

## OnePower



OnePower 1500



OnePower 2200



OnePower 3000

OnePower is ONEtastic's Air Cooled High Power transmitter range, available in different versions with different output powers:

1500W rms (OnePower 1500), 2200W rms (OnePower 2200), and 3000W rms (OnePower 3000).

Equipment of the OnePower series are composed of some main subparts:

- An exciter (dual driver as an option), with native adaptive pre-correction circuits, bringing multiple input interfaces (ASI, IP, Satellite) and on-board GPS for accurate synchronization in SFN environments;
- Several amplifier stages (from 2 to 4 depending on the output power level);

- A control and monitoring unit, with embedded change over system (Onelagic).

OnePower transmitters support several digital modulation standards (DVB-T/H/T2, ISDB-T/Tb, DAB/T-DMB), as well as dual-cast analog operation (supporting PAL and NTSC).

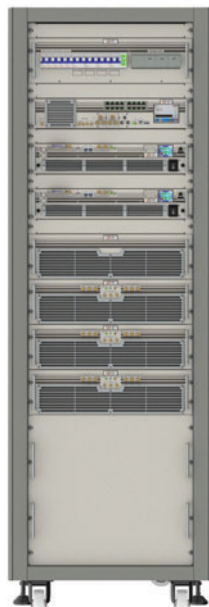
OnePower obviously incorporates the innovative and distinctive engineering that has made the success of the low/medium power range of ONEtastic transmitters, allowing ease of use and maintenance.

## MAIN FEATURES

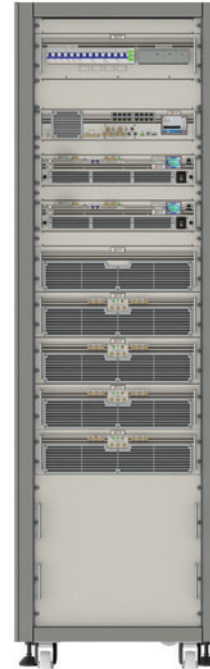
- Compact single 19" Rack
- Output Power up to:
  - 1500W rms (@ 36dB MER): ONEPOWER 1500)
  - 2200W rms (@ 36dB MER): ONEPOWER 2200)
  - 3000W rms (@ 36dB MER): ONEPOWER 3000)
- High efficiency wideband amplifier technology
- Single or Dual driver
- DVB-T/H/T2, ISDB-T/Tb, DAB/DAB+/T-DMB modulations supported (PAL and NTSC for Dual-cast operations)
- Embedded Re-Multiplexer/BTS Adapter and Layer Combiner for ISDB-Tb
- Adaptive pre-correction circuits
- On-board high stability GPS receiver with battery
- Flexible input interfaces (ASI/BTS, IP, Satellite)
- ONELOGIC control and monitoring unit with embedded change over and switching system



OnePower 1500



OnePower 2200



OnePower 3000

# SPECIFICATIONS

## SYSTEM

<b>Output Power (rms):</b>	1500 W rms @ MER > 36 dB (Onepower 1500) 2200 W rms @ MER > 36 dB (Onepower 2200) 3000 W rms @ MER > 36 dB (Onepower 3000)
<b>Output Power (ps):</b>	3000 W (Onepower 1500) 4800 W (Onepower 2200) 6400 W (Onepower 3000)
<b>Configurations:</b>	Single or dual driver
<b>RF Connector:</b>	7/8" (f), 50 Ohm (Onepower 1500) 1-5/8" (f), 50 Ohm (Onepower 2200 and 3000)
<b>Frequency Agility:</b>	UHF Band IV and V, 470-862 MHz VHF Band III, 174-240 MHz
<b>Frequency Resolution:</b>	1 Hz
<b>Pre-correction:</b>	Adaptive
<b>Single Driver:</b>	Onedriver 80U (Onepower 1500) Onecomact 170U (Onepower 2200 and 3000) 2x Onedriver 80U (Onepower 1500) 2x Onecomact 170U (Onepower 2200 and 3000)
<b>Dual Driver:</b>	2x Onedriver 80U (Onepower 1500) 2x Onecomact 170U (Onepower 2200 and 3000)
<b>ASI/BTS/Video (dual), audio and RF matrix:</b>	included in the control logic (Onelogic)
<b>Input/output connectors BTS/ASI/Video matrix:</b>	BNC (f), 75 Ohm
<b>Input/output connectors audio matrix:</b>	Tini-QG "Mini XLR", 6 Pin (m), 600 Ohm

