

U·D·O

12 VOICE POLYPHONIC BINAURAL ANALOG-HYBRID
SYNTHESIZER WITH SUPER-WAVE TECHNOLOGY

SUPER 6

INTRODUCING THE SUPER 6

DON'T SETTLE FOR ANYTHING LESS THAN SUPER

The Super 6 is a 12-voice polyphonic, Binaural Analog-Hybrid Synthesizer. A harmonious marriage of state of the art FPGA digital hardware oscillators and Voltage Controlled Analog technology.

It is flexible, immediate, powerful and refined with a gorgeous analog tone. Rich and evolving textures are easily teased from the unique Super-Wavetable core and can be shaped and manipulated with the binaural analog signal path and flexible modulation. Robust, compact and inviting to pick up and play with smooth, solid and responsive controls throughout, it cries out to be played.







OVERVIEW

- 12-VOICE POLYPHONIC ANALOG-HYBRID SYNTHESIZER
- BINAURAL ANALOG SIGNAL PATH FOR STEREO MOVEMENT AND SPATIAL EFFECTS
 - 7-CORE SUPER-WAVETABLE MAIN OSCILLATOR WITH WAVEFORM DOWNLOAD
 - DDS OSCILLATOR 2 WITH FM, SYNC, SUB OSCILLATOR AND X-FADE MODES
- 4 OCTAVE FATAR KEYBOARD WITH VELOCITY AND AFTERTOUCHE, EXPRESSION AND SUSTAIN
 - FLEXIBLE HYBRID FPGA & ANALOG VOICE ARCHITECTURE
 - ROBUSTLY BUILT WITH SOLID, PLAYABLE CONTROLS
- MULTI-PURPOSE FLEXIBLE LFOS, ENVELOPES & MODULATION MATRIX
 - ARPEGGIATOR & STEP SEQUENCER
 - EXTERNAL AUDIO INPUT WITH AUDIO TRIGGER
 - DUAL STEREO 24-BIT DIGITAL EFFECTS

LFO1

- Main LFO with rate adjustable from 0.05Hz to 20KHz in low and high frequency modes
- One LFO per-voice implementation
- Left – right phase control for stereo effects and harnessing the binaural sound engine
- One-shot mode for envelope duties
- Keyboard tracking mode for FM sounds
- LFO1 can be mapped through the DDS1 or DDS2 audio path in either fixed or tracking modes for use as a drone or third-oscillator
- Free-running, or reset on note press or beginning of bar for sequencer/arpeggiator

DDS MODULATOR

- LFO and envelope control of DDS1 & DDS2 pitch
- Selectable ½ super or full super mode for DDS1
- Variable detune control for super waves and variable pulse width control for selected standard waves
- LFO and or ENV1 can modulate the depth of detune for the super-waves and the pulse width for the standard waves
- DDS2 to DDS1 cross modulation for deep FM sounds

DDS1

- FPGA based super-wavetable oscillator core sampled at 50MHz with centroid-oscillator and 6 sister oscillators dynamically de-phased in the stereo field
- Sine, saw tooth, squarewave, triangle, noise
- V16 wavetables that can be user-defined
- Range adjustable from 2' to 64'

DDS2

- FPGA based wavetable oscillator core sampled at 50MHz
- Sinewave, sawtooth, square, triangle, noise and pulse waveforms
- Hard-sync to DDS1
- X-fade with DDS1 with adjustable split-point on the keyboard
- LFO mode
- Sub-oscillator mode active when in LFO mode
- Variable pulse width and PWM

VOLTAGE CONTROLLED FILTER

- Analogue 4 pole low-pass self-resonant filter
- Two levels of overdrive
- High-pass filter with fixed frequency or linked to low pass filter for bandpass response
- Selectable keyboard tracking with filter autotune for accurate keyboard tracking
- Modulation by ENV1 and/or ENV2, LFO1 and DDS2

VOLTAGE CONTROLLED AMPLIFIER

- Analogue VCA with selectable fixed or variable envelope (ENV2)
- Dynamics control for velocity sensitivity
- Modulation by LFO1

AUDIO INPUT

- Stereo audio input that can be fed through the 12 analog filters and the effects section
- Audio to gate trigger with variable-gain input stage

MIXER

- Adjusts mix-level of DDS1 and DDS2 audio paths
- When in oscillator x-fade mode, adjusts split-point on keyboard

KEYBOARD AND CONTROLLER SECTION

- 49-Key Fatar mechanism with velocity and aftertouch
- Two-axis bender with LFO trigger
- Voice modes poly 1, poly 2, variable size unison, solo and legato
- Keyboard adjacent dedicated controls for bend range to DDS1/2 and VCF
- Global LFO2 with rate and delay controls. Triggered and always-on modes
- Variable portamento
- Playable spring-lever keyboard octave selector
- MPE midi compliance with mapping to press and release velocity, bend, poly pressure and expression
- Protective panels at either end

