

## N6143, Stellar Control Unit and 1:1 Redundant Assemblies

The N6143 controller is a compact and user friendly unit providing full remote control of up to two Stellar amplifiers and a redundant switch.

The N6143 is also available with a range of 1 for 1 redundant switch waveguide networks, designed specifically to interface with the Stellar range of amplifier products. Customer specific system requirements can be provided.

### FEATURES

- Remote Serial interface Provided as standard to allow remote control and monitoring of the system.
- User Friendly Easy to use controls with clear, high visibility displays. A dedicated display and separate controls are provided for each amplifier, avoiding operator confusion.
- Mimic Display An intuitive mimic display with indicators is provided on the front panel to clearly show the condition of each amplifier and the position of the waveguide switch.

### SPECIFICATION

#### Electrical

Voltage .....	99 to 264 V
Frequency .....	47 to 65 Hz
Power requirement .....	15 W nom
Power factor .....	0.96 min
Input surge current (% of normal line) .....	100% max

#### Mechanical

Weight .....	2 kg
Dimensions:	
width .....	483 mm (19 inches)
height .....	1U, 44 mm (1.75 inches)
depth (not including connector mating halves) .....	153 mm (6 inches)
Cooling .....	natural

### ENVIRONMENTAL

For operation outside these parameters, refer to Spacepath Communications for guidance.

Operating temperature .....	- 20 to +50 °C
Storage temperature .....	- 40 to +70 °C
Vibration .....	MIL-STD-810E; common carrier and field transportation
Shock .....	IEC Publication 68-2-27 Part 2 Test Ea 25 g
Electromagnetic compatibility .....	EMC Directive 89/336/EEC ETS 300 327
Safety.....	Low Voltage Directive 73/23/EEC BS EN 60950

### CONNECTORS

Mains (see note 1) .....	IEC320
Amplifier interface (see note 2) .....	9-pin D-type plug
Waveguide switch unit (see note 2) .....	15-pin D-type plug
Remote serial interface (see note 2) .....	9-pin D-type socket

### CONTROLS

- Main power on/off switch
- Front panel control keys:
  - AMPLIFIERS A and B
    - Off mode select (OFF)
    - Standby mode select (STBY)
    - Transmit mode select (XMIT)
    - Set-up enter (SET-UP)
  - REDUNDANCY
    - RF switch position select (SEL A/B) (see note 3)
    - Automatic or manual mode select AUTO/MAN
- Two rotary shaft encoders for parameter selection and gain control (see note 4).

**FRONT PANEL DISPLAY**

Backlit LCD, functions selected by front panel keys, shows:

- Amplifier status
- Helix Current
- Set-up parameters
- Output Power
- Fault identification

**FRONT PANEL INDICATORS**

- Audible alarm
- Amplifier state (1 and 2):
  - Off
  - Transmit
- Redundancy state:
  - Automatic/manual mode
- Standby
- Summary fault
- RF switch position