## MODULATOR

<b>DVB-T/-H/-T2</b>	
<b>Standard:</b>	EN300744, EN302304, EN302755, TS101191, TS102773 (T2-MI), TS102034
<b>Inputs:</b>	4x ASI BNC (f), 75 Ohm or 2x ASI BNC (f), 75 Ohm and 2x RJ45 TS oIP 10/100/1000 Switch seamless between ASI inputs. Hierarchical and not hierarchical (DVB-T)
<b>FFT:</b>	1K (DVB-T2), 2K, 4K, 8K, 8K ext. (DVB-T2), 16K & 16K ext. (DVB-T2), 32K & 32K ext. (DVB-T2)
<b>Code Rate:</b>	All modalities available according to the standard Block Short or Normal (DVB-T2) DVB-T: Reed-Solomon (204, 188) DVB-T2: BCH, LDPC
<b>Guard Interval:</b>	1/32, 1/16, 1/8, 1/4, 19/256 (DVB-T2), 19/128 (DVB-T2), 1/128 (DVB-T2)
<b>Constellation:</b>	QPSK, 16QAM, 64QAM (DVB-T2). Rotated and non-rotated (DVB-T2)
<b>MISO Processing:</b>	Supported
<b>ISDB-Tb</b>	
<b>Standard:</b>	ABNT NBR 15601, ABNT NBR 15603
<b>Inputs:</b>	4x ASI TS/BTS BNC (f), 75 Ohm or 2x ASI TS/BTS BNC (f), 75 Ohm and 2x RJ45 TS/BTS oIP 10/100/1000
<b>FFT:</b>	Mode 1 (2K), Mode 2 (4K), Mode 3 (8K)
<b>Code rate:</b>	1/2, 2/3, 3/4, 5/6, 7/8
<b>Guard Interval:</b>	1/4, 1/8, 1/16, 1/32
<b>Hierarchical Modulation:</b>	Up to 3 layers
<b>Constellation:</b>	QPSK, 16QAM, 64QAM
<b>Time interleaver:</b>	Fully supported
<b>Partial reception:</b>	Supported

## DAB/DAB+/T-DMB

<b>Standard:</b>	EN 300401, ETS 300 799
<b>Inputs:</b>	4x ETI (NI[G703], NA5376[G704] or NA5592[G704]) BNC (f), 75 Ohm
<b>Transmission Modes:</b>	Mode I, II, III, IV (Automatically detected from the ETI stream, or user selectable)
<b>Operation:</b>	MFN or SFN operations

## Analogue

<b>Standard:</b>	B, G, D, K, M, N, I
<b>Inputs:</b>	Video BNC (f), 75 Ohm, audio Tini-QG "Mini XLR", 6 Pin (m), 600 Ohm
<b>Color system:</b>	PAL, NTSC

## SATELLITE RECEIVER

<b>Standard:</b>	ETSI EN 300 421 (QPSK) (DVB-S) ETSI EN 302 307 (QPSK, 8PSK, 16APSK) (DVB-S2) ETSI EN 50083-9 (ASI) ETSI EN 50221 (Common Interface)
<b>DVB-S2:</b>	VCM, CCM, Multi Stream and Single Stream, Normal & Short FEC frames
<b>Symbol Rate:</b>	1 - 45 Msym/s (DVB-S) 2 - 45 Msym/s (DVB-S2)

<b>Constellation:</b>	QPSK, 8PSK, 16APSK
<b>FEC:</b>	Automatic, all modalities available according to the standard Block Short or Normal DVB-S: Reed-Solomon (204,188) DVB-S2: BCH, LDPC
<b>Roll-Off:</b>	0.2, 0.25, 0.35
<b>Input connector:</b>	F (f), 75 Ohm
<b>Frequency:</b>	L-band 930-2250 MHz
<b>LNB control voltage:</b>	Off, +13/18 Vdc, 22 kHz, 0.25 A (overload protection)
<b>RF input level:</b>	40 ÷ 100 db/µV (with attenuator)
<b>Output connector:</b>	BNC (f), 75 Ohm
<b>Modality:</b>	188 bytes
<b>Max input bit rate:</b>	80 Mbps (CAM limit: 72 Mbps)
<b>CAM interface:</b>	PCMCIA DVB-CI Common Interface
<b>CAS mode (Conditional Access):</b>	Multicrypt, Simulcrypt
<b>CAS support:</b>	Mediaguard, Viaccess, Irdeto, Conax, BISS with Professional multiprogram CAM (descrambling of up to 24 Elementary Streams) Betacrypt, Cryptoworks, Nagravision with standard consumer CAM (descrambling of up to 4 services)

## GPS

<b>Input connector:</b>	N (f), 50 Ohm
<b>Input/Monitor output 10 MHz:</b>	BNC (f), 75 Ohm
<b>Input/Monitor output PPS:</b>	BNC (f), 75 Ohm
<b>Phase noise:</b>	-140 dBc/Hz @ 10 kHz -150 dBc/Hz @ 100 kHz
<b>Stability:</b>	1e-12 / 24 H with disciplined OCXO
<b>Hold-over stability:</b>	5 µs after 5 hours (optional 1 µs after 24 hours)

