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

1+1 Redundancy Switch for the P7000 & IBUH/IBDH series of frequency converters, the ILAH series of Line Amplifiers, PTR50 Beacon Receivers and the UPC series of 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-Band) synthesised converters
T1000H(DBS) for use with P7018 series IF/ SHF (DBS-Band) synthesised converters
T1000HH, R1000HH for use with IBUH, IBDH series L/ SHF (S, C, X, Ku-Band) block converters
T1000HH(DBS) for use with IBUH series L to SHF (DBS-Band) block up 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 & P1000 Series - Typical Specification

**IF, L-band & RF Interfaces**

**Frequency**
- IF: 50 to 200MHz
- L-band/RF: DC to 14.5GHz
- RF (DBS): to 18.4GHz
- RF (Ka): to 31.0GHz

**Connections for P7000 series Converters**
- IF: 500Ω, BNC (f).
- Option 1: 75Ω, BNC (f)
- L-band/ RF: 500Ω, N-type (f)

**Connections for IBUH, IBDH series Converters**
- L-Band/ RF: 500Ω, SMA (f)

**Connections for IBUH(Ka), IBDH(Ka) series Converters**
- L-Band: 500Ω, SMA (f)
- RF (Ka): 500Ω, K-Type (f) or 2.92mm (f)

**Connections for ILA series Line Amplifiers**
- L-Band/ RF: 500Ω, 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: 500Ω, 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) *

**General**

**Mechanical**
- Width: 19", standard rack mount
- Height: 1U (1.75") **
- 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
  *Note; provides rear panel visual indication of individual PSU condition only

**Options**

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

* Notes: for B1000L (for PTR series beacon receivers) and P100xL (for UpLink power controllers fitted with integral beacon receiver options);
1/ 10dB nominal 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.

** Notes: P1001x /2x (for 1 & 2-channel uplink power controllers) will be provided in a larger 2RU chassis size. P1003x /4x (for 3 & 4-channel Uplink power controllers) require a mains power supply and may be provided in a larger 3RU chassis size, please consult factory for details.

Rear Panel (T1000L example)