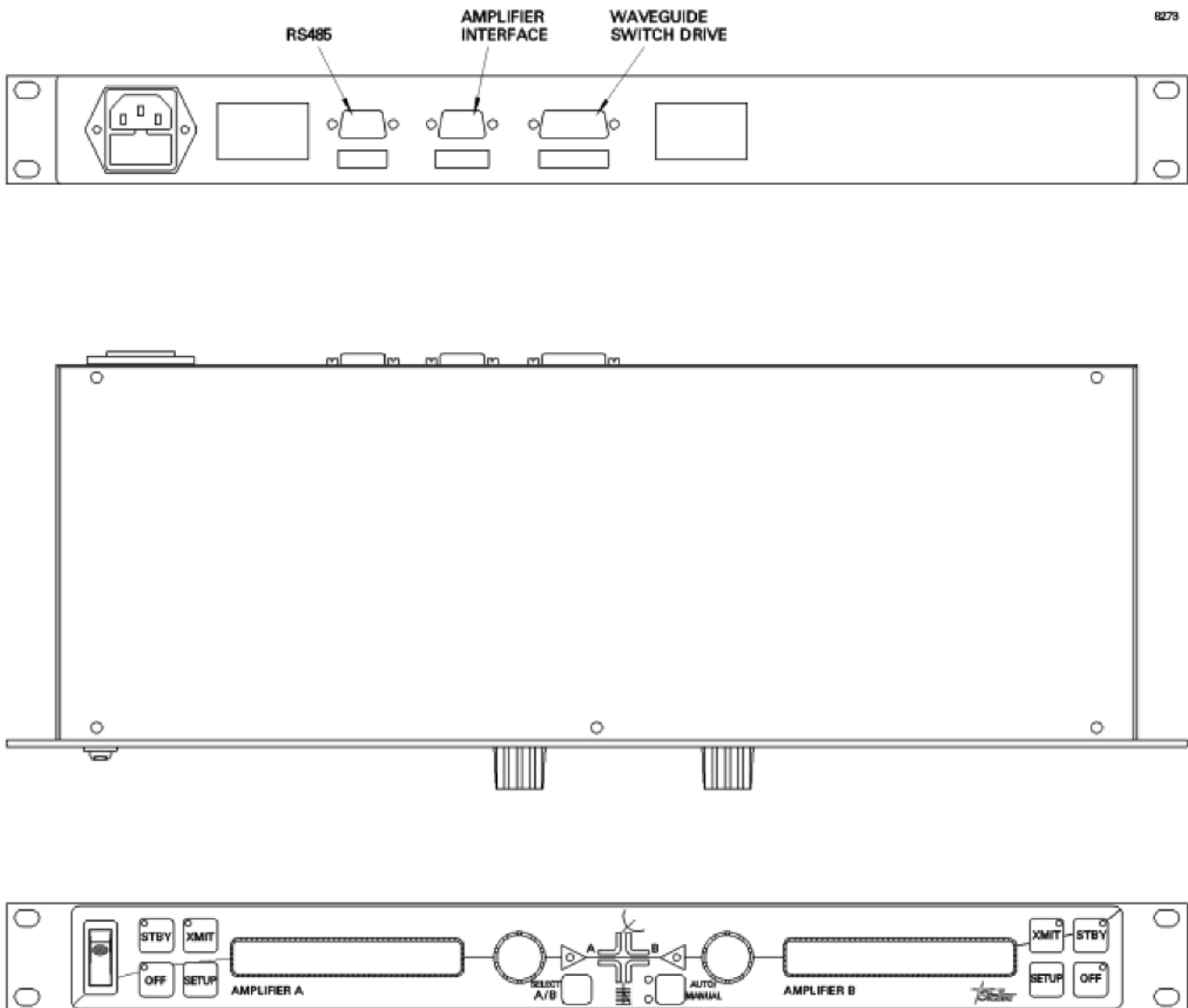
**DOCUMENTATION**

An operation manual is supplied with each unit

**NOTES**

1. A mating connector is supplied with each unit.
2. Interconnecting cables are not provided. Refer to the Spacepath Communications data sheet A1A-Stellar Cables for recommended cable assemblies.
3. Only operational when manual mode is selected (AUTO/MAN key).
4. Gain control function is only applicable if specified as an option when purchasing amplifier

**OUTLINE**



**Packed Gross Weight  
& Dimension  
2.20kg 54x29x10cm**

**OPTIONS**

The N6143 is compatible with the N631x series, N6612 series, N6712 series, N6812 series and STA1000 series of HPAs. (Consult Spacepath Communications for availability of options).

**APPLICATIONS**

**Single HPA Operation**

The N6143 can be used to operate a single HPA. The typical configuration is shown in Fig. 1 below, with the N6143 connected using Spacepath Communications cable assembly DAS564492AA (contact Spacepath Communications for ordering information). Full interconnection details are given in the relevant HPA operation manual.

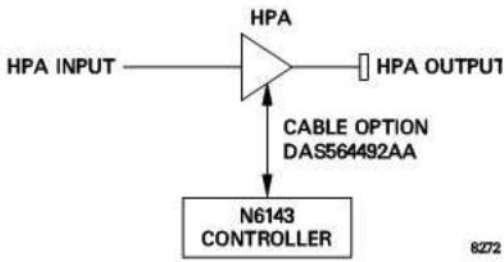


Fig. 1 Single HPA Configuration

**1:1 Redundant Switch Assemblies**

Spacepath Communications also provide a range of pre-configured waveguide switch assemblies that, when used with an N6143 and two HPAs, form a fully automated 1:1 redundant HPA assembly. Fig. 2 shows the typical configuration for a 1:1 system, with the N6143 connected to the HPAs using Spacepath Communications cable assembly DAS548660BA. Full interconnection details are given in the relevant HPA operation manual.

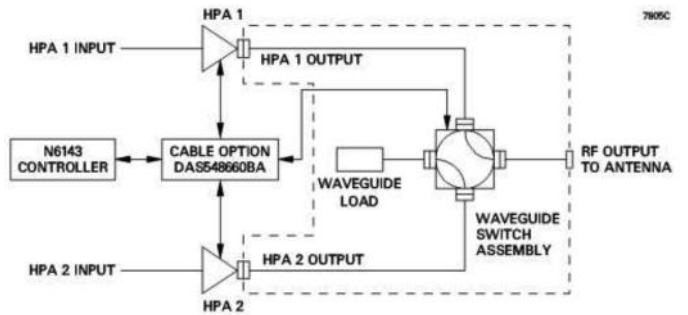


Fig. 2 Redundant Switch Configuration

Details of waveguide switch assembly and HPA compatibility are provided in the following table.

Waveguide Switch Assembly	For Use With HPA Type				Cable Option
	N631x	STA1140	STA1240	STA1340	
DAS563702BA	•				DAS563702BA
DAS705652AA		•			DAS705652AA
DAS705651AA			•		DAS705651AA
DAS705650AA				•	DAS705650AA

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