## MECHANICALS

<b>Rack:</b>	30U rack 19" (Onepower 1500) including output filter 36U rack 19" (Onepower 2200) including output filter 40U rack 19" (Onepower 3000) including output filter
<b>Width:</b>	600 mm
<b>Height:</b>	1530 mm (10,5cm wheels included) (Onepower 1500) 1800 mm (10,5cm wheels included) (Onepower 2200) 2000 mm (10,5cm wheels included) (Onepower 3000)
<b>Depth:</b>	920 mm connectors included
<b>Max weight:</b>	240 Kg (Onepower 1500) 270 Kg (Onepower 2200) 300 Kg (Onepower 3000)

## CONTROLS

<b>TFT touchscreen</b>	
<b>Web GUI</b>	
<b>SNMP</b>	
<b>GPIO</b>	

## ENVIRONMENTAL

<b>Operating Temperature Range:</b>	-5°C ÷ 45°C
<b>Max. relative Humidity:</b>	90% non condensing
<b>Max. operating altitude:</b>	2500 m. a.s.l. (>2500 m. optional)

## ELECTRICAL

<b>Power Supply:</b>	Energy distribution system with different options: <ul style="list-style-type: none"><li>• Line 380-400 V3N~, 50/60Hz</li><li>• Line 220 V3N~, 50/60Hz</li><li>• Line 220-240 V~, 50/60 Hz</li></ul>
<b>Average efficiency:</b>	35%

## NOTES

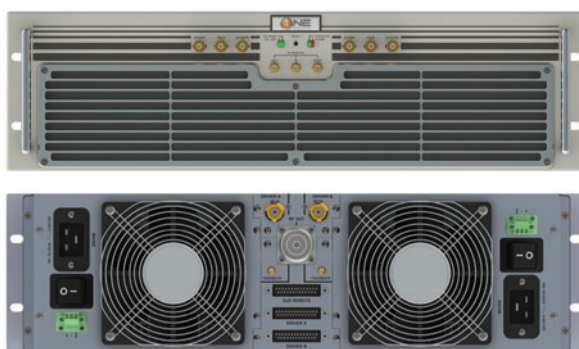
To comply with the applicable standards and limit values for the suppression of out-of-band emissions (and in the case of digital standards, also for maintaining the required shoulder distance), the transmitter may only be operated with suitable filters at the RF output.

Specifications are subject to change without notice.

## ORDERING INFO

DESCRIPTION	Model
1500 W rms UHF DVB-T/H Digital TV Transmitter (cabinet 30RU included)	ONEPOWER 1500UD
1500 W rms UHF DVB-T/H Digital TV Transmitter, dual driver version (cabinet 30RU included)	ONEPOWER 1500U2D
1500 W rms UHF ISDB-Tb Digital TV Transmitter, (cabinet 30RU included)	ONEPOWER 1500UI
1500 W rms UHF ISDB-Tb Digital TV Transmitter, dual driver version (cabinet 30RU included)	ONEPOWER 1500U2I
2200 W rms UHF DVB-T/H Digital TV Transmitter (cabinet 36RU included)	ONEPOWER 2200UD
2200 W rms UHF DVB-T/H Digital TV Transmitter, dual driver version (cabinet 36RU included)	ONEPOWER 2200U2D
2200 W rms UHF ISDB-Tb Digital TV Transmitter, (cabinet 36RU included)	ONEPOWER 2200UI
2200 W rms UHF ISDB-Tb Digital TV Transmitter, dual driver version (cabinet 36RU included)	ONEPOWER 2200U2I
3000 W rms UHF DVB-T/H Digital TV Transmitter (cabinet 40RU included)	ONEPOWER 3000UD
3000 W rms UHF DVB-T/H Digital TV Transmitter, dual driver version (cabinet 40RU included)	ONEPOWER 3000U2D
3000 W rms UHF ISDB-Tb Digital TV Transmitter, (cabinet 40RU included)	ONEPOWER 3000UI
3000 W rms UHF ISDB-Tb Digital TV Transmitter, dual driver version (cabinet 40RU included)	ONEPOWER 3000U2I

OPTIONS	
GPS receiver plug-in board	Opt. G
26 dB LNA GPS antenna kit including mounting kit and 25 mt. coaxial cable	Opt. KA
DVB-S/S2 receiver board, single and multistream, with integrated CAM	Opt. S
Software upgrade for DVB-T2 modulation	Opt. T2
Software upgrade for ISDB-Tb Remux/BTS adapter and Layer Combiner	Opt. L
Dual-cast option for analogue modulation (PAL)	Opt. P
Dual-cast option for analogue modulation (NTSC or PAL-M)	Opt. N



OneAmpli 800



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