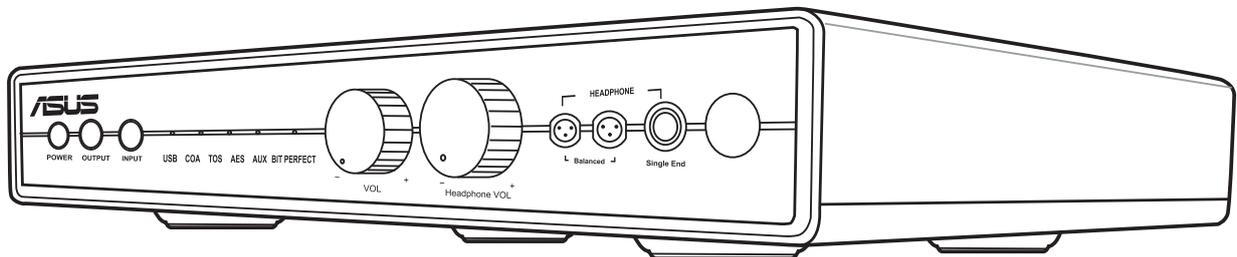


# Essence 3

*Hi-Fi USB DAC (Digital-to-Analog Converter)*



## User manual

E8381

First Edition  
Sept. 2013

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## Safety Information

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



## Additional Safety Information

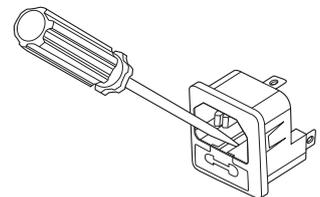
For your own safety please read the following important instructions carefully before attempting to connect this unit to the main power supply. The instructions provided will help you get the best performance from this device and prolong the life of this product.

### Repairs

Do not attempt to repair or disassemble this product. Consult a qualified technician or professional for service or repairs.

### Fuse

The fuse holder is located next to the power connector at the rear panel of the device. The fuse used is 250V/1A.



Use tools to replace the fuse.

## Philosophy

We at ASUS, recognizing that computers and digital devices are the major platforms for audio entertainment, started out with consumer-sound cards in 2007 to build the ASUS brand in the audio industry. This gives our ASUS brand a more stable foundation through gradual growth, making it possible to move into the Hi-Fi/audiophile market.

In 2009, we launched Essence ST/STX, one of our mid-range products that covered a wide variety of applications, from high-end music applications to games. Essence ST/STX was very popular in forums and user communities, leading us to conclude that the time was right for more upscale audiophile products.

We then started work on a prototype which eventually became the Essence One, with its greater flexibility, more spacious PCB and higher power delivery – all attributed to Essence One being an external device rather than an internal card.

ASUS now has a large team dedicated to designing and engineering audio products. We have been able to expand our audio product range into more diverse categories in recent years, and have met considerable success. In 2010 we partnered with Sennheiser on a headset-soundcard set, which confirmed our level of expertise as partners of one of the world's leading audiophile brands.

## Design Story

ASUS has an eclectic group of visionaries and acoustic engineers coming from the art, user experience, and the entertainment industry with a shared passion for music. Knowing that digital media constantly changes and evolves based on our personal experience, the ASUS team constantly evaluates the design segments with different outlook and perspective, striving to provide new and better experience for music lovers and audiophiles.

### Being Present

Instead of defining hard-stoned desired results, we believe that sound is about appreciating the present. Top-grade component is just one tiny part of the puzzle that we mold and build to bring you the “essence of sound”. Through our meticulous testing and product performance checks, we examine our design rules and layout with excruciating detail because any misstep could lead to a misrepresentation of the originality of sound.

### Made for You

Across all our products, you will find that the Essence of Sound is sublime rather than over-dominating, composed yet powerful. The Essence series follow the Confucius thinking of “Respect” and “Harmony” – we respect that personal taste for music may vary and hence we've included swappable op-amps for further customization. We recognize that beautiful sound is about being in harmony with the surrounding and the environment. Hence having an independent volume control for audiophiles' smooth volume switching experience becomes crucial.

### Aesthetically Pleasing

ASUS is well known for its quality control, but beyond the hard and cold facts of humidity storage and drop test, there's the soft appeal and the intrinsic properties that we look into when it comes to material selection. Whether it is sweat-proof and finger print free surface finish, an elegant color palette or smooth curvatures, it is our commitment to bring a state-of-art audio with innovative material application and usage.

## FEATURE SUMMARY

### Ultimate audio enjoyment with native Direct Stream Digital (DSD) support

- Digital Stream Digital (DSD) is an encoding technology at 1 bit representation of the audio waveform, allowing high reproduction of the original audio. With native DSD support, audiophiles can enjoy high-fidelity music.

### Top-notch headphone amplifier enables balanced headphones of up to 600ohm impedance

- Most headphone amplifiers only support single-end headphones. Essence 3 has unique mini-XLR ports tailored for headphone audiophiles who are accustomed to modeling their own balanced headphones. The balanced signals are kept in differential from DAC chip to headphone output without being converted to single end and back (a true balanced signal), providing best signal clarity and minimized noise interference. It also supports up to 600ohms impedance, allowing headphone enthusiasts to enjoy the best of their favorite headphones without any additional amplification needed.

### Exclusive remote-controlled stepped attenuator ensures precise and convenient adjustments

- Essence 3 comes with a 24-step attenuator that ensures precise left/right balance at any volume level. Unlike traditional designs where the attenuator is operated by hand, it has a Microcontroller Unit (MCU) that directly controls the multiple relays, making it completely remote-controllable with precision.

### Toroidal transformer-based multi-rail linear power supply with fully independent noise-free left/right channel power delivery

- A clean power source is crucial for ensuring minimal supply contamination and consistent power delivery. The toroidal transformer comes with a specially designed silicon strip to prevent hysteresis loss. The power supply is also regulated such that the left and right channels power sources are independent and minimize the possibility of cross talk and interferences.

