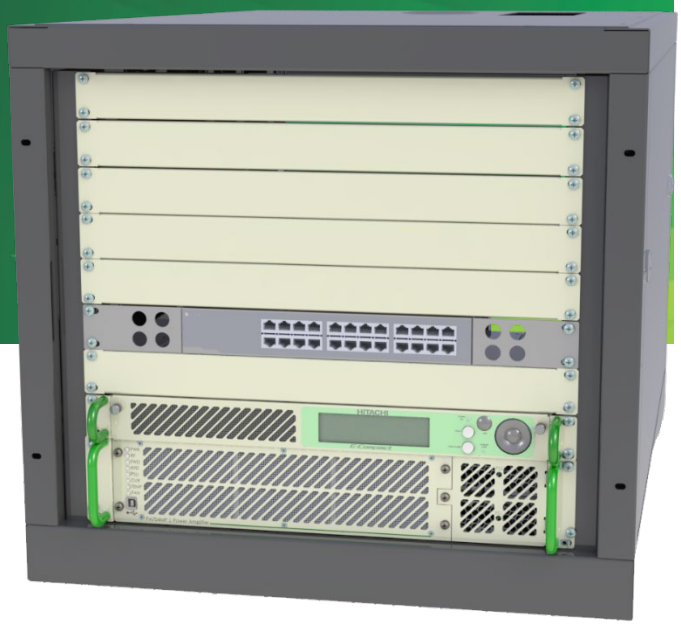
HITACHI
Inspire the Next

E-Compact MP-BB3
UHF Digital TV Transmitters

E-Compact TV • High Efficiency • UHF Broadband • Air Cooled • Doherty Technology

ATSC 3.0
210 to 420 Watts RMS
ATSC 1.0
250 to 500 Watts RMS



Hitachi's E-Compact transmitter Series offers optimal broadcasting features with power efficiency up to 44%.

The simplicity of its configuration and operation allows a fast startup and its high robustness ensures a smooth and safe operation.

The E-Compact MP-BB3 Series is comprised of air-cooled transmitters with output powers of 267W up to 508W in ATSC 3.0 standard, and of 321W up to 610W in ATSC 1.0.

Highlights:

- 267 to 508 Watts RMS ATSC 3.0 (Before Filter);
- 321 to 610 Watts RMS ATSC 1.0 (Before Filter);
- UHF: 470 to 608MHz (Channel 14 to Channel 36);
- Devices assembled on a single 19” 10U cabinet. Its compact design results in a smaller installation footprint;
- Excellent power density on PA module. Single 2U Compact Power Amplifier Drawer up to 610 WRMS;
- Developed with Doherty Technology, it provides high efficiency and low consumption for cost reduction of up to 60% when compared to conventional transmitters;
- The E-Compact line astonishes with its transmission versatility, allowing upgrade from ATSC1.0 to 3.0 through software configuration;
- Broadband: 470 to 608MHz;
- Easy assembly and maintenance, Powers Sources featuring Plug-In connection, no wiring or cables required;
- Features an OEM 1.6kW power supply model, Mean Well p/n RCP-1600-48, ensuring power redundancy;
- Automatic Fan Speed Control providing low noise level and increased lifespan;
- High versatility. Compatible with ATSC 1.0 / ATSC 3.0 Exciters. Excellent response to any pre-adaptive signal correction and high performance in SFN network transmission or MFN retransmission;

Included:

- Control Module with management software, WEB interface, WEB Server and SNMP [7];
- RF Output with Sample Probe to monitor the RF Output signal after the RF Mask Filter;
- RF Low Pass Filter
- Sample probe before RF Mask Filter inside Power Amplifier Drawer;
- 19” Ethernet[5] Switch;
- Cleanable air filters;
- User Guide in digital media;

Optional:

- UHF 6 or 8-Pole Bandpass Filter
- Tele supervision Module, Telemetry though GPRS;
- Backup Exciter and Control Module (Main and Standby) for complete Redundancy;
- Printed user Guide;
- Exciter SNMP license
- Off-air receiver for use as a translator

High Efficiency | Redundant Power Supply | SFN | Digital TV Standard | Smart Fan Control | RoHS Compliant | ATSC 3.0 ATSC 1.0 Standard

E-Compact Less energy. More power.

