

FAQ about hiFace

1)What is hiFace?

hiFace is an USB to S/PDIF interface able to make an S/PDIF digital audio coax output available, to be used to drive a stereo D/A converter.

2)Where is hiFace made?

hiFace is a product designed and manufactured in Italy. Some parts bought in the Far East, the whole production process is carried out in Italy.

3)Which computers hiFace can be used with?

hiFace works with every PC with Microsoft or Linux operating system, as well as with MacIntoshes.

4)What does hiFace need to operate?

A PC or Mac, the proprietary driver provided with **hiFace** and a suitable player, that is an application dedicated to music files playback, are needed.

5)Which drivers are available at the moment?

To date, the driver for Microsoft OSes is available. It's compatible with XP, Vista and 7, both 32 and 64 bits. Mac drivers will be released shortly; Linux drivers to follow.

6)Which sampling frequencies HiFace operates at?

hiFace operates at 44.1, 48, 88.2, 96, 176.4 and 192kHz in Kernel Streaming mode. In Direct Sound mode, the maximum sampling frequency depends on the PC performance.

7)Which features are required to use hiFace with a PC?

1.6GHz CPU, 1GB RAM and a 2.0 USB interface are the base requirements to properly operate **hiFace** up to 192kHz/24bit. With lower sampling frequencies, even less powerful PCs suffice (1.3GHz with 512MB RAM is enough to play 44.1kHz/16bit files).

8)May I use hiFace with a netbook?

Sure, provided its performance is adequate. **hiFace** has been successfully tested on a netbook provided with 1.6GHz Atom 270 and 1GB RAM.

9)Which is the expected CPU load when using hiFace?

It depends on the computer: on a laptop with 1,6GHz single core CPU we read up to 12% peak load, but the load rarely goes up to 2-3%.

10)May I use hiFace to listen to web-radios?

Sure, provided the player allows for it.

11)Does hiFace work with all players?

If 1.00 driver is installed it only works with FooBar, a free player that can be downloaded from Internet and must be installed together with its optional DLL to enable the operation in Kernel Streaming mode. With the driver release 1.01 for Microsoft OSes it also works with Winamp and Media Monkey, provided the plug-in for Kernel Streaming operation is installed. iTunes will be used on Mac. With the driver release 1.02 every player can be used, provided the Direct Sound mode is selected. This option, at the cost of a lesser sound quality, allows for listening Internet streams using browsers.

12) Why, with old drivers, must I use FooBar instead of other players, such as iTunes, Media Monkey or Windows Media Player?

With old drivers, **hiFace** only works in Kernel Streaming mode. Some player, like Windows Media Player, only work in Direct Sound mode, which doesn't allow to obtain the results provided by the Kernel Streaming mode. Instead, with the driver release 1.02 **hiFace** also works both in Direct Sound and Kernel Streaming mode. Thus, it is also suitable to reproduce Windows sounds and game sounds, like any sound card.

13) How can I use hiFace in Direct Sound mode?

Just select it as system audio card: this way, every player will use it to play back music files and streams. Instead, Kernel Streaming mode is only used when explicitly chosen by the user, which select it for a specific player when configuring it (please check FooBar configuration procedure indicated in the installation manual provided in the installation CD-ROM or zip file for driver release 1.00).

14) How can I get to know when a new driver is released?

Those who have already bought **hiFace** and have given an e-mail address will receive the new driver by e-mail as soon as they're released. Those who didn't give any e-mail address should regularly visit M2Tech website (www.m2tech.biz) or Audiophile Sound one (www.audiofilemusic.com).

15) Which audio formats hiFace is compatible with?

All the format recognized by the player. For example, FooBar decodes WAV, WMA, FLAC, MP3 and other formats.

16) Which sampling frequencies and resolutions are managed by hiFace?

hiFace works with the following sampling frequencies: 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz. It's able to manage resolutions 16 bits to 24 bits. As a reference, 44.1kHz/16bit is the CD audio format.

17) Is hiFace provided with an optical output?

No, the optical output is limited to 96kHz and suffers from a relevant jitter which decreases the audio quality. For this reason we have chosen not to use it.

18) Can hiFace also operate as an input, to send digital audio streams to a PC?

No, **hiFace** only works as an output.

19) What can I connect hiFace to, to listen to music?