### Separate boards for analog, digital, and power circuitry minimize interference

- Besides separating signal grounds on to different layers with our exclusive hyper ground technology, the boards for different signals are physically separated. Even at areas where analog meets digital signals, the signal routings are minimized and contained within an area to prevent interferences.

### Fully balanced design with two single-channel DACs

- Traditional audio products use one DAC (digital-to-analog converter) chip for both left and right channels. Essence 3 has dedicated DAC for each channel to achieve a top-notch signal clarity. Based on a dual DAC design, the left and right channels will be perfectly balanced.

### Hassle-free left/right balance calibration via exclusive software

- Essence 3 comes with an exclusive software for volume calibration that you can run a simple test of the left/right channel balance and perform correction if needed. Most products that come with such tweaking ability require the use of additional equipment to determine how unbalanced the system is, making it extremely hard for non-pros to perform such task.

## Product Lineup

	Essence ST/STX	Essence STU	Essence ONE	Essence ONE PLUS EDITION	Essence ONE MUSES EDITION	Essence III
Key Audience	PC all-purpose gamers/ audiophiles	Headphone adventurers	Entry-level audiophiles	OP-AMP lovers and DIY adventuurers	Hi-Fi adventurers	Explorative Audiophiles
Key Focus	Desire to get the best audio quality on PC	Desire to explore different headphones and their characteristics	Desire to enjoy high fidelity music on both headphone and speaker	Desire to DIY and customize sound based on personal preferences	Desire to experience high fidelity music with world known Muse01 Op-Amp	Desire to experiment with new standards, constantly on the outlook for better approach
Audio Clarity	124-dB SNR Hi-Fi audio clarity	120dB SNR Hi-Fi audio clarity				Ultimate audio enjoyment with native Direct Stream Digital (DSD) support
Audio Precision	Ultra jitter-free fidelity with Precision Clock Tuning	Ultra jitter-free fidelity with asynchronous USB audio interface				Ultra-low jitter via high precision TCXO clock sources and asynchronous USB
Op-amp Selection & Tonal Customization	Customizable tone characters with 3 swappable Op-Amps (LM4562 & JRC 2114D)	Customizable tone characters with 3 swappable Op-Amps (LM4562 & LME49720)	Customizable tone characters with 11 swappable Op-Amps, focusing on 6 key Op-Amps	Op-Amp Tweaking Kit with additional TI-2132 (4pcs) and NS4562 (2pcs) and tweaking tool set	Unimagiably heart-touching and spacious sound powered by MUSES 01 Op-Amp (6 pcs)	Premium AD 827SQ and MUSES 02 Op-Amps
Powerful Headphone Amplifier	Headphone amplifier for up to 600ohm headphone impedance	Headphone amplifier for up to 600ohm headphone impedance with 2 gain settings	Headphone amplifier for up to 600ohm headphone impedance	Headphone amplifier for up to 600ohm headphone impedance	Headphone amplifier for up to 600ohm headphone impedance	Top-notch headphone amplifier enables balanced headphones of up to 600ohm impedance + Remote-controlled, relay based stepped attenuator
Clean Power	Onboard Power	Switching Power	Dedicated linear power supply	Dedicated linear power supply	Dedicated linear power supply	Toroidal transformer-based multi-rail linear power supply with fully independent noise-free left/right channel power delivery
Additional Features		Selectable DC servo headphone output minimizes unwanted pop noise	8X Upsampling to 384kHz	8X Upsampling to 384kHz	8X Upsampling to 384kHz	Hassle-free left/right balance calibration via exclusive software
						Fully balanced design with single-channel DACs
						Separate boards for analog, digital, and power circuitry minimize interference

# DESIGN HIGHLIGHTS

## Hardware highlights

### Power management

- **Independent L/R Power Supply**  
With perfectly balanced L/R power supply, this minimizes power outage and ripples, hence reducing cross talk.
- **High-fidelity Low Dropout Regulator (LDO) Regulation**  
Using the highly regarded (TI TPS 7A4700 and 7A3301), the power source is regulated twice to reduce heat energy and ensure stable power.
- **Hyper/Super Grounding 2oz Copper PCB Board**  
Unprecedented choice of material with 2oz Copper conducted 4-layer PCB board for regulating heat and energy source.
- **Robust Capacitor**  
WIMA FKP2 capacitor serves as a stable water reservoir for stabilizing power source, hence reducing ripples.
- **Toroidal transformer**  
Specially designed Silicon-strip toroidal transformer to reduce hysteresis loss and prevent easy worn-out.

### Signal management

- **4-Layer Hyper grounding**  
4 layer PCB board with extra 2oz. copper for separating Digital and Analog signals on different grounds and heat source. Not only are the analog and digital signals on different layers, it is sandwiched in between multiple ground layers to further prevent signal interferences.
- **Perfect Isolation**  
Separate analog and digital signals boards (2 main boards + power board) with no cross-over layout. Even at areas where analog meets digital signals, this area is enclosed with the shortest signal travel distance to prevent interferences.
- **Asynchronous data transfer**  
A PC uses a different clock system from Essence 3 and hence a buffer will monitor the data speed such that when the PC clock is firing too fast, this is regulated and the data transfer feed is adjusted to slow down. This greatly improves the precision of digital audio and provides more detail with less listening fatigue.
- **TCXO Clock Source**  
Clock generators are susceptible to heat/temperature changes, which can impact the stability of audio source. Hence with a pure-gold module acting as a clock source (normally used in GPS), this would minimize jitter and support more stable local clock signals.
- **Total Ground Isolation with 40-pin digital parallel cable**  
The 40-pin cable is dedicated for high-speed digital data signal transfer. Voltage changes are volatile and signal crosstalk can increase with digital signals. To prevent this, a 40-pin parallel cable is used. All the middle paths are used as ground ensuring a total separation and minimizing any possibility of interferences.
- **High Channel Separation: 20-pin analog parallel cable for Headphone**  
The middle paths of the 20-pin analog parallel cable is also used for ground, and hence the left and right channels separation would be 6 times more than the normal 3.5mm cable for headphone, perfectly balanced with super low cross talk.
- **Custom Resistor with high temperature and heat tolerance**  
0.1% tolerance and high tolerance for temperature changes with +/-0.5ppm/Celsius with ultra-low noise and better stability.
- **DC Servo to reducing DC biasing:**  
The DC servo design helps to reduce decoupling and this helps to extend bass performance with richer and deeper sounds. The 6 Op-amps for DC servo also helps to reduce DC biasing, which causes jitter.

