

BST50 PNG Base Station



The PNG base station is the heart of the system and shall be installed in the platform and connected to the wired ICS. The Base station supports multiple audio connections.

In addition to the ICS, the base station can be connected to other installed radios via the platform's audio control interface or via dedicated audio interfaces. It can deliver a PTT signal to these radios, thereby the wireless users are able to address platform installed radio systems and can use the platform as a relay through his mobile transceiver.

The PNG base station is controlled by a dedicated AXNES control panel CP50.

The base station supports up to two antennas, one for in-cabin installation and one for an external antenna. The base station is supplied by the platform's internal power. Two power inputs are available, one for main power supply and one for emergency or backup power supply.

- Qualified according to DO-178C
- Delivered with EASA Form 1 or a Certificate of Conformity (CoC)

Technical spec BST50:

Radio: Duplex, single frequency
Frequency: 397-470 MHz, customer specified channels
VOX operation: Axnes patented NIVOX ensures no loss at VOX operation and operation in high noise environments
Number of wireless users: Unlimited
Number of groups: 1 - 2 depending on configuration
Number of radio configurations: Up to 20
Encryption: AES 256, FIPS 140-2, further qualifications pending
Operating temperature: -45 °C to +70 °C
Moving map interface: RS232 ARINC 429

Power supply

Supply voltage: 10 - 33 VDC
Current consumption: Operation 285mA (@ 400mW TX and 28V, including control
3A internal fuse
Protection: Reverse voltage protection

Audio interface

Line output level: 0.8-850mV rms, 150 load impedance, 1KHz test signal
Line output level: 0.46-37.5mV rms, 5 load impedance, 1KHz test signal
Line input impedance: 10K Ω at 1 kHz
Line input level: 70-5000 mV rms
PTT out: Supported on audio interface 0 and 1.
Open collector output, active low
PTT in: Supported on audio interface 0 and 1.
Active ground, internal pullup.
Broadcast and mute activation: Active ground, internal pullup.

Connectors

Power and Digital ICS i/f P1: Amphenol 451 02 Y 20 41 P 50
Analogue ICS i/f P2: Amphenol 451 02 Y 20 41 P W 50
Antenna A1/A2: TNC female

Radio characteristics

Frequency: 397-470 MHz (customer configurations)
Channel separation: 25 KHz
Modulation: $\pi/4$ DQPSK, 8PSK, 16QAM
Frequency stability: <5 ppm
Receiver sensitivity: <102dBm at BER 10⁻²
Output power: 30-500 mW (nom 400 mW) @ A2, A1 17 dB below
Antenna impedance: 50 Ω

Dimensions

Weight and physical dimensions: 193 x 53 x 150 mm 1270 g
Mounting: Wall-mounting M5 bolts
Material: Nickel plated aluminium chassis