ET3315 / ET3325 / ET3340 / ET3360

ET3300 Series Dual-Channel DDS Function / Arbitrary Waveform Generator



OVERVIEW

The ET3300 series dual-channel function / arbitrary waveform generator is designed with direct digital synthesis (DDS) technology to produce precise, stable, low-distortion output signals.

FEATURES

- Frequency range 1 μHz to 60 / 40 / 25 / 15 MHz depending on model
- 200 MSa/s sampling rate, 13-bit vertical resolution, 8k storage depth
- Dual-channel independent output with phase synchronization
- Built-in 5 basic waveforms and 32 arbitrary waveforms
- Waveform storage: 50 groups of user-defined waveforms in internal memory
- Pulse output with adjustable edge time
- External analog modulation function (optional)
- Linear / logarithmic sweep and burst waveform output
- Built-in 100 MHz high-precision frequency meter and 32-digit counter
- Chinese and English menus; key help for convenient information access
- Internal / external AM, FM, PM analog modulation and ASK, FSK, PSK digital modulation

- 3.5-inch 480×320 TFT LCD with a clear graphical interface
- Standard interfaces RS232 and USB Device, SCPI protocol supported (USB Host optional)

SPECIFICATIONS

Item	ET3315	ET3325	ET3340	ET3360
Sine wave	1 µHz – 15 MHz	1 µHz – 25 MHz	1 µHz – 40 MHz	1 µHz – 60 MHz
Square wave	1 µHz – 15 MHz			
Ramp (triangle)	1 µHz – 15 MHz			
Pulse wave	100 µHz – 6 MHz			
Arbitrary wave	1 µHz – 6 MHz			
Noise (−3 dB)	7 MHz bandwidth			
Frequency	Resolution 1 µHz · accuracy ±5 ppm · stability ±1 ppm / 3 h			
Waveform types	Sine, square, ramp, pulse, noise, arbitrary (incl. DC) · 12 built-in waveforms and 50 user-defined waveforms · waveform length 8192 points · sampling rate 200 MSa/s · vertical resolution 13 bit			
Sine characteristics	Harmonic distortion ≥45 dBc (<1 MHz), 40 dBc (1 – 20 MHz) · total distortion <0.8 % (20 Hz – 20 kHz, 0 dBm)			
Square characteristics	Rise / fall time <20 ns · overshoot <5 % · duty cycle 1 % – 99 % (freq <100 kHz), 20 % – 80 % (100 kHz – 5 MHz), 40 % – 60 % (≥5 MHz), 0.1 % resolution			
Pulse characteristics	Pulse width min 20 ns, 1 ns resolution · min edge transition 20 ns · overshoot <5 % · jitter 6 ns + 0.1 % of period			
Ramp characteristics	Linearity ≥98 % (0.01 Hz – 10 kHz) · symmetry 0.0 – 100.0 %, resolution 0.1 %			
Amplitude range	2 mVpp – 20 Vpp (freq <10 MHz) · 2 mVpp – 10 Vpp (10 MHz ≤ freq <30 MHz) · 2 mVpp – 5 Vpp (freq ≥30 MHz)			

OUTPUT & MODULATION

- **Amplitude:** resolution 1 mV · accuracy ±1 % of setting + 2 mVpp (1 kHz sine, 0 offset, >10 mVpp) · flatness ±0.4 dB (<10 MHz) / ±1.0 dB (≥10 MHz), relative to 1 kHz sine, 1 Vpp
- **Output:** impedance 50 Ω ±10 % (typical) · short-circuit protection — outputs are automatically disabled within 60 s on overload
- **Phase:** adjustable range 0 – 359.9°, resolution 0.1°
- **Frequency counter:** frequency range 1 Hz – 100 MHz · period measurement 0.01 s – 10 s (square wave) · counting capacity 0 – 4294967295 · manual count mode · input signal 2 Vpp – 20 Vpp · DC / AC coupling
- **SYNC output:** CH1 or CH2 (default CH1) · TTL compatible level · impedance 50 Ω · rise / fall <25 ns · max frequency 25 MHz
- **AM:** carrier sine / square / ramp / pulse / arbitrary (except DC) · internal or external source · modulation waveform sine / square / ramp · modulation frequency 2 mHz – 20 kHz · depth 0 % – 120 %
- **FM:** same carrier and source options · modulation frequency 2 mHz – 20 kHz · frequency deviation 0 to max carrier frequency
- **PM:** same carrier and source options · phase deviation 0° – 360°
- **ASK / FSK / PSK:** carrier sine / square / ramp / pulse / arbitrary (except DC) · internal or external source · 50 % duty-cycle square modulation · keying frequency 2 mHz – 1 MHz (PSK phase shift 0° – 360°)

- **Sweep:** carrier sine / square · linear or logarithmic · sweep time 1 ms – 500,000 s · upward or downward · internal / external / manual trigger
- **Burst:** waveforms sine / square / ramp / pulse / noise / arbitrary (except DC) · burst count 1 – 65535 or infinite, gated · period 1 µs – 500 s · start phase 0° – 360° · internal / external / manual trigger
- **Trigger input:** 2 Vpp – 20 Vpp · DC / AC coupling · pulse width >100 ns · response time <500 ns (sweep), <10 µs (burst)
- **External modulation input:** impedance 1 MΩ · input range ±2.5 V ac+dc

GENERAL

- **Power supply:** 220 V AC ±10 % or 110 V AC ±10 %, 45 – 65 Hz
- **Display:** 3.5-inch TFT, 480 × 320, 16M colours
- **Temperature:** operating 10 – 40 °C · non-operating −10 – 60 °C
- **Humidity:** ≤90 % RH (0 – 40 °C)
- **Interfaces:** RS232, USB Device
- **Size & weight:** 265 × 105 × 305 mm (W × H × D) · 2.3 kg

ACCESSORIES

- **Standard:** A51-type three-core power cord × 1, A52-type BNC coaxial cable × 1

For quotations, options and lead time, contact Kate Liu — enquiries are answered personally, typically within one working day.