## Ease of use & Customization

- **Precision Matched, Remote Controllable 24-Step Attenuator**

0.1% tolerance, high accuracy in volume adjustments even at low volume level. The 24-step attenuator is designed with 2 columns of relays that ensure perfect L/R stepping in volume adjustments. Furthermore, it comes with a motor that allows user to enjoy the benefit of remote control.

- **Volume Bypass Mode**

For those who prefer to max out preamp volume, the volume bypass mode can bypass to power amp for direct line out signals.

- **Left/Right Calibration**

L/R Volume Measurement software that allows easy calibration.

- **DC Servo to reducing DC biasing:**

6 Op-amps for DC servo that reduces DC biasing, which causes jitter.

- **USB Audio Switch**

Supports driver-free under USB Audio 1.0 on PC and USB Audio 2.0 for Mac.

- **DSD Support**

DSD Support for USB 2.0.

- **Bit Perfect Mode**

Bit-perfect mode allows the use of ASIO or similar function while doing audio playback, avoiding any sample rate conversion being done by PC's operating system. This feature keeps audio contents of all resolutions being played as its original sample rate without any potential quality loss during sample rate conversion.

## Component Selection

- **ADI AD1955:** Supreme DAC with great sound stage at 115 SNR.

- **WIMA FKP2:** High temperature tolerance with robust performance.

- **TI TPS 7A4700 and 7A3301:** Excellent Low Dropout Regulator (LDO) regulators for stable power source.

- **TI LME49600:** Headphone amp that supports up to 600ohms with excellent dynamics.

- **Op-amps:**

- **ADI AD827SQ:** military-grade Op-Amp with ceramic packaging with higher temperature tolerance and great stability. The ceramic packaging allows for stable temperature control and supports better THD+N.

- **JRC Muse02:** high-purity oxygen free copper for lossless sound reproduction and assembled with Advanced Symmetry Die-Bonding (ASD) technology for super low cross talk.

- **TI OPA2227P:** This op-amp is especially good for using on DC Servo.

## Package contents

This package should contain the following:

- ASUS Essence 3 Hi-Fi USB DAC x 1
- USB cable ('B-A' type) x 1
- Power cord x 1 (may contain two power cords depending on region/country)
- 6.3mm to 3.5mm adapter x 1
- Multi-language QSG x 1
- Audio-Precision (AP) test report x 1
- Installation driver CD x 1
- Spare fuse
- Remote control x 1
- IR Receiver Cable x1
- XLR to Mini XLR x2
- XLR to RCA x1
- RCA to RCA x1

## System requirements

To ensure a successful installation of the ASUS Essence 3 USB DAC, your computer must meet the following requirements:

- IBM compatible PC with one USB2.0 (or higher) compatible port for the USB audio device
- Mac OS X 10.6/ Microsoft® Windows® 8(32/64 Bit) / 7 (32/64 Bit)/ XP (32/64 Bit)
- Intel® Pentium® 4 1.4GHz or AMD Athlon 1400 CPU or faster CPU
- 256 MB DRAM system memory
- 200 MB available HDD space for driver installation
- CD-ROM drive (or DVD-ROM drive) for software installation
- High-quality headphones or powered analog speakers

## Driver installation

After connecting the ASUS Essence 3 to your computer using the bundled USB cable, install the device driver using the provided CD.



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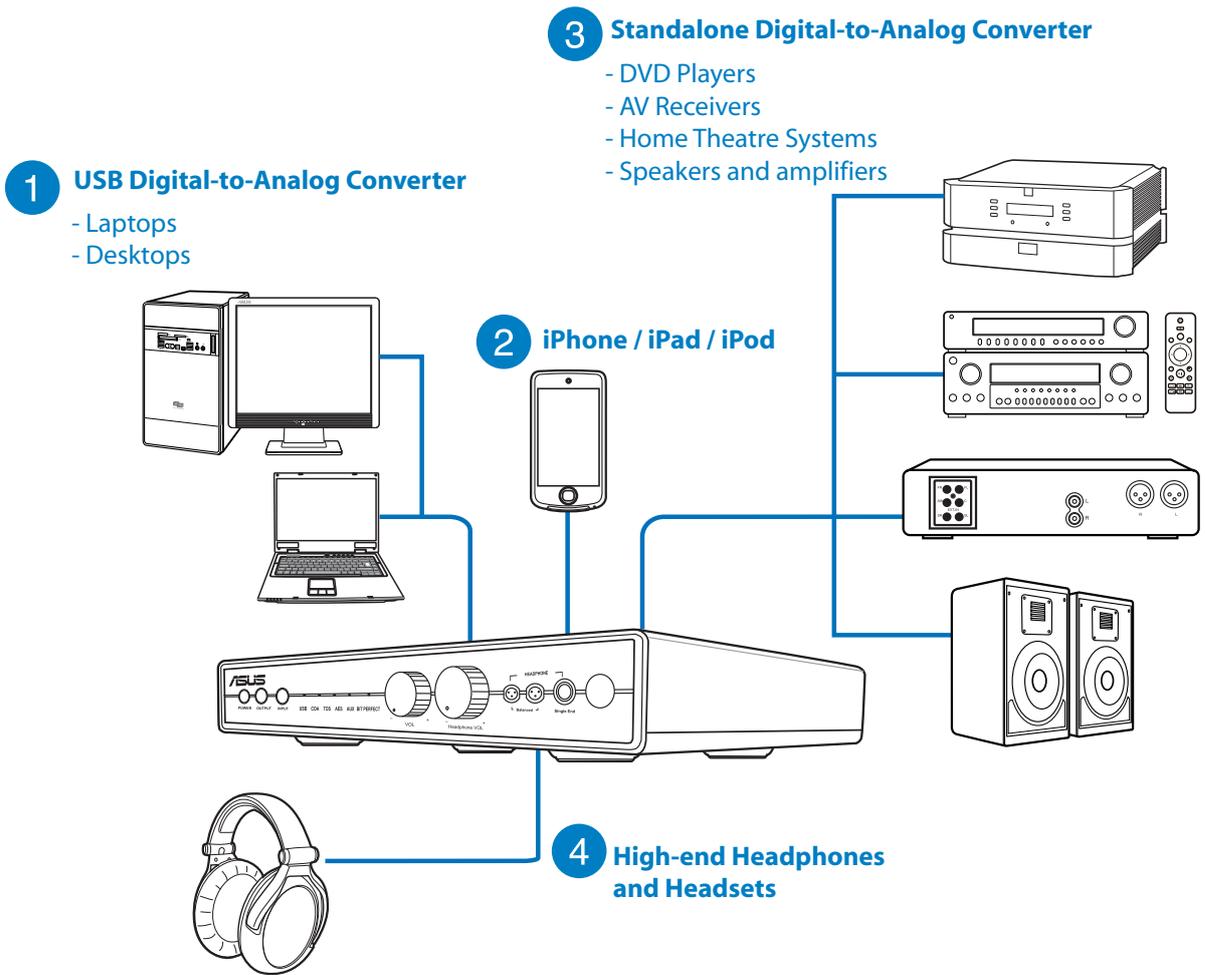
### NOTES:

