Cost of raspberry pi to create centralized water sprinkler

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| Component for raspberry pi | Cost | Relevant specs | Quantity | Link of product where it has been purchased from |
| Raspberry Pi Zero W  Raspberry Pi Zero W | £9.30 | Raspberry Pi Zero W (Wireless) features:   * BCM2835 (same as Pi 1) but up-clocked to 1GHz, so 40% faster * 512MB RAM * Mini HDMI * USB On-The-Go port * Micro USB power * HAT-compatible 40-pin header * Composite video and reset headers * CSI camera connector * 802.11b/g/n Wireless LAN * Bluetooth 4.1 * Bluetooth Low Energy (BLE) * 40-pin GPIO * Also includes rechargeable battery and solar panel.   Essential Kit:   * 4 x Rubber Feet (To protect the Raspberry Pi Zero) * 1 x MiniHDMI > HDMI adapter (to allow the use of standard HDMI cables) * 1 x MicroUSB > USB adapter (to allow the use of standard USB devices) * 2 x Single row, 20 pin GPIO headers * 1 x Dual row, 40 pin female GPIO header * 1 x Dual row, 40 pin right-angled GPIO header * 1 x Dual row, 40 pin GPIO header | 4 | <https://thepihut.com/products/raspberry-pi-zero-w> |
| Official Raspberry Pi Universal Power Supply  [A product image of Official Raspberry Pi Universal Power Supply](https://cdn.shopify.com/s/files/1/0174/1800/products/Power_Supply_1_of_2_8c276d37-bd34-4146-bdf0-4cc9a06a12be_1024x1024.JPG?v=1484318076) | £8 | * High-quality power supply * 1.5m cable length * microB USB connection * Includes 4 worldwide adaptor plates: Australia/China, Europe, UK, US/Japan * Cable strain relief * 100-240v input, 5.1v 2.5A output | 4 | https://shop.pimoroni.com/products/raspberry-pi-universal-power-supply?variant=48202516490&gclid=EAIaIQobChMIjaD4jP7e3gIVRLDtCh1P6wkzEAQYASABEgI6ifD\_BwE |
| USB to UART serial console cable.  [A product image of USB to UART serial console cable](https://cdn.shopify.com/s/files/1/0174/1800/products/USB_UART_1_of_2_1024x1024.JPG?v=1463052664) | £6 | * Provides serial console access * Powers your Raspberry Pi * Plugs directly into the GPIO header (see diagram) * Avoid having to setup a full screen, keyboard, mouse, and networking to use your Raspberry Pi * Use a terminal emulator to access your Pi! | 4 | https://shop.pimoroni.com/products/usb-to-uart-serial-console-cable?variant=288389664&gclid=EAIaIQobChMI9pKx1f\_e3gIVipPtCh2vtwB1EAQYAiABEgLfnfD\_BwE |
| Official Raspberry Pi Zero CaseOfficial Raspberry Pi Zero Case | £6.00 | * Solid * GPIO access (allowing access to the pins for HATs, pHATs and/or jumper cables) * Camera mount & lens hole | 4 | <https://thepihut.com/products/official-raspberry-pi-zero-case> |
| Adafruit PowerBoost 1000 Charger - Rechargeable 5V Lipo USB Boost @ 1A [ADA2465]  Adafruit PowerBoost 1000 Charger - Rechargeable 5V Lipo USB Boost @ 1A [ADA2465] | £18.50 | * Synchronous operation where you can disconnect the output completely by connecting the enable pin to ground. This will completely turn off the output * 2A internal switch (~2.5A peak limiting) which means you can get 1000mA+ from a 3.7V LiPoly/LiIon battery. * Low battery indicator LED lights up red when the voltage dips below 3.2V, optimized for LiPo/LiIon battery usage * Onboard 1000mA charge-rate 'iOS' data resistors. Solder in the USB connector and you can plug in any iPad, iPhone or iPod for 1000mA charge rate. * Full breakout for battery in, control pins and power out * 90%+ operating efficiency in most cases, and low quiescent current: 5mA when enabled and power LED is on, 20uA when disabled (power and low batt LED are off) | 4 | https://thepihut.com/products/adafruit-powerboost-1000-charger-rechargeable-5v-lipo-usb-boost-1a-1000c |
