

EC710MP-BB UHF Digital TV Transmitters

HITACHI

Inspire the Next

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

ATSC 3.0
ATSC 1.0
1000 WATTS RMS



Highlights:

- 1300 Watts RMS ATSC 1.0 / ATSC 3.0 (Before Filter);
- Power Amplifier Drawer efficiency up to 36%;
- Broadband: 470 to 608MHz;
- Compact structure, 19" EIA chassis, optional 8RU or 25RU cabinet mounting;
- Single 3RU Compact Power Amplifier chassis with ten Doherty Technology Transistors;
- Single 1RU Power Supply chassis with four Plug-in 1200W Power Sources (25% Equipment Power Redundancy);
- Easy assembly and maintenance, Powers Sources featuring Plug-In connection, no wiring or cables required;
- Automatic Fan Speed Control providing low noise level and increased lifespan;
- Highly versatile, compatible with ATSC 1.0 / ATSC 3.0. Excellent signal quality with adaptive signal pre-correction. High performance in either SFN or MFN transmission systems;
- AC Mains Protection Unit, composed of Surge Protection Devices (SPD) and Circuit Breakers that limit possible overvoltages of the AC mains, protecting the Equipment;

Included:

- Main Control Software, WEB Server and SNMP;
- USB Communications Drive;
- EIA 1-5/8" RF Low Pass Filter;
- Sample probe before RF Mask Filter inside Power Amplifier Drawer;
- EIA 1-5/8" RF Output Line with Sample Probe to monitor the RF Output signal after the RF Mask Filter;
- 1RU 19" Ethernet¹ Switch;
- 1RU EXACT-V2 DTV exciter with GPS receiver;
- 1RU system controller chassis;

Optional:

- Telesupervision Module, Telemetry through GPRS;
- 8RU or 25RU equipment cabinet mounting;
- Dual Drive with two DTV exciters and two system controllers (Main and Backup) for redundancy. Only available in 25RU Cabinet mounting;
- 6-pole RF Mask Filter with coax interconnect kit;
- 8-pole RF Mask Filter with coax interconnect kit;



E-Compact
Less energy. More power.

Empresa Certificada
ISO 9001
10 anos de certificação

Hitachi Kokusai Linear

Solutions in Broadcasting, Video and Communication from Brazil to the World.

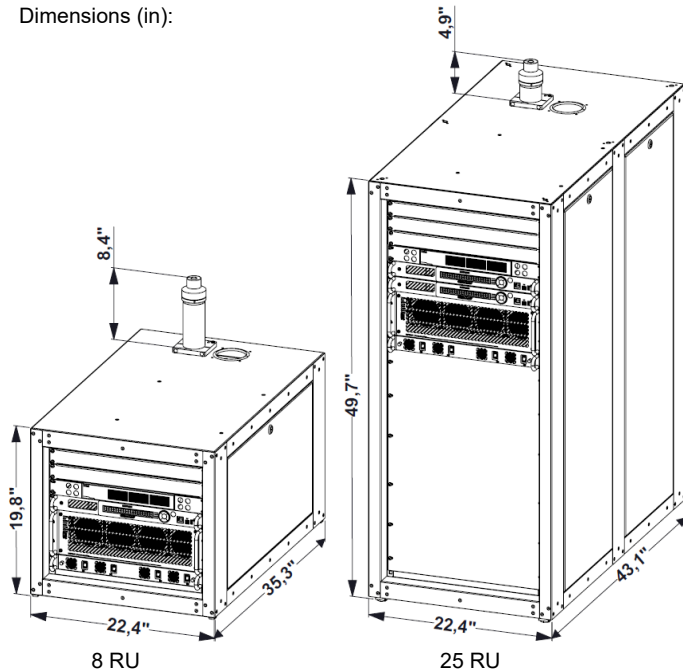
General Specifications

- ASI or SMPTE-310 TS input for ATSC 1.0, redundant A/B switching;
- A/324 Gigabit Ethernet IP inputs for ATSC 3.0
- Control Module present;
- Switch Module present;
- 1.3kW Power Amplifier Drawer ATSC 1.0 / ATSC 3.0;
- High efficiency with asymmetric Doherty LDMOS technology;
- Air cooled PA and PSU;
- Automatic Fan Speed Control providing low noise levels, energy savings and increased lifespan;
- Power supplies featuring Power Factor Correction better than 0.95;
- Measures and alarms through front display and keypad or remotely.
- VSWR and Overdrive protection via hardware with power reduction;
- Software oriented overheating protection for internal modules;
- Adaptive Digital Pre-correction (Linear and Non-Linear);
- Main Control Software, WEB Server and SNMP;
- USB communication Drivers;
- Passive elements: Low-pass filter, before and after-filter probes;
- Rack 19" standard mount.
- Optional 8RU or 25RU cabinet (dual drive only in 25RU);
- Telemetry: WEB Server/SNMP, for local or remote management (Optional);

Mechanical Features

Equipment Weight	8 RU	150lbs / 67Kg
	25 RU	247lbs / 112Kg
Equipment Color	Beige	
Transmitter Service/Access	Top and Front	

Dimensions (in):



RF Performance

Modulation Standard	ATSC 3.0 A/300 ATSC 1.0 A/53
Output Power (After Filter)	1000 Watts
ATSC 3.0 ATSC 1.0	
Output Power (Before Filter)	1300 Watts
ATSC 3.0 ATSC 1.0	
RF Output Regulation	± 0.1 dB
Operation Frequency	470MHz to 608MHz (UHF) Channel 14 to Channel 36
Bandwidth	6 MHz
RF Input Level	0dBm
ATSC 3.0 MER Performance	Typical 35dB
ATSC 1.0 MER Performance	Typical 36dB
Harmonics/Spurious	better than -60dBc
Output Impedance / Connector	50Ω / 1-5/8" EIA

Electrical Features

Power Requirement	2-Phases B208: 180~240VAC Between Both Phases. 3-Phases T208: 180~240VAC Between three Phases. Single Phase M208⁴: 180~240VAC Between Phase and Neutral. 3-Phases T380⁴: 180~240VAC Between each Phases to Neutral.		
(specify configuration at equipment purchase order)			
Frequency AC mains	50Hz / 60 Hz		
Power Factor Correction	Typical 0.95, minimum 0.9		
Typical Efficiency (varies per channel)	ATSC 1.0: >36.5% Before Filter ATSC 3.0: >34.5% Before Filter		
Typical Consumption (Single Drive, ATSC 1.0) 6 poles Filter	TPO 1.0 kW	DC 2.93 kW	AC 3.18 kVA
Typical Consumption (Single Drive, ATSC 3.0) 6 poles Filter	TPO 1.0 kW	DC 3.11 kW	AC 3.38 kVA
Typical Consumption (Single Drive, ATSC 3.0) 8 poles Filter	TPO 1.0 kW	DC 3.29 kW	AC 3.58 kVA
Typical Heat Dissipation	7500 BTU/h		
ATSC 1.0 – 6 Poles Filter	8200 BTU/h		
ATSC 3.0 – 6 Poles Filter	9000 BTU/h		
ATSC 3.0 – 8 Poles Filter			

Environment Features

Operation altitude	up to 5000ft ² AMSL ³
Environment temperature range	+14°F to +113°F (-10°C to +45°C)
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	USB / Ethernet ¹ / SNMP
Format	Ethernet ¹ (IEEE 802.3u) 10Base-T/100Base-TX

Notes:

¹Ethernet is a trademark of Xerox Corporation.

²Above 5000ft on request.

³AMSL: Above Mean Sea Level.

⁴Electric grid on request

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