- Driver installation is only required if you plan to connect the ASUS Essence 3 to a PC or notebook.
  - Driver version and the contents of the support CD are subject to change without notice.
- 

### To install the device driver:

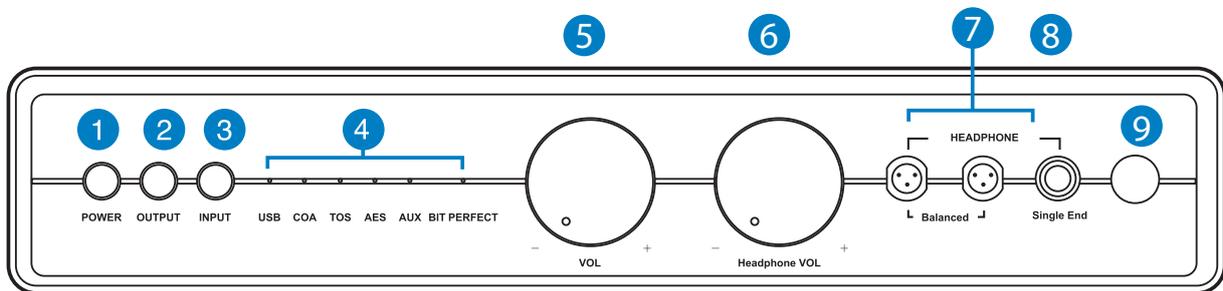
1. Insert the **ASUS Essence 3 Support CD** into your optical drive. Proceed to Step 5, if **Autorun** is enabled on your computer and the driver setup screen appears. If Autorun is not enabled on your computer, perform step 2.
2. On your Windows desktop, launch **File Explorer**.
  - Windows® 7 SP1 Click **Start** then **Computer**.
  - Windows® 8 Click **[Windows Key] + E**
3. In **File Explorer**, double-click the optical drive icon.
4. Double-click **Setup.exe**.
5. Read through the **End User License Agreement** and click **Accept** when prompted. Follow the on-screen instructions to complete driver installation.
6. When driver installation is complete, you will be prompted to restart your computer.