Empresa Certificada ISO 9001 10 anos de certificação

General Specifications

- One Power Amplifier Drawer: 210 to 420W RMS @ ATSC 3.0 / 250 to 500W RMS @ ATSC 1.0;
- High efficiency with Doherty technology;
- Transistor AGING compensation via exciter's front panel;
- Automatic GM compensation with temperature;
- Forced air cooled amplifiers;
- Automatic control of fan speed: decreased noise levels, saves electrical energy, and increases life span;
- Power Supplies featuring Plug-In connection, no wiring or cables required;
- Measurements and alarms through front display and keypad or remotely (via WEB)[7];
- Main Control Software, WEB Server and SNMP[7];
- Hardware Protection of VSWR and overdrive;
- Software Protection against module over temperature;
- Ethernet[1] port for Web and SNMP management[7];
- Telemetry: Web server and SNMPv2 for local or remote management[7] (optional);
- RF output connector: DIN 7/16" or EIA 7/8" or EIA 1-5/8"
- Passive elements: Low-pass filter, before and after-filter RF probes;
- Redundant Control Module/Exciter with Ethernet[1] Switch (optional);
- WEB interface with embedded WEB server;

RF Performance

Modulation Standard		ATSC 3.0 A/300 (NextGen TV) ATSC 1.0 A/53	
Output Power (Before Filter)		**EC702MP-BB3**	**EC704MP-BB3**
	ATSC 3.0	267 W	508 W
	ATSC 1.0	321 W	610 W
Output Power (After Filter)		**EC702MP-BB3**	**EC704MP-BB3**
	ATSC 3.0	210 W	420 W
	ATSC 1.0	250 W	500 W
Minimum operating power		**EC702MP-BB3**	**EC704MP-BB3**
	ATSC 3.0	21 W	42 W
	ATSC 1.0	25 W	50W
RF Output Regulation		≤± 0.1 dB	
UHF Operation Frequency		470MHz to 608MHz / Ch14 to Ch36	
Bandwidth		6 MHz	
50Ω RF Output Connector		DIN 7/16" EIA 7/8" EIA 1-5/8"	

Electrical Features

Power Requirement[4] (specify configuration at equipment purchase order)	**EC702MP-BB3** Single-Phase (M110) Single-Phase (M220) Biphasic (B220)	**EC704MP-BB3** Single-Phase (M220) Biphasic (B220)
AC Power	**EC702MP-BB3** 100~264VAC (one PSU)	**EC704MP-BB3** 100~264VAC (two PSU)
AC mains Frequency	47 to 63Hz	
Power Factor Correction	0.97/230VAC at full load	
Typical Consumption[5]	**EC702MP-BB3**	**EC704MP-BB3**
ATSC 3.0	887 W	1556 W
ATSC 1.0	990 W	1750 W
Typical Thermal Dissipation[5]	**EC702MP-BB3**	**EC704MP-BB3**
ATSC 3.0	2309 BTU/h	3874 BTU/h
ATSC 1.0	2524 BTU/h	4263 BTU/h

Mechanical Features

Equipment Weight: Cabinet 19" 10U mounting	**EC702MP-BB3** 141 lb	**EC704MP-BB3** 143.3 lb
Dimensions (Cabinet 19" 10U mounting):		
Width:	23.62 in	
Length:	35.43 in	
Height:	21.65 in	

Environment Features

Operation altitude	up to 8200ft[2] ASL[3]
Environment temperature range	+32°F to +113ºF (+77°F recommended) 0ºC to +45ºC (+25°C recommended)
Environment humidity range	0 to 95% (non-condensing)
Power Amplifier Cooling	Forced ambient air, front to back flow using integral high volume fans

Interfaces

Monitor / Control Interface	Web GUI and SNMP: Ethernet[1] via RJ-45
Communication Interfaces	Ethernet[1] / SNMP
Format	Ethernet[1] (IEEE 802.3u) 10Base-T/100Base-TX

Notes:

[1]Ethernet is a trademark of Xerox Corporation.
[2]Above 8200ft on request.
[3]ASL: Above Sea Level.
[4]Electric grid on request
[5]May change depending on MER value, channel and output power.
[6] SMARTCARD not included.
[7]Consult factory when using transmitter's web interface on same network as a multicast stream.

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