

HRMU - Hiltron Redundancy & Monitoring Unit

Flexible N:1 redundancy unit for LNB, LNA, and BUC

The Hiltron *Redundancy & Monitoring* Unit HRMU is a *modular control system* for *managing different control applications* at *satellite earth stations*.



FEATURES

- Available for many frequency bands and equipment vendors.
- Redundancy control function with automatic switchover to the standby off-line unit triggered by configurable thresholds for voltage, current and signal strength or equipment alarm relays.
- Monitoring and control of voltage and current with configurable voltage and current thresholds including shortcut detection.
- RF level detection (L-Band) with configurable thresholds for alarming and/or redundancy switching.
- DC power is provided for the BUC/ LNA/ LNB units.
- Split unit configuration for systems using Fiber Optic LNBs.
- Integrated Bias-T for DC supply and 10 MHz reference signal insertion.
- GPS synchronised 10 MHz reference as option.
- LNB internal switch control by 14/18V and 22kHz tone up to four bands for each polarisation.
- IP-based control from a PC running a graphical user interface compatible with standard web browsers.
- Ethernet interface and control via SNMP for M&C.

UNIT TYPES / APPLICATIONS

N:1 BUC / LNA / LNB redundancy unit - full outdoor

- Waveguide switching system.
- Outdoor controller (HCS) in IP65 outdoor cabine or hub installation.
- BUC / LNB / LNA power supply.
- Optional 10 MHz distribution.

N:1 BUC / LNA / LNB redundancy unit - indoor controller

- Waveguide switching system.
- Rack mounted indoor controller (HCS), can be shared by more antennas.
- Additional control cable between indoor / outdoor required.
- BUC / LNB / LNA power suppl.
- Optional 10 MHz distribution.

N:1 fiber optic LNB redundancy unit.

- Waveguide switching system.
- Outdoor controller (HCS-master) in IP65 outdoor cabinet for hub installation with integrated LNB power supply unit.
- Indoor controller (HCS-slave) rack mounted design for the L-Band switching. Can be shared by more antennas.
- Ethernet over fiber between indoor / outdoor.

HRMU - Hiltron Redundancy & Monitoring Unit

Flexible N:1 redundancy unit for LNB, LNA, and BUC

The HRMU redundancy and monitoring unit has a standardized design and can be adapted to any kind of antenna.

The N:1 redundancy and monitoring unit for BUC/BDC/LNA/LNBs includes state of the art waveguide switches and components integrated in a compact design for easy installation. BUC/BDC/LNA/LNB equipment for professional satellite communication is used in the HRMU to meet the highest demands. On request, different types of equipment can be integrated in the redundancy and monitoring unit.

Monitoring and control of devices and switches are performed by the Hiltron Control System (HCS), which is normally provided in an IP65 outdoor box for installation in the antenna hub. It is also available in a 19 inch rack mount version. The HCS is designed to drive and monitor waveguide switches, BUC, BDC, LNA, and LNBs. It offers DC power supply to the devices and can distribute an external or internal generated 10 MHz signal.

Supply current and voltage are monitored to verify correct operation. In the event of a malfunction of a device an automatic switch-over to the standby/ off-line unit can be triggered when the system is operated in redundancy control mode.

The HCS provides a standard web-browser based control facility and can be accessed via SNMP from an external system.

The N:1 redundancy and monitoring unit for fibre optic LNBs consists of an outdoor part with the fibre optic LNBs and the switching system plus the Hiltron Control System (HCS) which manages LNBs and waveguide switches as well as providing DC power supply to the LNBs. The Hiltron Control System is the HCS-master. This controller is normally provided in an IP65 outdoor box for installation in the antenna hub.

In addition, an indoor controller (HCS-slave) monitors the incoming signals and manages the L-band switches. It is rack mounted and can be shared by other redundancy units.



SPECIFICATIONS FOR THE HILTRON CONTROL SYSTEM (HCS)

Electrical specifications

Power supply:	Redundant
-Power requirements:	95-245 VAC, 47 - 63 Hz, PFC
-Power consumption:	Max. 1A at 230V
-Max. output power:	90W / 180W

Environmental Specifications

- Operating temperature:	0°C to +50°C
- Humidity (operating):	5% to 95% non-condensing

Monitoring & control

Remote control:	Web interface TCP/IP, RJ45 10/100 Base-T, SNMP
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