# Functionality

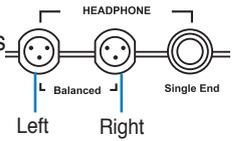


## Hardware features

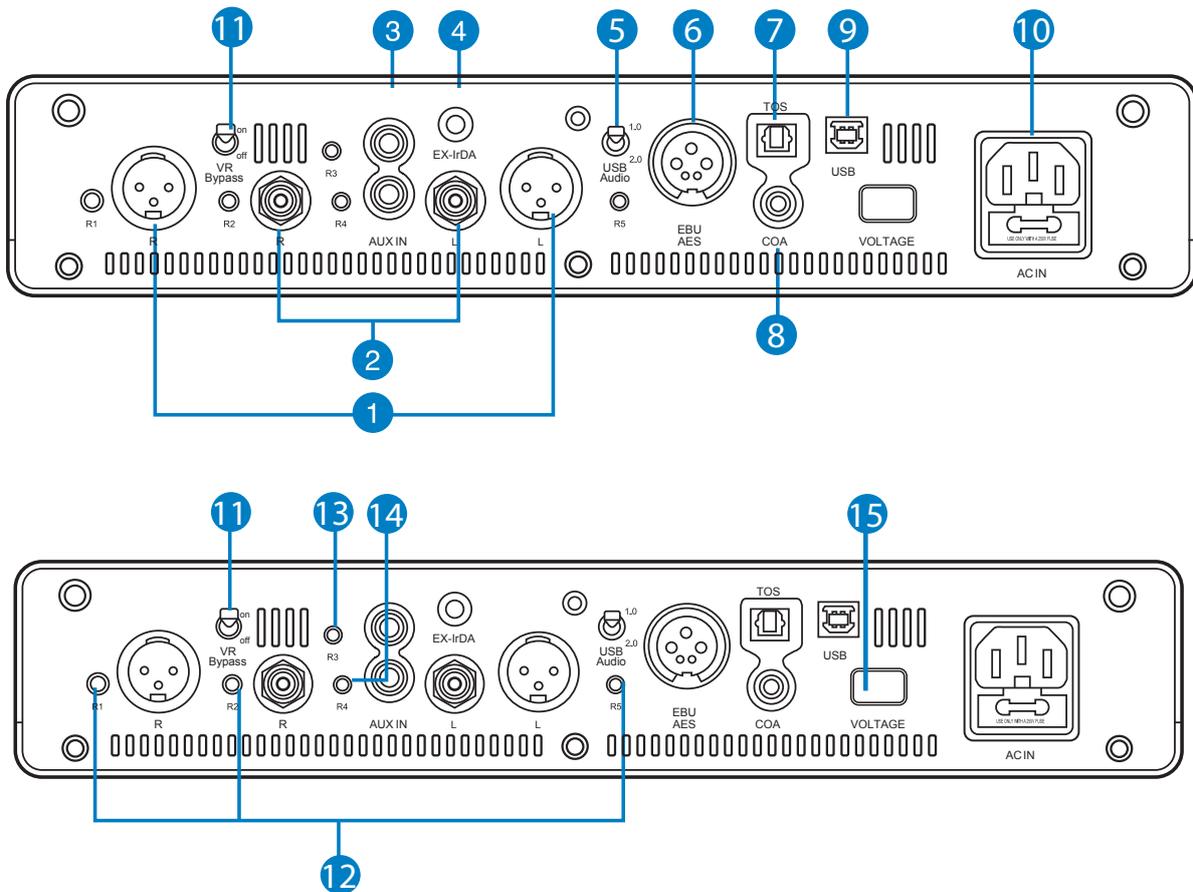
### Front Panel



1. **Power On/Off**  
Press to power off/on Essence 3.
2. **Output selection**  
Press to select output device such as speaker or headphone.
3. **Input selection**  
Press to select audio input source: USB, TOSLINK, Coaxial (COA), AES/EBU (AES3), or AUX audio input.
4. **Input selection/Bit perfect indicator**  
The corresponding LED will light up to show which audio source has been selected.
5. **Speaker volume control**  
The volume control adjusts the output level of unbalanced RCA and balanced XLR analog output.
6. **Headphone volume control**  
The volume control adjusts the output levels of the headphone jack.
7. **Headphone output (Balanced)**  
Connect your high-quality headphones/headsets with mini-XLR left and right connectors (The left and right channels are labelled in the right diagram).
8. **Headphone output (Single End)**  
Connect your high-quality headphones/headsets with a 6.3mm connector.
9. **IR sensor**  
Point your remote control to this area to remotely adjust input and volume.



## Rear Panel



### 1. **Balanced XLR Output (Line-Out)**

The ASUS Essence 3 features true balanced (XLR) output and supports balanced XLR audio speaker sets and audio receivers.

### 2. **Unbalanced RCA Output (Line-Out)**

This port supports conventional stereo output for connection to line-level phono/RCA speaker systems or audio receivers.

### 3. **AUX Input**

This port supports Apple iPod, iPad, and iPhone devices as well as other audio sources using a 3.5mm stereo connector.

### 4. **Ex-IRDA**

Connect an IR receiver to this port if the Essence 3 does not have direct line of sight to the remote control.

### 5. **USB Audio 1.0/2.0**

Use this switch to toggle between USB 1.0 and USB 2.0 audio support. Set USB audio to 1.0 for Plug-and-Play on a PC. Set USB audio to 2.0 for Plug-and-Play on an Apple MAC.



NOTE: Before installing the driver on your PC, ensure that you set USB audio to 2.0.

### 6. **EBU/AES Input**

This port is used for connecting external digital decoders or digital speaker systems, home theater systems, AV receivers, and TV sets.

### 7. **TOSLINK Optical Input**

This port is used to support TOSLINK input audio sources.

### 8. **Coaxial (COA) S/PDIF Input**

This port is for connecting external digital decoders or digital speaker systems, home theater sets, and AV receivers for outputting digital audio. This connection produces loop or pass-through unprocessed digital audio.

### 9. **USB port**

This USB port can be used to connect a desktop PC or laptop using a Type B to Type A USB cable.

### 10. **Power connector**

Plug the supplied power connector into the Essence 3 after connecting all audio devices.

### 11. **VR Bypass (Volume Control Selection Bypass)**

Use this switch to bypass volume control on Line-Out.

### 12. **XLR VR Calibration (R1, R2, R5)**

Turn to calibrate XLR volume control.

### 13. **AUX IN VR Calibration (R3)**

Turn to calibrate AUX IN volume control.

### 14. **RCA VR Calibration (R4)**

Turn to calibrate RCA volume control.

### 15. **Voltage Selector**

Use this switch to change voltage from 230V to 115V.

## Remote Control

### 1. **Power On/Off**

Press this button to switch off/on Essence 3.

### 2. **Speaker Volume**

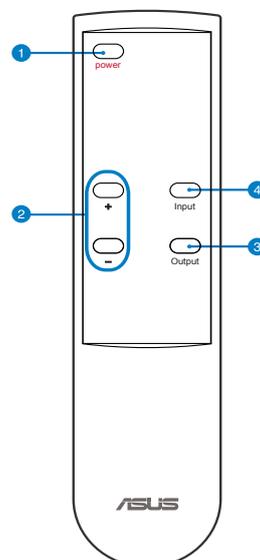
Press the button to adjust speaker volume.

### 3. **Output Select**

Press this button to switch audio output source.