| 'NOOBS' Preinstalled 16GB Micro SD Card (Latest v2.8.2)'NOOBS' Preinstalled 16GB Micro SD Card (Latest v3.0.0) | £9.00 | * This is the hard drive and operating system for the Raspberry Pi * Extended partition to make full use of the SD card * Ready to use – plug it in and you’re ready to go * Only the most current stable release of the operating system will be used * High quality MicroSD card | 4 | <https://thepihut.com/products/noobs-preinstalled-sd-card> |
| Adafruit TSL2561 Digital Luminosity/Lux/Light Sensor Breakout [ADA439]  Adafruit TSL2561 Digital Luminosity/Lux/Light Sensor Breakout [ADA439] | £6.00 | The sensor has a digital (i2c) interface. You can select one of three addresses so you can have up to three sensors on one board - each with a different i2c address. The built in ADC means you can use this with any microcontroller, even if it doesn't have analog inputs. The current draw is extremely low, so its great for low power data-logging systems. about 0.5mA when actively sensing, and less than 15 uA when in powerdown mode. | 1 | https://thepihut.com/products/adafruit-tsl2561-digital-luminosity-lux-light-sensor-breakout |
| PIR Motion Sensor Module  PIR Motion Sensor Module | £2.00 | Applications   * Switch * Motion sensor * Thief-guarding system * Industrial automation   Specifications   * Input voltage: DC 4.5~20V * Static current: 50uA * Output signal: 0,3V (Output high when motion detected) * Sentry angle: 110 degree * Sentry distance: max 7 m * Shunt for setting override trigger: H - Yes, L - No | 2 | <https://thepihut.com/products/pir-motion-sensor-module> |
| Extra Tall GPIO Connector for the Raspberry Pi  Extra Tall GPIO Connector for the Raspberry Pi - RASPBERRY PI ACCESSORIES - The Pi Hut | £2.00 | Features:   * Gold Plated 26 Pin Double Row (2x13) Socket Connector * Extension for the Raspberry Pi GPIO Connectors * Dimensions (L x W x H) 33.0 x 6 x 26 mm * Pitch 2.54mm * Fully Tested on the Raspberry Pi Model B | 2 | https://thepihut.com/products/extra-tall-gpio-connector-for-the-raspberry-pi?variant=758600837 |
| 1.8M HDMI Cable for the Raspberry Pi  1.8M HDMI Cable for the Raspberry Pi - RASPBERRY PI ACCESSORIES - The Pi Hut | £2.00 | 1.8M Gold plated HDMI cable for the Raspberry Pi computer. 1080p output  > Connects your Raspberry Pi to your HDMI display unit  > Gold-plated connectors for highest signal transfer rate and resistance in corrosion. > Fully Compatible with new HDMI 1.4 specification and HDMI 1.3b or below.  > Supports 480i, 480p, 720p, 1080i, 1080p | 2 | <https://thepihut.com/products/1-8m-hdmi-cable> |
| Zero4U: 4-Port USB Hub For Raspberry Pi Zero (v1.3)  Zero4U: 4-Port USB Hub For Raspberry Pi Zero (v1.3) - RASPBERRY PI ACCESSORIES - The Pi Hut - 1 | £10.00 | The USB hub will take power directly from your Raspberry Pi Zero, so you don’t need to power the USB hub separately. However you can use the JST XH2.54 connector on board as the alternative power input port.  There are one blue LED on board as the power indicator, and four white LED aside the USB ports as transaction indicators.  If you use this USB hub with other types of computer, you can use a USB cable (not included) to connect the mini-USB port on board to the up-stream USB port.  Kit Contents:   * 4-port USB hub board x 1 * 5 x 4mm plastic spacer x 4 * M2.5 plastic screw x 4 * M2.5 plastic nut x 4 | 1 | https://thepihut.com/products/zero4u-4-port-usb-hub-for-raspberry-pi-zero |
| Adafruit Female-Female 2.54 to 2.0mm Jumper Wires x 40 [ADA1919]  Adafruit Female-Female 2.54 to 2.0mm Jumper Wires x 40 [ADA1919] | £6.50 | For best results, when plugging these in a line, have the sides with the 'silver latch bit' sticking out since that side is a tiny bit wider than 0.1" or .08". | 2 | https://thepihut.com/products/adafruit-female-female-2-54-to-2-0mm-jumper-wires-x-40 |
