

Introduction

This document describes recommended mini-PC models and configurations for use with Live Channel. The hardware-choices in this document are from well known providers and will allow the customer of Live Channel to have a low-cost hardware setup. It is a goal for Sportradar that our customers try to standardize the hardware-setup for Live Channel and to run on an efficient platform that ensures stability and easy maintainability.

A mini-PC is a standard PC in a small form-factor unit. In this document we have given examples that have been tested by Sportradar and that also is a good value for money. The purpose of the document is to describe the necessary equipment and configuration, so that after finishing all steps the mini-PC can be used without user interaction (apart from switching on the device).

Prerequisites

- Internet connection of at least 1 Mbps (2 Mbps recommended)
- LAN 100Mbps
- TV-set with HDMI input
- Live Channel account

PC Recommendations

Hardware

- CPU:
Minimum requirement: average CPU Mark of ~1200 at <http://www.cpubenchmark.net>
(e.g. Intel Atom x5-Z8300 @ 1.44GHz)
Recommended: average CPU Mark of ~2400 at <http://www.cpubenchmark.net>
(e.g. Intel Core i3 4010U)
- System Memory (RAM): 2GB or more
- Hard Disk: min. 5GB free space
- Ethernet (LAN): 100 Mbps or above
- 16-bit sound card
- Graphics card with 1 GB memory and 1920x1080 resolution, DVI or HDMI-output connected to display
- Connection to TV-Screen/Display (HDMI recommended)

Software

- Operating System: Windows 10 or Ubuntu/Lubuntu *
- Browser Chrome latest version (48.x or above) or Firefox (44.x or above) *
- JavaScript and Cookies enabled

*) Sportradar have successfully tested running the Live Channel on Ubuntu/Lubuntu PC, and we can recommend this if customer has Linux knowledgeable personnel. Other browser-types and operating systems may potentially be compatible; please contact m.maass@sportradar.com in case you require to use other operating systems or browsers.

Recommended Mini PC Models

Equipment needed for bet shop

We recommend to use a mini PC which can be attached at the backside of the TV set/ Monitor. E.g. via a Vesa mount unit. Below are example configurations for Intel NUC and Intel Compute Stick.

Intel NUC (option1)

Example: NUC5I3RYK with Intel® Core™ i3 5010U processor

<http://www.intel.com/content/www/us/en/nuc/overview.html>



Sportradar recommend the current generation Broadwell CPUs with Intel HD Graphics 5000 for future-proof performance. The NUC unit from Intel has the advantage that it includes an Ethernet port as a backup for poor WiFi conditions. The Intel NUC delivers full PC performance for the requirements of Live Channel.

Setup of Intel NUC

Important steps when setting up the Intel NUC:

1. Install Windows (or alternatively Linux) from a bootable USB stick
2. Update Windows using Windows Update from Start Menu à Settings à Update & Security
3. Install Intel Driver Update utility in Windows from: http://www.intel.com/content/www/us/en/support/detect.html?iid=dc_iduu
 - Start the Intel Driver Update utility and click "Start Scan"
 - Download and install the found updates
 - Reboot Intel NUC and verify again that no updates are available
 - Intel NUC is ready to use

Required extra components Intel NUC:

4GB SODIMM DDR3 RAM module low voltage version



A USB stick e.g. 16GB (recommended USB 3.0 for faster I/O) for Windows/ Image installation

One M2.SSD as internal mass storage (64GB)



or optional a USB Flash drive 64GB as external mass storage



Intel Compute Stick (option2)

Example: Intel Compute Stick with Windows 10 (STK1AW32SCR)



The Intel® Compute Stick is a complete and affordable Windows PC with a quad-core Intel® Atom™ X5 processor, Intel® HD Graphics, integrated Wi-Fi and Bluetooth technologies, 32 GB storage, 2 GB memory, two USB 2.0 port, HDMI port and a Micro SD card reader.

For further information please refer to: <http://www.intel.eu/content/www/eu/en/compute-stick/intel-compute-stick.html>

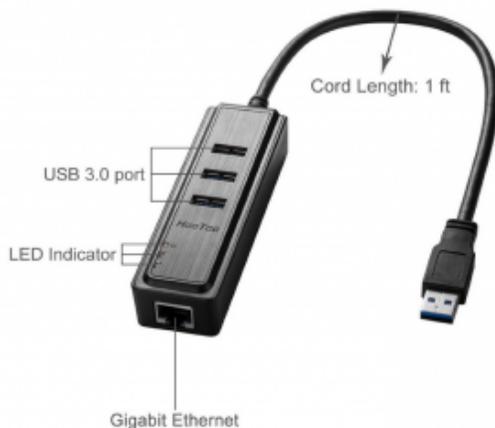
Setup of Intel Compute Stick

Important steps when setting up the Intel Compute Stick:

1. Update Windows using Windows Update from Settings à Update & Security
2. Install latest BIOS update, as old BIOS gives known problems with video playback performance
 - a. Guide from Intel: <http://www.intel.com/content/www/us/en/support/boards-and-kits/intel-compute-stick/000005961.html>
 - b. Sportradar recommends:
 - i. BIOS update:
 - Download latest BIOS from <https://downloadcenter.intel.com/product/84806/Intel-Compute-Stick> for the model name found on the back of your Intel Compute Stick
 - Load the .bio file in root directory on an empty MicroSD card
 - Reboot the Intel Compute Stick and press F7 while booting
 - Select the file from MicroSD card and install using the tool
 - Boot Intel Compute Stick again
 - ii. Install Intel Driver Update utility in Windows from: http://www.intel.com/content/www/us/en/support/detect.html?iid=dc_iduu
 - Start the Intel Driver Update utility and click "Start Scan"
 - Download and intall the found updates
 - Reboot Intel Compute Stick
 - iii. Intel Compute Stick is ready to use

Recommended peripherals for Intel Compute Stick

As the Intel Compute Stick does not ship with a LAN port we recommend to connect a USB hub network adapter to be able to connect it via LAN (rather than Wi-Fi) if WiFi connection has a weak signal.



For set-up, administration and configuration, you need:

- A keyboard and mouse, for later use in a bet shop it could be a combo like Logitech K400:



- A HDMI cable



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