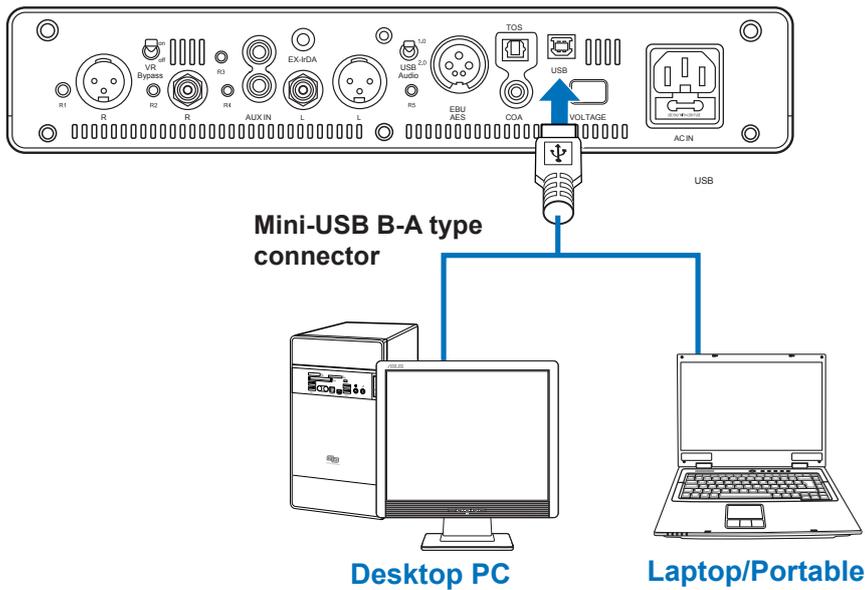
### 4. **Input Select**

Press this button to switch audio input source.



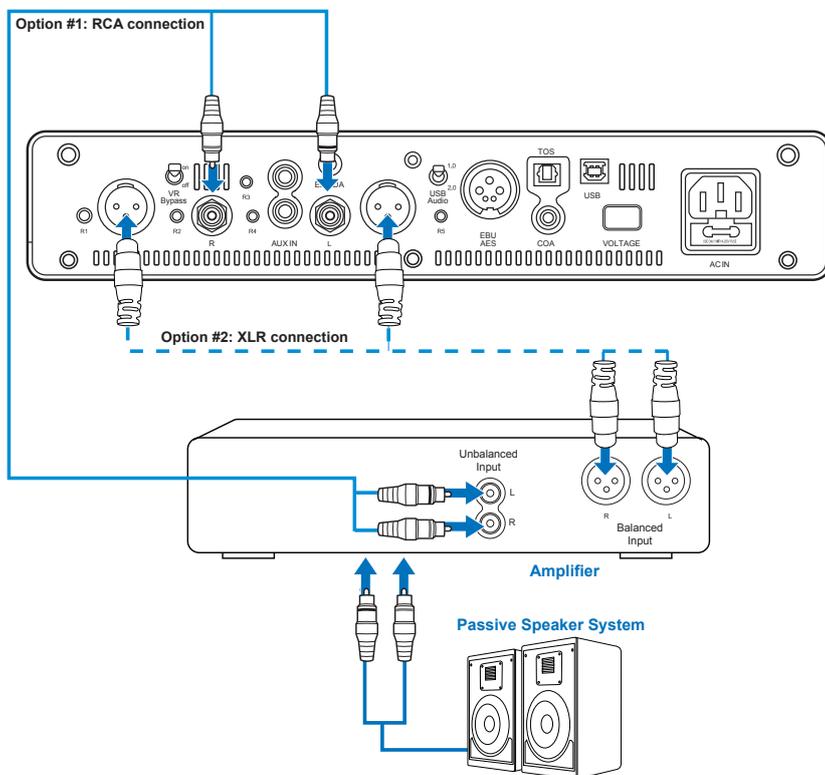
## Connectivity options

### Connecting a desktop PC or laptop using USB



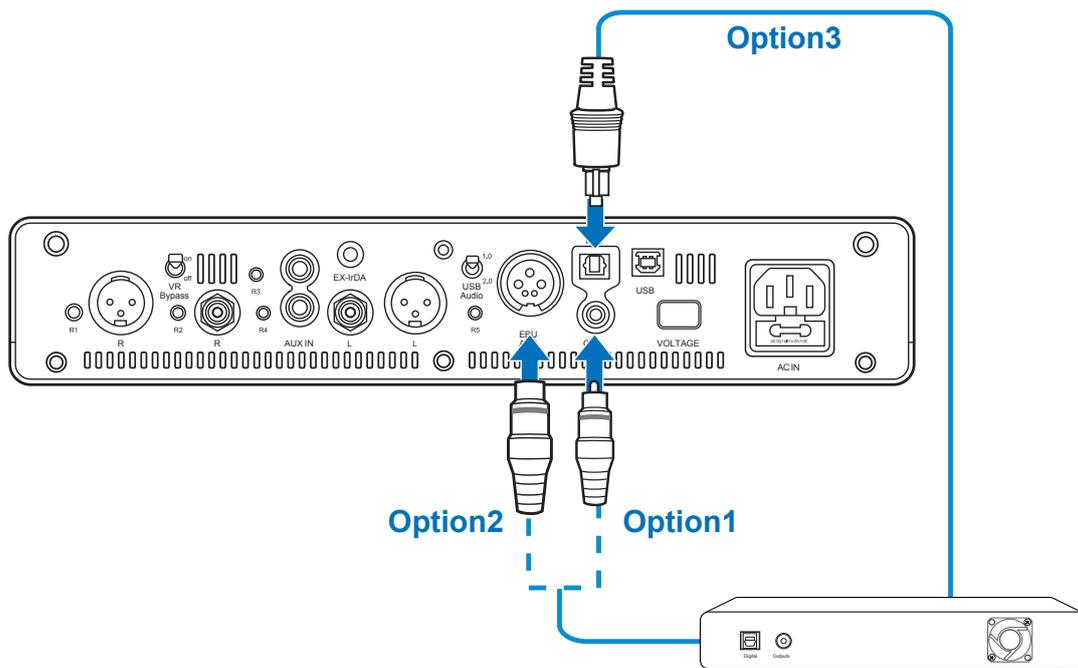
1. Connect a USB B-A type cable to the Essence 3's rear USB connector to one of the USB ports on the desktop PC or laptop.
2. Power on the Essence 3 and select USB input using the front panel or remote control. Ensure that the USB LED is on.
3. Install device drivers from the support CD. Please refer to the section **Driver Installation**.