| Adafruit Premium Male/Male Raw Jumper Wires - 40 x 6" (150mm) [ADA3142]  Adafruit Premium Male/Male Raw Jumper Wires - 40 x 6" (150mm) [ADA3142] | £4.00 | The 0.1" raw sockets on either end are designed to be custom fitted with [your choice of housing blocks](https://thepihut.com/pages/search-results?q=wire%20housing%20pack%20for%20jumper%20cables&) to meet your prototyping needs. You can always pull the ribbon wires off to make individual jumpers, or keep them together to make neatly organized wire harnesses. | 2 | https://thepihut.com/products/adafruit-premium-male-male-raw-jumper-wires-40-x-6-150mm |
| Adafruit Extra-long break-away 0.1" 16-pin strip male header (5 pieces) [ADA400]  Adafruit Extra-long break-away 0.1" 16-pin strip male header (5 pieces) [ADA400] | £3.00 | Add the pins to one end to turn the cables into female-male jumpers. | 1 | https://thepihut.com/products/adafruit-extra-long-break-away-0-1-16-pin-strip-male-header-5-pieces |
| Hook-up Wire Spool Set - 22AWG Solid Core - 6 x 25 ft [ADA1311]  Hook-up Wire Spool Set - 22AWG Solid Core - 6 x 25 ft [ADA1311] | £15.00 | This box has a wooden dowel rod to hold the spools in place and let them spin, and there are little punch-outs you can pass the wire through so it'll stay nice organized.  Hook-up Wire Spool Set - 22AWG Solid Core - 6 x 25 ft | 1 | https://thepihut.com/products/adafruit-hook-up-wire-spool-set-22awg-solid-core-6-x-25-ft |
| Solar Panel (9v 220mA) - Prototyping - The Pi Hut - 1Solar Panel (9v 220mA) | £9.00 | Ultra-white glass lamination process provides an efficient and waterproof surface for the panel.The back of the panel has separate aluminium wires. | 1 | <https://thepihut.com/products/solar-panel-9v-220ma> |
| Samsung galaxy s9+  https://images.samsung.com/is/image/samsung/p5/uk/smartphones/galaxy-s9/shop/buyingtool/product/product_galaxys9plus_midnightblack_01.png?$ORIGIN_PNG$ | £869 | Specs:  Super Slow-mo  AR Emoji  Dual Aperture  Low light photos with noise reduction.  Easy sharing between different devices  Lock in a slow-mo master piece  Motion detection  OIS - More action. Less blur.  Live focus with background blur shapes | 1 | https://www.samsung.com/uk/smartphones/galaxy-s9/shop/ |
| Electric Solenoid Valve for Water Air N/C 12V DC 1/2"  Electric Solenoid Valve for Water Air N/C 12V DC 1/2&quot; | £7.99 | * Voltage: 12V DC * Current: 250mA * Pressure: 0 - 0.5Mpa * Valve type: diaphragm * Operation mode: normally closed | 1 | https://www.amazon.co.uk/Electric-Solenoid-Valve-Water-Air/dp/B00BVESSJY |
| BuyDell XPS 13 Laptop, Intel Core i7, 16GB RAM, 512GB SSD, 13.3”, 4K Ultra HD, Epic Silver Online at johnlewis.comDell XPS 13 Laptop, Intel Core i7, 16GB RAM, 512GB SSD, 13.3”, 4K Ultra HD, Epic Silver | £1,599.00 | * Intel Core i7 * **Power processor** * **Solid State Drive** * **Great entertainment** * **Connecting your other devices** * **Wireless communication** | 1 | https://www.johnlewis.com/dell-xps-13-laptop-intel-core-i7-16gb-ram-512gb-ssd-13-3-4k-ultra-hd-epic-silver/p3501747?sku=237371322&s\_kwcid=2dx92700037894575683&tmad=c&tmcampid=2&gclid=EAIaIQobChMIq4-OnoHf3gIVBLTtCh2VxQezEAQYAiABEgKkHvD\_BwE&gclsrc=aw.ds |
| NETGEAR R6120-100UKS AC1200 Dual Band Wi-Fi Routerhttps://images-na.ssl-images-amazon.com/images/I/71MLKxt7ZPL._SL1500_.jpg | £48.61 | * Wi-Fi speeds up to 300 + 900 Mbps * Upgrade your Wi-Fi to support new AC devices * Works with all N150, N300, N600 and AC devices * Nighthawk app - easily setup your router, manage internet access by pausing and resuming internet instantly; all from your mobile device * Ready share USB access - wireless access and share USB storage * Requires a modem * Customer Care Number: 0844 875 4000. It is Hours/Days of operation - this depends on the team - English offers 24/7 support but localised languages operate Monday to Friday 9am -5.30pm local times | 1 |  |