ARPEGGIATOR-SEQUENCER

- Midi syncable multimode arpeggiator with smart-hold
- 1-4 Octave range selectable for arpeggiator
- Midi syncable 64-step sequencer with programmable note, rest, slide and accent controls
- LFO1 and delay controls can be locked to arpeggiator/sequencer clock
- 64 Sequence memories

MODULATION MATRIX

- Intuitive modulation matrix for second-tier modulation functions
- LEDs give clear feedback on assignment depths
- 20x audio rate oversampling computation

IO CONNECTIONS

- Midi in out and thru on DIN connectors
- USB for midi, patch & sequence management and waveform download
- Audio input on stereo ¼" jacks
- Expression pedal input. Responds to CV inputs 0-5V and routed to modulation matrix
- Sustain pedal input. Accepts standard momentary footswitch
- Main output left and right on ¼" jacks
- High quality stereo headphone power amplifier

PERFORMANCE

- 64 User patch memories
- Patch, sequence & waveform management via simple USB 'memory stick' type interface
- Easy access buttons and a menu-free interface

INTEGRATION

- Easy disk-access patch & sequence management and waveform download
- Access multi-timbral mode*
- Access deeper modulation capabilities*
- Easy OS upgrade

*Available in a future firmware update



ENVELOPES

- ENV1 invertible hold-attack-decay-sustain-release, multiple destinations
- Looping mode selectable keyboard-tracking for LFO and FM duties
- ENV2 attack-decay-sustain-release, multiple destinations

EFFECTS

- Dual mode stereo chorus using 24-bit 192KHz processing
- Syncable & modulatable stereo delay with 24-bit 192KHz processing

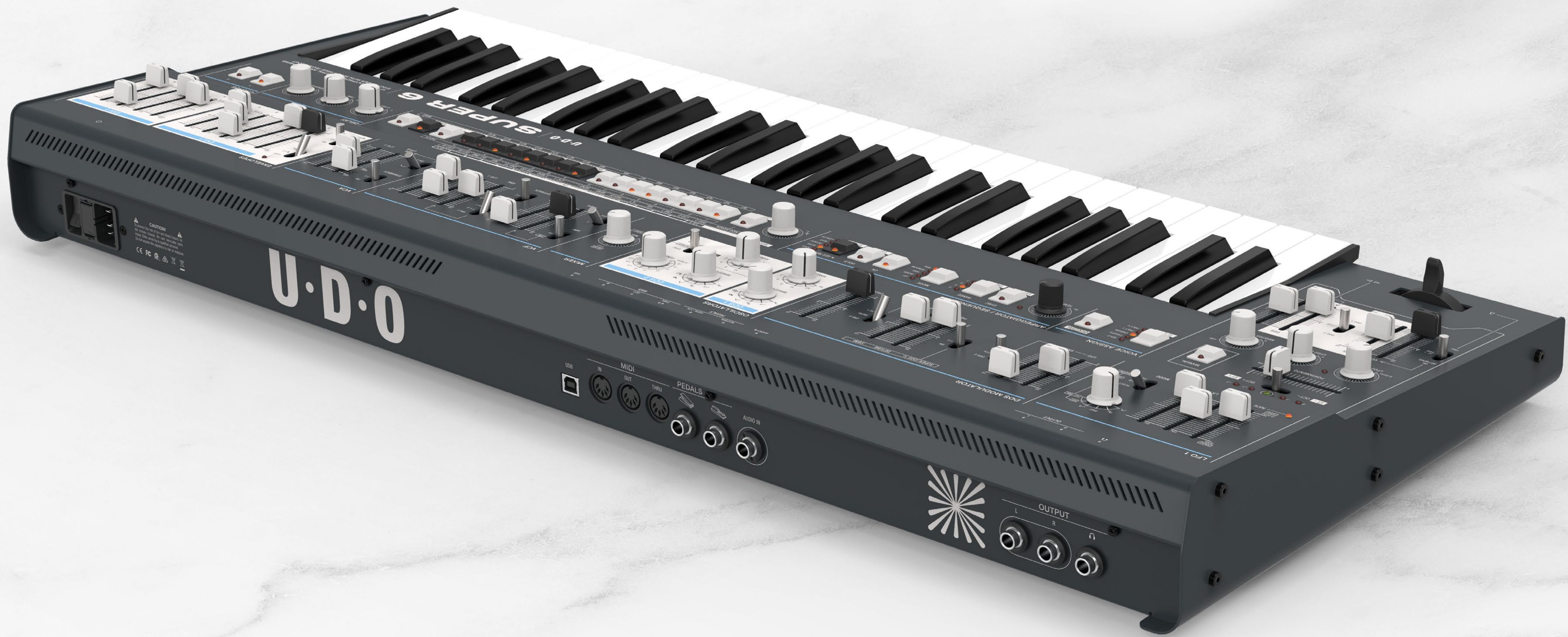
POWER SUPPLY

- Universal (worldwide) mains AC input on IEC C14 connector
- 30W power consumption

PHYSICAL

- Weight approximately 8kg
- Size approximately 830 x 350 x 90mm









U·D·O

UDO-AUDIO.COM
HELLO@UDO-AUDIO.COM
IG: @UDO_AUDIO