### Connecting an amplifier and passive speaker setup

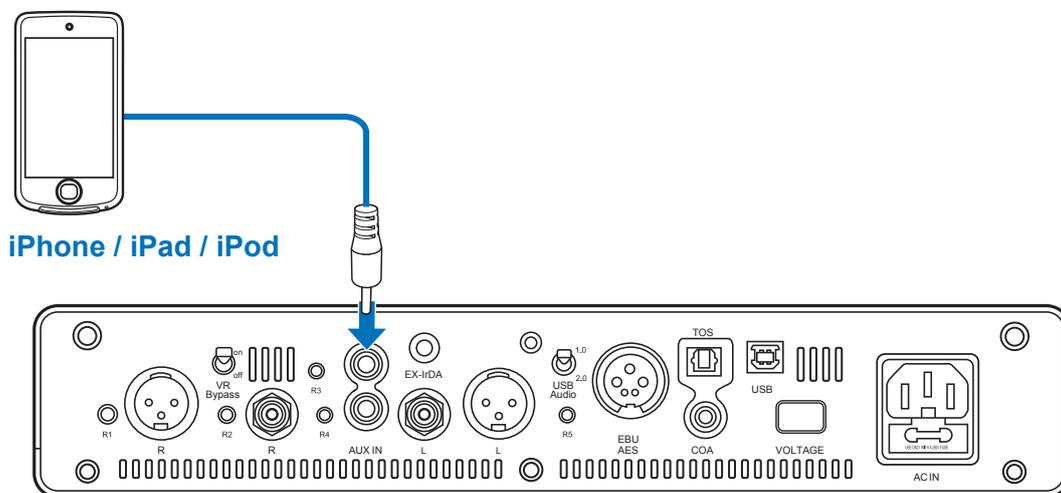


1. Connect the amplifier to the Essence 3 using either the unbalanced (RCA/Phono) or balanced (XLR) output connectors.
2. Connect the amplifier to a passive speaker system.

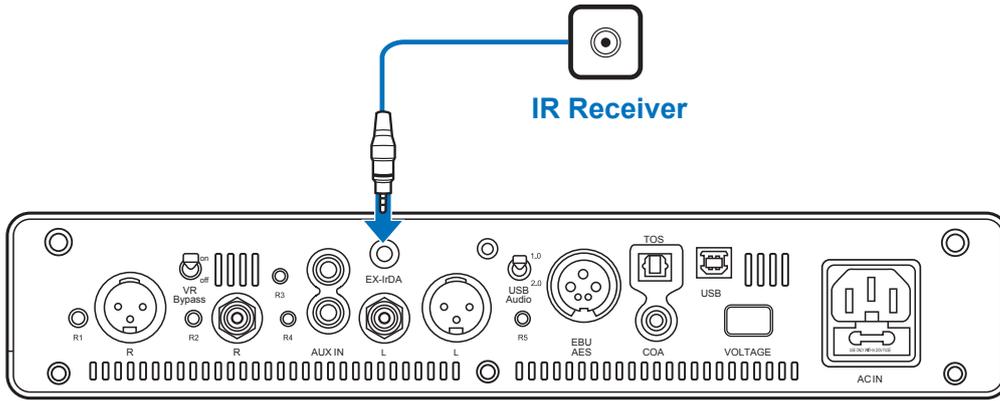
## Connecting digital audio input devices using AES / EBU / TOSLINK / COA



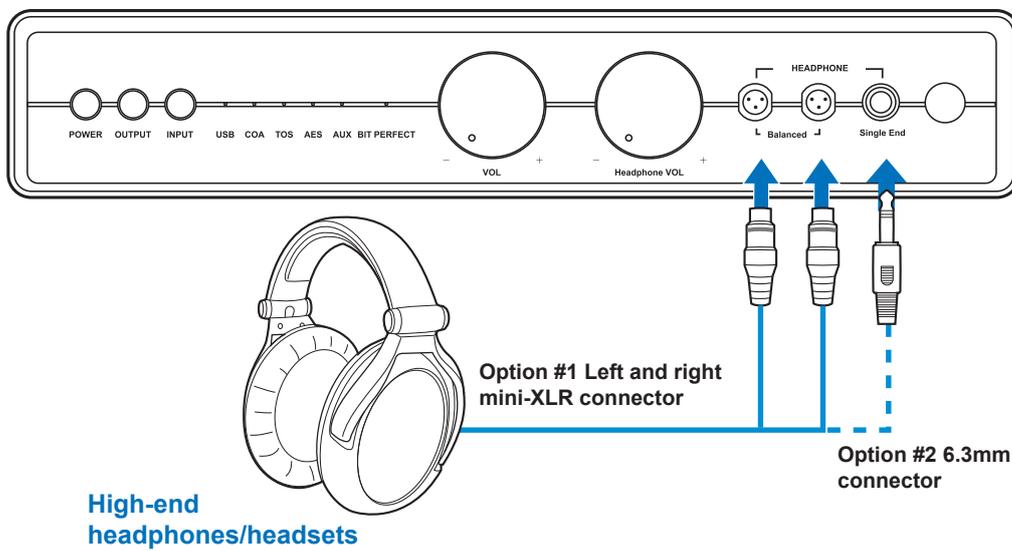
## Connecting an iPhone / iPad / iPod (Smart Devices) using AUX IN