Three options are available.

The first one is using a D/A converter, a.k.a. DAC, that is, the piece of equipment purposely made for converting digital audio into analog audio. A lot of different DAC models exist on the market. Be aware, anyway, that not all of them accept 96kHz or 192kHz digital audio streams at their S/PDIF input.

The second option requires the use of a digital input provided CD player. Generally, CD players are provided with a digital output to allow for the use of an external DAC; very few of them have an input. Those who have it can be used as a DAC, too. We renew the caveat: check the maximum allowed input sampling frequency.

The third option relates to the use of an audio/video amplifier provided with digital audio inputs. While more or less all multi-channel amplifiers/processors for audio/video are provided with digital audio inputs, not all of them are capable to deal with 192kHz. The compatibility is generally more easy to find on most recent models.

20) May I directly connect hiFace to my amplifier?

Yes, but only when it is provided with at least one S/PDIF digital audio input.

21) I own a DAC which only accepts digital signals up to 48kHz or 96kHz: may I use hiFace?

Yes, you may, but you won't be able to listen to music files sampled at more than the maximum allowed input sampling frequency of your DAC. For example: with a DAC which work up to 48kHz it is possible to listen to files in CD format (44.1kHz/16bit) or sampled at 48kHz, but not to 96kHz or 192kHz sampled files.

22) What kind of cable should I use to connect hiFace to my DAC?

At short distances (1-1.5 meters), even a plain signal cable can be used. As distance grows (up to 10 meters) a specific 75 Ohms cable is recommended. Several dedicated cable exist for connection between digital devices, anyway, every 75 Ohms cable can be used.

23) May I use an USB joint cable with hiFace?

Yes, but attention must be paid to cable's length: over 4 meters the performance of an USB connection worsen and it may happens that 192kHz file transfer is impeded.

24) My computer is far from my DAC: may I use a long cable between hiFace's output and my DAC's input?

We suggest not to run cables more than 10 meters between **hiFace's** output and DAC's input. Please choose a high performance cable, with an adequate shielding and true 75 Ohms impedance.

25) May I use hiFace with an USB hub?

hiFace has been successfully tested with normal USB hubs (that is, not wireless ones). Still to be tested is its operation with a wireless USB hub, but nothing leads to think that any problem is to arise. Anyway, a 2.0 hub is to be used.

26) My DAC is provided with an S/PDIF input on BNC connector: may I use this input?

Theoretically, a BNC connector is better suited for controlled impedance connections: we deliver a modified **hiFace** with BNC connector on request, at a slightly higher price. This way, the use of a BNC S/PDIF input is possible.

Caution: some professional DAC's use a BNC connector to accept a non-balanced version of the AES-EBU professional digital signal: in this case, **hiFace** can't be used and a normal RCA S/PDIF input must be used.

27) May I use hiFace to send digital audio from my PC to my DAT or CD burner?

Yes, provided the audio format is compatible with the format accepted by these units (44.1kHz/16bit or 48kHz/16bit for DAT's, 44.1kHz/16bit CD burners), otherwise the receiving unit won't recognize the signal (too high sampling frequencies) or will discard a portion of the audio information (resolution more than 16 bits).

28) Does hiFace works in asynchronous mode?

Sure, the transfer of data over the USB bus happens in a totally asynchronous fashion, with respect to their retransmission to the DAC, in short packets which use all the available bus bandwidth. Actually, **hiFace** is master in the transmission from PC to interface. As it

uses its low jitter oscillators to time the S/PDIF transmission, line jitter is totally uncorrelated to data transmission from PC to interface.

29) *Is hiFace a bit-perfect device?*

It depends on the mode it is used: in Direct Sound mode it can't be bit-perfect, as the kernel mixer is on the samples way from the player to the interface and produces alterations which are not due to both player and **hiFace**, but that nevertheless change their value. But when Kernel Streaming mode is used, a bit-perfect transfer is ensured, because samples are directly delivered by the player to the interface, without any change.

30) *Does hiFace perform data resampling?*

No, **hiFace** can't do any other conversion operation than USB-S/PDIF translation. What comes out of it is always same as what comes from the player. Differences between the original value of data and that of data coming out of **hiFace** is due to either the player or the kernel mixer (or core audio on Mac computers).