         | 1   | MCP1603T-330I/OS | MICROCHIP           | Synchronous Buck Step Down,Switching Regulator, Fixed, 2.7V-5.5V In, 3.30V/0.5A Out, 2.8 MHz  | TSOT-5                     | SMD  | Non critical component. Vendor and P/N can be determined by cost and local availability. |
| 4      | L1         | 1   | MSS1038-473MLC   | COILCRAFT           | Power Inductor (SMD), 47 µH, 2.2 A, Shielded, 1.6 A, MSS1038 Series                           | 10.2mm x 10mm x 3.8mm      | SMD  | Non critical component. Vendor and P/N can be determined by cost and local availability. |
| 5      | J12        | 1   | Amphenol FCI     | 10103594-0001LF     | USB Connector, Micro USB Type B, USB 2.0, Receptacle, 5 Ways                                  | Surface Mount, Right Angle | SMD  | Non critical component. Vendor and P/N can be determined by cost and local availability. |
| 6      | U4         | 1   | WORLDSEMI        | WS2812B             | LED; SMD; 5050,PLCC4; RGB; 5x5x1.6mm; 3-3.4V  | 5050, PLCC4                | SMD  | Non critical component. Vendor and P/N can be determined by cost and local availability. |
| 7      | J11        | 1   | CONNFLY          | DS1095-WNR0         | Socket; USB A; THT; angled 90°  | angled 90°                 | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability. |
| 8      | D1         | 1   | KINGBRIGHT       | L-964QBDL-D         | KINGBRIGHT LED, Blu, Foro Passante, T-1 (3mm), 20 mA, 3.3 V, 465 nm                           | Radial Leaded              | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability. |
| 9      | R6         | 1   | MULTICOMP        | MCF 0.5W 1K         | Through Hole Resistor, 1 kohm, MCF Series, 500 mW, ± 5%, Axial Leaded, 350 V                  | Axial leaded               | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability. |
| 10     | J9         | 1   | CONNFLY          | DS1021-1*40SF11     | Pin header; pin strips; male; PIN:40; straight; 2.54 mm; THT; 1x40                            | --                         | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability. |
| 11     | J7, J8     | 2   | MULTICOMP        | 2214S-06SG-85       | Board-To-Board Connector, 2.54 mm, 6 Contacts, Receptacle, 2214S Series, Through Hole, 2 Rows | ---                        | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability. |
| 12     | R1, R2, R3 | 3   | TE CONNECTIVITY  | LR0204F10K          | Through Hole Resistor, 10 kohm, LR Series, 250 mW, ± 1%, Axial Leaded, 200 V                  | Axial leaded               | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability. |
| 13     | C1, C2     | 2   | MULTICOMP        | MCNP16V475M5X11     | Electrolytic Capacitor, 4.7 µF, 16 V, MCNP Series, ± 20%, Radial Leaded, 5 mm                 | Radial Leaded              | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability. |
| 14     | J1 - J6    | 6   | MOLEX            | 95501-2661          | Modular Connector, RJ12, Jack, 6 Contacts, 6 Ways, 95501 Series, Cat3                         |                            | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability. |



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## Chordata ID Module R1 BOM

| Item # | Ref Des | Qty | Manufacturer | Manufacturer Part # | Description / Value  | Package      | Type | Notes   |
|--------|---------|-----|--------------|---------------------|--|--------------|------|---|
| 1      | (*)     | ~20 | VISHAY       | MRS25000C1023FCT00  | Through Hole Resistor, 102 kohm, MRS25 Series, 600 mW, $\pm 1\%$ | Axial leaded | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability |
| 2      | (*)     | ~20 | VISHAY       | MRS25000C1823FCT00  | Through Hole Resistor, 182 kohm, MRS25 Series, 600 mW, $\pm 1\%$ | Axial leaded | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability |
| 3      | (*)     | ~20 | VISHAY       | MRS25000C2803FCT00  | Through Hole Resistor, 280 kohm, MRS25 Series, 600 mW, $\pm 1\%$ | Axial leaded | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability |
| 4      | (*)     | ~20 | VISHAY       | MRS25000C3923FCT00  | Through Hole Resistor, 392 kohm, MRS25 Series, 600 mW, $\pm 1\%$ | Axial leaded | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability |
| 5      | (*)     | ~20 | VISHAY       | MRS25000C6813FCT00  | Through Hole Resistor, 681 kohm, MRS25 Series, 600 mW, $\pm 1\%$ | Axial leaded | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability |
| 6      | (*)     | ~20 | VISHAY       | MRS25000C8873FCT00  | Through Hole Resistor, 887 kohm, MRS25 Series, 600 mW, $\pm 1\%$ | Axial leaded | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability |
| 7      | (*)     | ~20 | VISHAY       | MRS25000C9763FCT00  | Through Hole Resistor, 976 kohm, MRS25 Series, 600 mW, $\pm 1\%$ | Axial leaded | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability |
| 8      | --      | 1   | CONNFLY      | DS1021-2*3SF1-1     | Pin header; pin strips; male; PIN:6; straight; 2.54mm; THT; 2x3  | ---          | THT  | Non critical component. Vendor and P/N can be determined by cost and local availability |

(\*) Reference designator for every board would be determined by the value of the ID module. The quantity included on this BOM is orientative and should be enough to build several ID Modules.



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