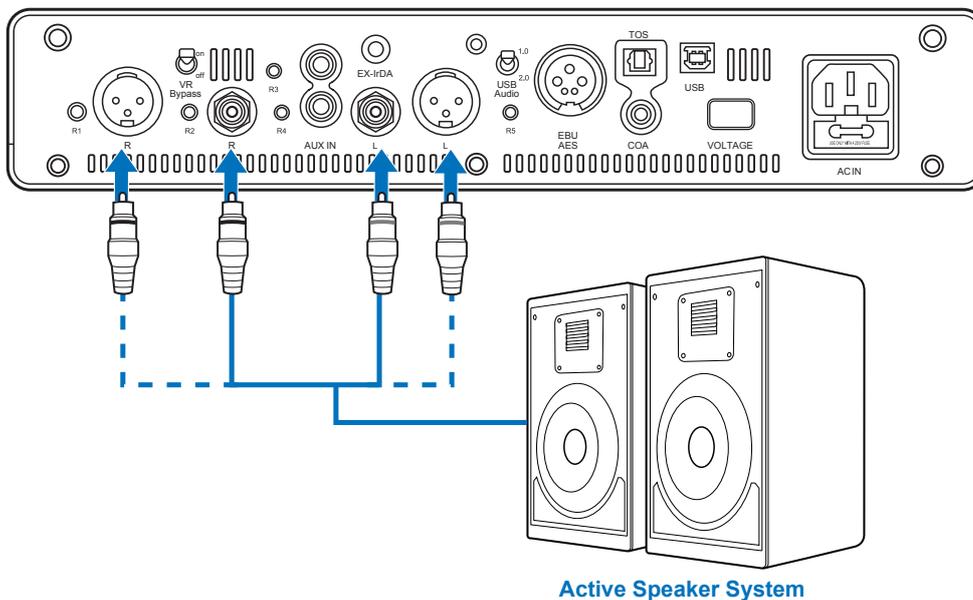
### Connecting an EX-IrDA receiver



### Connecting high-end headphones / headset



### Connecting an active speaker set directly



## Specifications

Items	Description
<b>Audio Performance</b>	
<b>Output Signal-to-Noise Ratio (A-Weighted):</b>	up to -117dB
<b>Output Total Harmonic Distortion + Noise at 1kHz@-3dB (A-Weighted):</b>	up to -105dB, 0.005%
<b>Output Full-Scale Voltage</b>	Balanced Output: 4V <sub>rm</sub> Unbalanced Output: 2V <sub>rms</sub> Balanced Output Headphone: 7V <sub>rms</sub> Headphone: 7V <sub>rms</sub>
<b>Frequency Response (-3dB, 24-bit/192kHz output):</b>	<10Hz to 48kHz
<b>Bus Compatibility</b>	
<b>USB</b>	USB
<b>S/PDIF</b>	IEC 60958-3 (2003-01)
<b>Main Chipset</b>	
<b>Audio Processor</b>	C-Media CM6631A
<b>S/PDIF Receiver</b>	TI PCM9211
<b>D-A Converter for Analog Inputs</b>	ADI AD1955
<b>OP Amp</b>	
<b>Balanced / Un-balanced I/V</b>	2 x ADI AD827SQ (Ceramics)
<b>Balanced / Un-balanced LFP</b>	2 x ADI AD827SQ (Ceramics)
<b>Balanced Buffer</b>	2 x ADI AD827SQ (Ceramics)
<b>Headphone (Single End)</b>	DC servo 2 x NJRC MUSES 02 + 2 x TI LME496000
<b>Headphone (Balanced)</b>	DC servo 4 x TI OPA2227P + 4 x TI LME496000
<b>Output impedance</b>	
<b>Line out</b>	100 ohm
<b>Headphone out</b>	10 ohm
<b>Clock</b>	
<b>Crystal clock</b>	12MHz for USB; 24.576MHz for S/PDIF
<b>Oscillator</b>	45.1584MHz (for 44.1KHz sample rate); 49.152MHz (for 48KHz sample rate)
<b>Sample Rate and Resolution</b>	
Analog Playback Sample Rate and Resolution	<p><b>USB audio Device 2.0 Digital Input:</b> 44.1K/48K/88.2K/96K/176.4K/192KHz @ 16bit/24bit DSD64 + DSD128</p> <p><b>USB audio Device 1.0 Digital Input:</b> 44.1K/48K/88.2K/96K @ 16bit/24bit</p> <p><b>S/PDIF Digital Input:</b> 44.1K/48K/88.2K/96K/176.4K/192KHz @ 16bit/24bit</p> <p><b>AES/EBU Digital Input:</b> 44.1K/48K/88.2K/96K/176.4K/192KHz @ 16bit/24bit</p> <p><b>ASIO Driver Support:</b> 44.1K/48K/88.2K/96K/176.4K/192KHz @ 16bit/24bit with very low latency</p> <p><b>USB audio capability:</b> Up to 352.8 kHz (44.1K 88.2K 176.4KkHz input) or 384 kHz (48K/96K/192KkHz input), 32bit</p>
<b>Power consumption (Max)</b>	17.5W
<b>I/O Ports</b>	
<b>Output Jack:</b>	1 x 6.3 mm jack (1/4") for Headphone out 2 X Mini XLR (Balanced) for Headphone out 2 x RCA (Un-Balanced) for Line out 2 x XLR (Balanced) for Line out
<b>Input Jack:</b>	3 x S/PDIF in (1 x Optical (Toslink) /1 x Coaxial / 1x AES-EBU), 2 x AUX in
<b>Power Input Jack:</b>	none
<b>Volume controller</b>	24-step volume control
<b>Power input range</b>	AC 100~240V

*Continued on the next page*

## Specifications

<b>LED Indicator</b>	
<b>One color LED</b>	White color LED
<b>Button</b>	
<b>Push Button</b>	2-pin Tact switch
<b>Accessories</b>	
<b>Accessories</b>	Driver CD x 1 Remote control x 1 6.3mm to 3.5mm stereo adapter x 1 Audio Precision (AP) test report x 1 USB cable x 1 Power cord x 1 Mini XLR to XLR x 2 XLR to RCA x 1 RCA to RCA x 1
<b>OS Support</b>	The Essence One supports Mac OS X 10.8 or later version without any driver needed.

\* Specifications are subject to change without notice.