BPBS44
100 W 1:1 Redundant S-band Outdoor Power Amplifier

MAIN FEATURES

- 100 W output RF power
- Stable output power over temperature
- 1:1 hot redundant arrangement
- Ethernet or RS-485 M&C interface
- High reliability

DESCRIPTION

This solid state power amplifier is intended for use in S-band satellite communications systems as uplink SSPA. It is to be installed directly to the antenna. The outdoor construction protects the amplifier against harsh environmental conditions. The SSPA can be fully remotely monitored and controlled via the built-in Ethernet interface. 1:1 hot redundant arrangement increases the reliability of the system.

SPECIFICATIONS

ELECTRICAL PARAMETERS	
Frequency band	2025 – 2120 MHz
RF output power	50 dBm @ P3dB
Gain	70 dB min.
Gain slope	±0.1 dB / 10 MHz max.
Gain flatness	±0.5 dB
Output power stability vs. temp (ALC ON)	±1 dB (-40°C to +60°C) max.
AM/PM conversion @ P3dB	<3 °/dB
ALC control range	20 dB min. with 0.5 dB step
In/Out impedance nominally	50 Ω
Input VSWR	<1.3 : 1
Output VSWR	<1.4 : 1
Output noise in 2.2-2.3 GHz band with filter	<-125 dBm/Hz (filter characteristics can be improved upon request)
Group delay variation (with filter)	Linear: 0.05 ns/MHz Parabolic: 0.001ns/MHz^2 Ripple: 1ns pk-pk
Gain adjustment range	20 dB
Gain adjustment step	0.1 dB typ.
Noise figure	<8 dB (@ max. gain)
Harmonics @ P3dB-3dB	<-60 dBc
Spurious @ P3dB-3dB	<-80 dBc
Output sample	-50 dBc typ.
Intermodulation distortion @ Pout=47 dBm (two-tone, 44 dBm/tone, 1 MHz spacing)	<-25 dBc
MTBF	>100 000 hours
Power supply voltage	110 – 240 VAC, 47 – 63 Hz
AC Power Consumption (230 VAC) @ Pout=50 dBm	<450 VA

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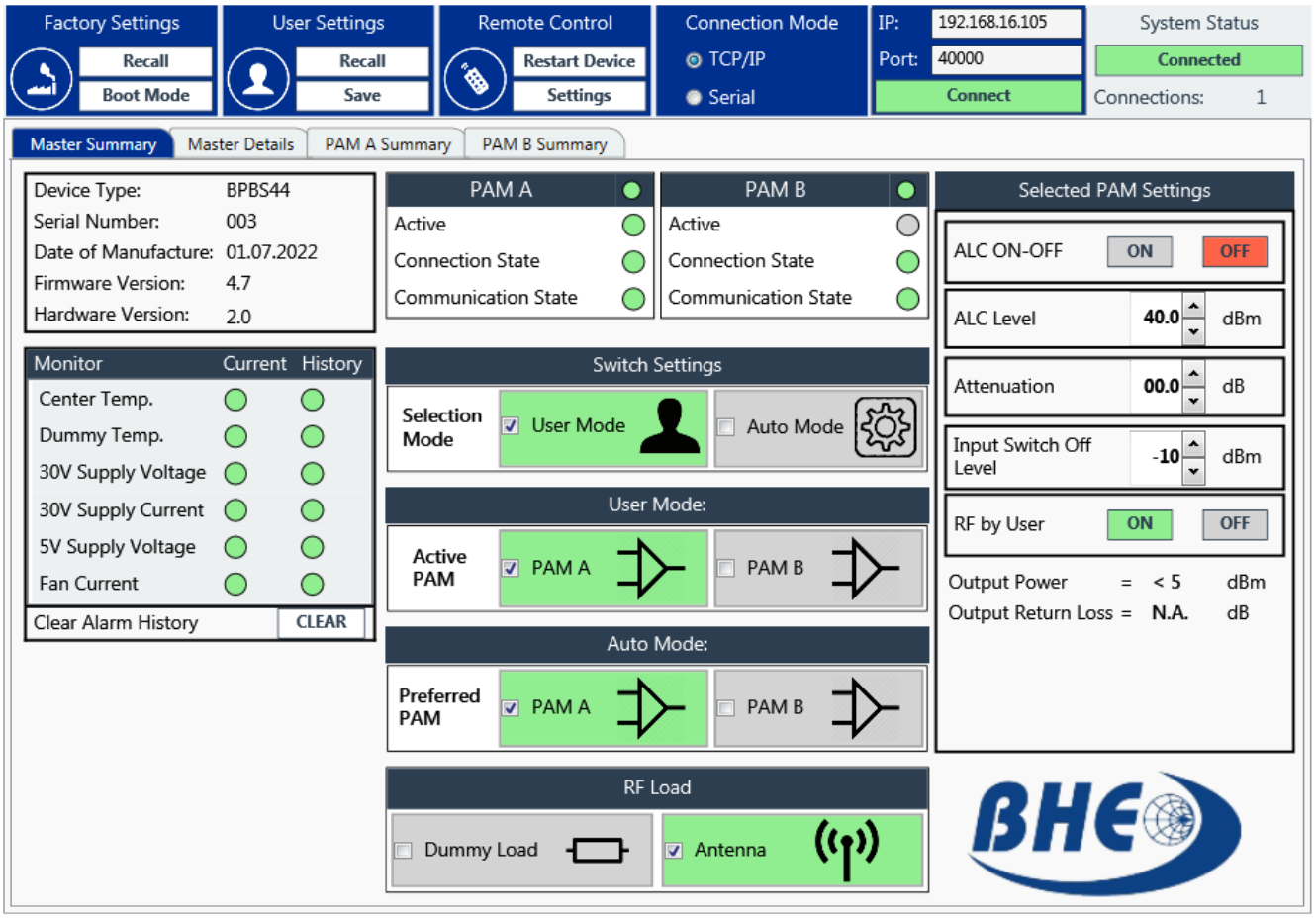
MECHANICAL PARAMETERS	
Connectors	AC: MS3102E18-10P Ethernet: Amphenol MS3112E12-10S RF IN: N–female Sample: N–female RF OUT: N–female
Weight	52.5 kg
Dimensions	Approx. 873 x 610 x 204 mm (see outline drawing)
ENVIRONMENTAL PARAMETERS	
Operating temperature range	-40°C to +60°C
Degree of protection	IP67 Outdoor
Cooling	Forced air cooling
Shock & Vibration	Transportation
SOFTWARE PARAMETERS	
Remote M&C interface	Ethernet (TCP/IP); Optional: RS-485

