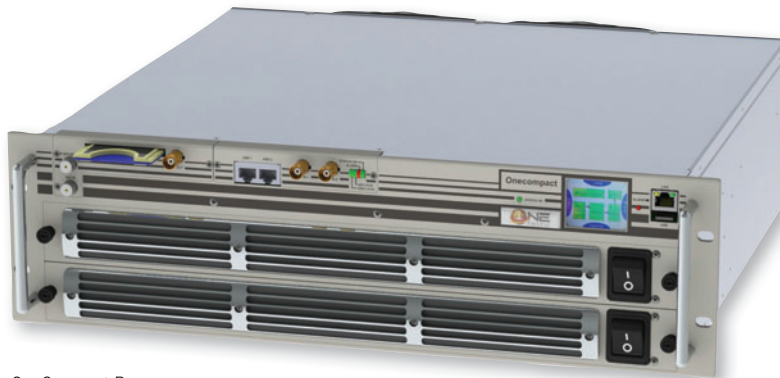




## OneCompact High Efficiency Broadband Doherty



OneCompact H



OneCompact R

OneCompact is an all-in-one transmitter, fully supporting DVB-T/H, DVB-T2, ISDB-T/Tb, DAB/DAB+/T-DMB, ATSC, PAL and NTSC modulations (dual-cast Analog and Digital is also supported), able to provide an output power up to 650W rms or up to 1200W p.s.

OneCompact comes as an ultra compact chassis available in 2U 19" rack or 3U 19" rack, with adaptive pre-correction circuits natively offered and built in GPS / GLONASS receiver for accurate synchronization and SFN operations.

Different input interfaces can be configured (Satellite Receiver, ASI, Gigabit Ethernet or RF), which makes OneCompact the perfect flexible platform to cover the different applications of any Digital TV network (terrestrial or satellite fed transmitter, re-transmitter, on channel repeater, transposer, etc.).

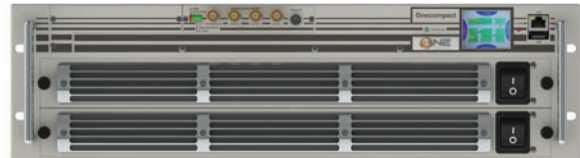
For the South American ISDB-Tb market, OneCompact is today the only solution in the market combining Satellite Receiver, Re-Multiplexer/Layer Combiner/TS to BTS (188 to 204 byte) converter and Transmitter in a single box.

## MAIN FEATURES

- Compact 2U 19" Rack chassis or 3U 19" Rack chassis
- Output Power up to 650W rms in digital or up to 1200 W p.s. in analogue
- High efficiency wideband or broadband amplifier technology
- DVB-T/H/T2, ISDB-T/Tb, DAB/DAB+/T-DMB, ATSC, PAL, NTSC modulations fully supported
- Embedded Re-Multiplexer/Layer Combiner/TS to BTS (188 to 204 byte) converter for ISDB-Tb
- Adaptive pre-correction circuits
- Powerful echo canceller when OneCompact is used as an on-channel repeater
- On-board high stability GPS / GLONASS receiver with battery
- Flexible input interfaces:
  - 4 x ASI inputs (TS, BTS, T2MI, SMPTE-310M) + Analog input
  - 2 x ASI inputs and 2 x Gigabit Ethernet
  - 1 x DVB-S/S2 Satellite Receiver input
  - 1 x RF input
- SNMP, Web Interface and Touch Screen display



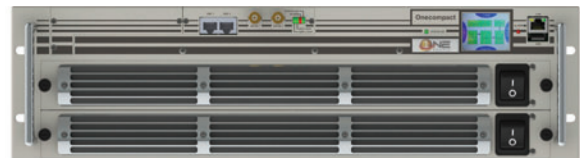
OneCompact H transmitter dual cast (ASI and analog inputs)



OneCompact R transmitter dual cast (ASI and analog inputs)



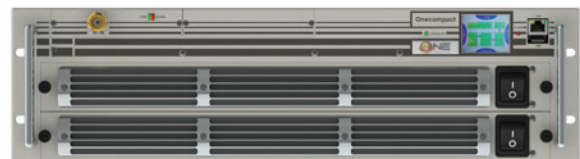
OneCompact H transmitter IP and ASI inputs



