

BE-TV-FA-U/V

Genesis Compact Transmitters



1W – 30W UHF/VHF III



50W – 250W UHF
50W – 300W VHF III



200W – 600W UHF/ VHF III


The BE-TV™ GENESIS Compact series transmitter line is specifically designed to meet the needs of the LPTV stations, providing an output power up to 600Wrms with OFDM modulation and up to 800Wrms with 8VSB modulation in UHF, 250 and 300W in VHF Band III.

It employs the latest components and technology, the result is an extremely reliable, easy to configure and maintain, transmitter/transposer/gap-filler.

Two different modulation standards can be loaded and switchable both locally and by remote, allowing to reconfigure the unit according to the actual or future needs.

Highest efficiency provided by the latest LDMOS amplifier design.

Key Features & Benefits

- Pro-TV Inside 
- Compact design (2 or 4 rack units)
- Extremely easy installation and maintenance
- Fully broadband on UHF or VHF Band III
- All digital and analog modulation standards
- GPS/GLONASS internal receiver (*hardware option*)
- High stability local oscillator (*hardware option*)
- Both SFN and MFN network mode
- Advanced modulator with automatic/adaptive pre-correction (*linear and nonlinear*)
- ATSC, ATSC 3.0, ISDB-T and DVB- T/T2 operation without hardware change
- Satellite receiver with or without CAM (*hardware option*)
- Transposer or SFN gap-filler (*hardware option*) with echo cancellation, including new ATSC/ATSC3.0 translator receiver technology
- Low power consumption
- High efficiency air cooling with redundant fans
- Latest LDMOS technology for RF stages
- Display & keyboard, web browser and SNMP for remote operation
- Seamless switching between ASI/SMPTE and/or IP (*With priority*) when in SFN network mode
- Remote software/firmware upgrade



GENERAL

Frequency Range	UHF band IV/V: 470 to 862 MHz; VHF band III: 170-254 MHz; 1Hz steps
Analog Modulation Standards	B/G/D/K/K1/M/N, color system PAL, NTSC, SECAM
Digital Modulation Standards	ATSC 1.0; ATSC 3.0; DVB-T/T2; ISDB-Tb; DAB, DAB+
Channel Bandwidth	TV: 6, 7, or 8 MHz; DAB/DAB+: 1.5MHz
VSWR	Protection against open or short circuit, all phase angles.
Local oscillator accuracy	+/-1x10 ⁻⁸ (0 to 70°C), +/-5x10 ⁻¹⁰ /day (after 30 days), +/-1x10 ⁻⁷ /year
Network mode	SFN and MFN; multiple PLP

RF INPUTS

GPS antenna	SMA female, 50 Ohms, (+5 V DC @ 100 mA max output for active antenna)
1 pps pulse	BNC female, 50 Ohms
10 MHz reference frequency	BNC female, 50 Ohms
F female, 75 Ohms	F female, 75 Ohms
Satellite receiver (with CAM)	F female, 75 Ohms

RF OUTPUT

RF Output connector	5,10, 100, and 200W: 1 x Type N female, 50 Ohms, 600W: 1 x 7-16 DIN connector, 50 Ohms
RF power setting	-7 to +0dB with reference to nominal power
RF Output power stability	< +/- 0.25dB
Amplitude flatness	< +/- 0.25dB
Harmonic Emission	< -60dBc
Spurious Emission	< -60dBc
10 MHz reference frequency	SMA female, 50 Ohms, 1Vpp+/-0.2Vpp, rise-time 3-10ns

DIGITAL MODULATION INPUTS

TS over IP/EDI	2 x RJ45 10/100/1000BaseT
ASI/SMPTE-310/T2MI/ETI	2 x BNC female, 75 Ohms (DVB-H: 1 main/1 hierarchical), continuous and burst mode
Maximum bit rate	50 Mbps

ANALOG MODULATION INPUTS

Video	2 x BNC fem., 75 Ohms, 1Vpp +/-6dB, AGC on ITS line, DC rest., sync rest., white limiter
Sound	2 x XLR31 mini, 600 Ohms or 5 kOhms, balanced or unbalanced, 0dBm -6/+21dB
Aux audio input	MPX (bw 120kHz): 1 x BNC female 50 Ohms or 5 kOhms; SCA: 1 x BNC female 50 Ohms
NICAM audio interface	2 x XLR 31 mini, 600 Ohms or 5 kOhms, balanced or unbalanced, 0dBm +/-10dB
NICAM data interface	1 x BNC female, TTL 728kb/s external data, 1 x BNC female, TTL 728kb/s external clock

USER INTERFACE/ REMOTE CONTROL

Control/Monitoring	LCD and keyboard, Web GUI, SNMP
Ethernet	2x GbE

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AC POWER

AC Input	100 to 240 V AC, 50/60 Hz, IEC320 C14 plug, single or dual phase
Power Factor	> 0.95
Frequency	50 or 60 Hz

ENVIRONMENTAL

Operational Temperature Range	0° to 45°C (32° to 113°F)
Storage Temperature Range	-40 to +70°C
Relative Humidity	0% to 90%, non-condensing @ 45°C
Altitude	Up to 2,500 m (8,202 ft) above sea level
Cooling	Forced air-cooled
Acoustic Noise	≤65 dBA (front 1 m)
Dimensions (H x W x D)	5,10 and 100W: 1RU x 19" rack (dimensions: 44 H x 482 W x 461 D [mm]) 200W: 2RU x 19" rack (dimensions: 87 H x 482 W x 461 D [mm]) 600W: 5RU x 19" rack (dimensions: 222 H x 482 W x 620 D [mm])

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Specifications (Power Levels)

UHF Band IV-V RF Output Power (Before filter)	Number of Amplifiers	OFDM Modulation (DVB-T/T2, ATSC 3.0 & ISDBT) MER @ 42dB	8VSB Modulation (ATSC 1.0)	VSB Modulation ATV @ IMD Typ. -62dB
BE-TV-1-FAU	1	1W	1W	2W
BE-TV-25-FAU	1	25W	30W	50W
BE-TV-200-FAU	1	200W	250W	500W
BE-TV-600-FAU	1	600W	800W	1500W

VHF Band III RF Output Power (Before filter)	Number of Amplifiers	OFDM Modulation (DVB-T/T2, ATSC 3.0 & ISDBT) MER @ 42dB	8VSB Modulation (ATSC 1.0)	VSB Modulation ATV @ IMD Typ. -62dB
BE-TV-1-FAV	1	1W	1W	2W
BE-TV-25-FAV	1	25W	30W	50W
BE-TV-300-FAV	1	300W	400W	800W
BE-TV-600-FAV	1	600W	800W	1500W

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Taking the next step is easy with Broadcast Electronics. Contact your sales representative today to discuss solutions that will work for you and your station(s).

To contact your BE sales representative, simply visit our website at bdcast.com or call 217.224.9600 and learn more about what BE has to offer.

BE manufactures complete RF systems for radio and TV. Our products encompass program generation, audio and data management, interfacility transport and analog and digital (*HD Radio and DRM transmission*).

They are used daily in more than 40,000 installations in nearly 100 countries. For over sixty years, BE pioneering developments have set industry standards for innovation and reliability, while providing broadcasters with new options for operational productivity and income generation. BE is headquartered in Quincy, Illinois, USA, and is represented worldwide by a network of local representatives.

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