# Hardware and software requirements – Oct 2016.

| | Cardio Training | AdmiQ | DesiQner | Bike Selection |
|---|---|---|---|---|
| **Computer** | | | | |
| Processor | i5 2,4 GHz, 64 Bit | i3, 2,4 GHz, 64 Bit | i5 2,4 GHz, 64 Bit | i3, 2,4 GHz, 64 Bit |
| Memory | 4 GB (minimum), 6 GB (recommended) | 4 GB (minimum) | 4 GB (minimum) | 4 GB (minimum) |
| Graphic Board | Dual screen (extended mode), min. resolution 2 x 1024 x 768 DirectX 10 compatible or later | DirectX 10 compatible or later | DirectX 10 compatible or later | DirectX 10 compatible or later |
| Hard disk | 1 GB free disk[2]) | 1 GB free disk2) | 1 GB free disk2) | 1 GB free disk2) |
| Media Player | VLC Player version 2.1.3 – 2.1.5[1]) | NA | Windows Media Player version 10 or later | NA |
| USB Ports | 1 USB port (minimum) – or one for each Team Pod. Further 1 USB port must be available for USB stick, if music is applied. | | 1 USB port (minimum) | |
| | | | | |
| **Projector** | HDMI, DVI or VGA. Resolution min. 1024 x 768 | NA | NA | NA |
| **Network** | Ethernet[4]). network must support 100 Mb/s or 10 Mb/s. | | Port 587 and 1433 (outgoing) must be open for internet access[3]). | |
| **Team Receiver** | PoE-adapter is required. The network must provide DHCP service[5]) | | | |
| **PoE-Adapter** (Power over Ethernet) | The PoE-Adapter must be IEEE 802.3af mode B compliant (24-48V/15,4W) | | | |

[1]) Cardio Training does not run with version 2.2.1.

[2]) Compressed C: drive is NOT applicable.

[3]) A stable Internet connection with a reasonable capacity (min 2 Mb/s) is required for each computer.

[4]) Wired network connection is required. WiFi connections are NOT applicable. iQniter firewall rules are automatically created when installing iQniter Cardio Training – **Notice!** Make sure no iQniter firewall rules on the Cardio Training computer are disabled.

[5]) The network must not be overloaded. Sub-network for the iQniter installation is recommended.

## General Requirements and Prerequisites

- Windows 7, 8, 8.1 and Windows 10.
- .NET Framework 4.6.2 or higher (downloaded and installed during installation of iQniter software).
- iQniter software – latest update.
- Standard ports 80 and 443 must be open. These ports are the same as for normal internet traffic (browsing) and for secure traffic (https). Please check they are not blocked in firewalls.
- Windows software must be up-to-date, i.e. all essential Windows Updates must be installed.
- Terminal environments, virtual or emulated Windows installations are NOT applicable.
- When using Suunto Team Pod, a driver for Movescount Mini™ (USB-Stick) must not be installed on the same PC as Cardio Training. For iQniter Team Receiver, this is not an issue.

## Cabling Requirements

**Display or projector**
The display or projector needs to support at least 1024x768 resolution and have a VGA, DVI or HDMI connector. For long distances (>10 m), only high quality cables are suitable. When using video cables longer than 15 meters, the signal must be boosted using a video distribution amplifier. If the same output is shown on many A/V units, a splitter is also needed.

**NOTE!** S-Video connector is not recommended due to lower signal quality.

Client computers should have graphics cards that support a range of high resolutions. In most cases, monitor displays have 1024x768 (XGA) or widescreen 1280x720 (WXGA) resolution.

**LAN - Network**
Use normal RJ-45 Ethernet cables (Cat-5/6, 10BASE-TX Ethernet). If there is a router without free ports or if the distance between computers is more than 100 meters, a repeater/hub or switch needs to be added to the network.

**NOTE!** Use high quality cables and network components to ensure a good, reliable network connection.

Wireless LAN is not recommended for client-server configurations. If wireless LAN is used, make sure the channels do not interfere with receiver PODs. The receiver PODs use 2465 MHz frequency, which is between WLAN channels 11 and 12.

**PoE cable between TeamReceiver and PoE adabter**
The cable between the PoE-adapter and the iQniter Team Receiver must be 8 wire (4 twisted pair) CAT5. Max cable length between PoE adapter and iQniter Team Receiver is 30m (100 ft).

**USB for Suunto Team Pod**

**USB extenders**
A USB-CAT5 extender is needed if the distance between a client computer and receiver POD is over 5 meters. The extender must meet the following requirements:

- Delay budget based extension technology. Should not be enumerated as USB device. Data bus should be galvanically isolated.
- Combined current consumption should be less than 400mA (Suunto Team Pod current consumption is 50mA).

**Supported USB extenders and recommended cabeling for USB extenders**
The following USB extenders have been tested and validated for MultiPOD configurations:

- Black box Single USB to CAT5 Extender, 100 Meters Type: IC245A  http://www.blackbox.com.
- Icron USB Extender Type: USB Rover 1300 www.icron.com

**NOTE!** The recommended maximum cable length is 50 meters. Use only delay budget based USB extenders.

The following cable types should be used with USB extenders for iQniter Cardio Training:

- CAT5/6 FTP (Foiled Twisted Pair) or CAT5/6 STP (Shielded Twisted Pair)

UTP (Unshielded Twisted Pair) cable is not recommended. UTP cable is not surrounded by any shielding and therefore does not offer the necessary protection against interference from external sources. The FTP/STP shielding provides protection against interference as well as grounding for the components and better protection against ESD (electrostatic discharge).

External USB Hubs are not recommended due to the risk of inconsistent behavior when unplugging Suunto Team POD from the hub. Therefore, ensure there are available USB ports on the client computer to support the required number of PODs.