

## T1000, R1000, TR1000, A1000L/H, B1000L and P1000L

**1+1 Redundancy Switch for the P7000 & IBUH/ IBDH series frequency converters, ILAH series Line Amplifiers, PTR50 Beacon Receivers & UPC series Uplink Power Controllers.**

**T1000L, R1000L, TR1000L** for use with **P7000 series** IF/ L-Band synthesised converters

**T1000LD, R1000LD, R1000LQ** for use with **P7001D/ 1Q/ 2D series** IF/ L-Band synthesised multi-channel converters

**T1000H, R1000H, TR1000H** for use with **P7000 series** IF/ SHF (S, C, X, Ku, DBS-Band) synthesised converters

**T1000HH, R1000HH** for use with **IBUH, IBDH series** L/ SHF (S, C, X, Ku, DBS-Band) block converters

**T1000HH(Ka), R1000HH(Ka)** for use with **IBUH(Ka), IBDH(Ka) series** L/ SHF (Ka-Band) block converters

**A1000L** for use with **ILAH series** L-Band line amplifiers

**A1000H** for use with **ILAH series** SHF line amplifiers

**B1000L, B1000Ku** for use with **PTR series** L-Band beacon receivers

**P1000/L/Ku, P1001/L/Ku, P1002/L/Ku etc.** for use with **UPC series** multi-channel up link power controllers

The **T1000, R1000, TR1000, A1000L & P1000series** 1+1 redundancy switch units are designed to take advantage of the redundancy control interface which is built in as a standard feature of the **P7000 series** of synthesised converters, the **IBUH, IBDH series** of block frequency converters, the **ILAH series** of line amplifiers, the **PTR series** of beacon receivers and the **UPC7000 series** of uplink power controllers.

The system is designed to provide redundancy for a single-feed system, maintaining maximum availability whilst allowing routine maintenance and repair work to be carried out on the standby unit, without the normally associated down-time.

The system maintains one 'host' unit on-line whilst the other is held in hot standby and allows the user to select the on-line unit. The redundancy unit is controlled from the front panel of the host units (local mode) or via the host units RS232/ 485 serial communications (or optional Ethernet) port (remote mode). In remote mode, the on-line unit can be selected and monitored whilst keeping switch-over automatic in case of failure.

In automatic mode, the system monitors the host unit alarm status and if a fault condition develops within the on-line unit, automatically switches traffic to the standby unit.

The unit is standard 19-inch rack mountable, however having no front panel controls can be mounted in the rear of the rack and connected with the cable set provided. For P7000series L-Band converters and L-Band line amplifiers, also L-Band beacon receivers and L-Band AUPC (when fitted with DC & 10MHz pass-through options) the units are designed to pass the DC and 10MHz external reference frequency required to lock an LNB or BUC.

### Peak Features



High quality, matched IF, L-Band & RF (as appropriate) cable set included as standard



Does not require rack 'front panel' space



Fully compatible with Peak **P7000, IBUH, IBDH, ILAH, PTR50 and UPC7000series** units



# T1000, R1000, TR1000, A1000, B1000 & P1000series - Typical Specification

## IF, L-band & RF Interfaces

Frequency	
IF	50 to 200MHz
L-band/RF	DC to 18.4GHz
RF (Ka)	to 31.0GHz
Connections for P7000 series Converters	
IF	50Ω, BNC (f).
Option 1;	75Ω, BNC (f)
L-band/ RF	50Ω, N-type (f)
Connections for IBUH, IBDH series Converters	
L-Band/ RF	50Ω, SMA (f)
Connections for IBUH(Ka), IBDH(Ka) series Converters	
L-Band	50Ω, SMA (f)
RF (Ka)	50Ω, K-Type (f) or 2.92mm (f)
Connections for ILAH series Line Amplifiers	
L-Band/ RF	50Ω, SMA (f)
Connections for PTR50 Beacon receivers	
L/Ku-Band input	50Ω, N-Type (f)
DC output	BNC (f)
Connections for UPC series AUPCs	
IF/L-Band uplink	50Ω, SMA (f)
L/Ku-Band input	50Ω, N-Type (f) (for internal beacon receiver)
DC beacon input	BNC (f)
DC aux. output	BNC (f)

## Switch Element Parameters

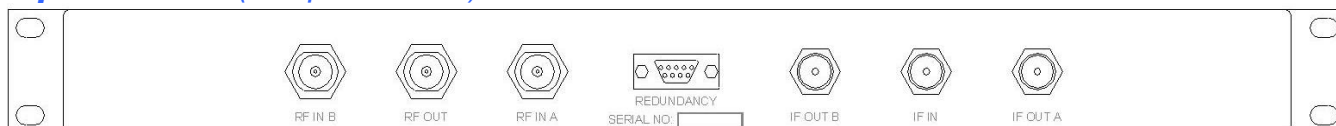
Type	Co-axial, latching
------	--------------------

## Typical System Performance

The following gives the typical performance that can be expected from a system comprising Peak converters/ line amplifiers/ beacon receivers/ AUPCs & using the high quality matched IF, L-band and RF cable sets;

Gain flatness	±1dB full band, band specific
Insertion loss (excludes unit gain/loss)	
IF	3.5dB
L-Band	0.5dB *
S-Band	0.5dB
C-Band	1.5dB
X-Band	2.0dB
Ku-Band	2.5dB
DBS-Band	3.0dB
Ka-Band	3.5dB
10MHz	0.5dB
Switching speed	<800ms (from fault to switch completion) *

## Rear panel view (sample T1000L)



## General

### Mechanical

Width	19", standard rack mount
Height	1RU (1.75")
<i>Note: For P100x/ P100xL series (uplink power controllers), 2RU (3.5").</i>	
Depth	150mm (6"), plus connectors
Weight (nom.)	1.5kgs (3.3lbs)
Construction	Aluminium chassis

### Environmental

Operating temp	0 to +50°C
EMC	EN 55022-part B & EN 50082-1
Safety	EN 60950

### Control System

Converter interface	D-type, 9-way
---------------------	---------------

### Power Supply (P1003x /4x only)

Voltage	90-264VAC
Frequency	47-63Hz
Power	25 Watts max (configuration dependant)
Option 10;	Redundant PSU; provides a 1+1 redundant power supply configuration with separate prime power inputs
<i>Note; provides rear panel visual indication of individual PSU condition only</i>	

## Options

- 1) 75Ω IF connections.
- 7) DC & 10MHz pass-through (B1000L & P100xL series only).
- 10) Redundant power supplies (P1003x /4x only).

**Notes:** For **B1000L** (PTR series beacon receivers) and **P100xL** (UpLink power controllers fitted with integral beacon receiver options);

- 1/ 10dB nominal L-Band beacon input signal insertion loss.
- 2/ Expect 0.15dB nominal variation for un-terminated input.
- 3/ 10ms nominal 'outage' on switch-over where DC output drops to minimum (AUPC unit automatically detects this and freezes the output compensation).
- 4/ Reference signal source facility for externally referenced LNB's is 'passed through' but will result in LNB frequency change and likely 'loss of lock' during switch-over, if required Peak can fit reference generation circuitry within the switch unit to overcome this.