Specifications are subject to change without notice.

SOFTWARE SCREENSHOT



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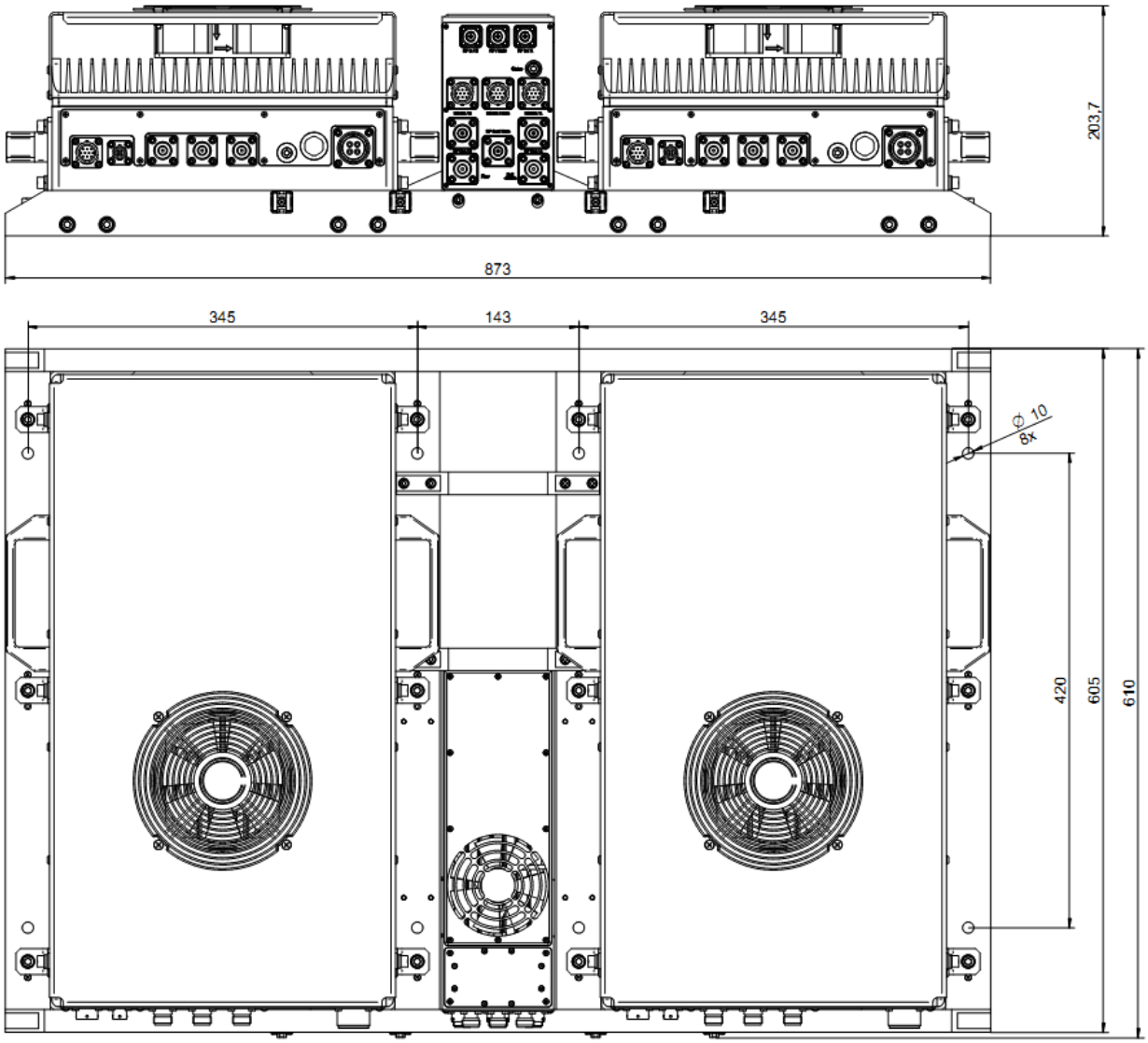
OUTLINE DRAWING (mm)



ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
BPBS44K11184	BPBS44 100 W, S-band 2025-2120 MHz, 1:1 redundant outdoor power amplifier, Ethernet control

DOCUMENT REVISION

DOCUMENT NAME	REVISION	DATE
BPB44-LM-K11184	V01	2023-05-10