OneCompact R transmitter IP and ASI inputs



OneCompact H repeater



OneCompact R repeater



OneCompact H with satellite receiver



OneCompact R with satellite receiver



OneCompact H with satellite receiver, IP and ASI inputs



OneCompact R with satellite receiver, IP and ASI inputs

# SPECIFICATIONS

## TRANSMITTERS

<b>UHF digital output power:</b>	up to 400 W rms @ MER 38 dB typ. (DVB, ISDB) up to 600 W rms (ATSC)
<b>UHF analogue output power:</b>	up to 1200 W p.s.
<b>VHF Digital output power:</b>	up to 450 W rms @ MER 37 dB typ. (DVB, ISDB) up to 650 W rms (ATSC)
<b>VHF analogue output power:</b>	up to 1200 W p.s.
<b>Frequency agility:</b>	UHF Band IV and V or VHF Band III
<b>Frequency resolution:</b>	1 Hz
<b>Pre-correction:</b>	Adaptive
<b>RF connector:</b>	7/16 (f), 50 Ohm

## MODULATOR

### DVB-T/-H/-T2

<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, 256QAM (DVB-T2). Rotated and non rotated (DVB-T2)
<b>MISO processing:</b>	Supported

### ISDB-Tb

<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

### ATSC

<b>Standard:</b>	A/53, A/110
<b>Inputs:</b>	4x ASI / SMPTE-310M BNC (f), 75 Ohm or 2x ASI / SMPTE-310M BNC (f), 75 Ohm and 2x RJ45 TS oIP 10/100/1000
<b>Modulation:</b>	8-VSB
<b>Input bit rate:</b>	19.39 Mbit/s
<b>Bandwidth:</b>	6 MHz
<b>Max processing delay:</b>	Up to 1 second (programmable)

### Analogue

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

## SATELLITE RECEIVER (Option)

<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 0.2, 0.25, 0.35
<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>	PCM CIA DVB-CI Common Interface
<b>CA 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 / GLONASS (Option)

<b>Input connector:</b>	N (f), 50 Ohm
<b>Input/Monitor output 10 MHz:</b>	BNC (f), 75 Ohm
<b>Input/Monitor output 1 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)

## MECHANICAL

<b>Chassis:</b>	2U rack 19" (Onecompact H) 3U rack 19" (Onecompact R)
<b>Width:</b>	482 mm
<b>Height:</b>	87.1 mm (Onecompact H) 130.8 mm (Onecompact R)
<b>Depth:</b>	460.5 mm without fans
<b>Weight:</b>	14 Kg (Onecompact H) 21 Kg (Onecompact R)

## CONTROLS

TFT touchscreen
Web GUI
SNMP
GPIO

## ENVIRONMENTAL

<b>Operating temperature range:</b>	-5°C ÷ 40°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>	Single Phase 100÷240 V~ 50/60 Hz, IEC320 C20 Plug
<b>Efficiency:</b>	Up to 40% efficiency in digital (UHF models)

## 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

UHF BAND IV & V	OUTPUT POWER <sup>1</sup>				Rack chassis dimensions
	COFDM (rms)		ATSC (rms)	ATV (p.s.)	
	Broadband	Wideband			
ONECOMPACT HUL	200 W	200 W	300 W	600 W	2 HU 19"
ONECOMPACT HU	350 W	400 W	400 W	600 W	2 HU 19"
ONECOMPACT RU	350 W	400 W	600 W	1200 W	3 HU 19"

<sup>1</sup> Before bandpass filter

VHF BAND III	OUTPUT POWER <sup>1</sup>			Rack chassis dimensions
	COFDM (rms)	ATSC (rms)	ATV (p.s.)	
ONECOMPACT V	250 W	250 W	600 W	2 HU 19"
ONECOMPACT RV	450 W	650 W	1200 W	3 HU 19"

<sup>1</sup> Before bandpass filter

OPTIONS	
Opt. G	GPS / GLONASS integrated receiver
Opt. KA	26 dB LNA GPS / GLONASS antenna including mounting kit and 25 mt. coaxial cable
Opt. S	DVB-S/S2 integrated receiver board, single and multistream, with CAM slot
Opt. IA	Additional input board, 4x ASI
Opt. IG	Additional input board, 2x ASI + 2x GbE
Opt. R	Additional input board, RF in
Opt. L	Software option for ISDB-Tb Remux/Layer Combiner/TS to BTS (188 to 204 byte) converter
Opt. T	Dual-cast software option, adds DVB-T modulation
Opt. T2	Dual-cast software option, adds DVB-T2 modulation
Opt. I	Dual-cast software option, adds ISDB-T modulation
Opt. AT	Dual-cast software option, adds ATSC modulation
Opt. P	Dual-cast software option, adds PAL modulation
Opt. N	Dual-cast software option, adds NTSC or PAL-M modulation



OneCompact H or V back panel



OneCompact R back panel



OneCompact H or V + GPS / GLONASS back panel



OneCompact R + GPS / GLONASS back panel



**ONETastic S.r.l.**

Via Ghislandi, 47 · 25125 Brescia (BS) · Italy  
 Phone: +39 030 3539080 / Fax: +39 030 2683019  
[www.onetastic.com](http://www.onetastic.com) - [info@onetastic.com](mailto:info@onetastic.com)