

## Application Note AN008

### P7xxx series 2+1 redundancy, utilising separate stand-alone RCUH200 control & switching units

Any identical P7xxx series synthesised rack mounted converters can be used with the RCUH200 series of switching and control units to operate as a 2+1 redundant system.

RCUH200 units are supplied with a full front panel user interface (keypad and graphics screen) and remote control facility.

All RCU units are available with optional cable sets that include all necessary IF, RF and control interface cables.

As co-axial switches are used for both input and output switching, losses are minimised. Additionally the switch units can be used for either Up or Down Converters.

For SHF converters, higher frequency co-axial switches are used, these must be specified by selection of the appropriate options (please see datasheets for details).

#### Operation

Using the front panel user menu or [remote control] interface, the RCU unit is set to either manual or automatic mode.

In '**MANUAL**' [**M**] mode the standby converter routing can be selected to be;

'**Unit 1**' [**1**]; standby to be switched online to path [**1**]

'**Stdby**' [**S**]; standby remains in off line position

'**Unit 2**' [**2**]; standby to be switched online to path [**2**]

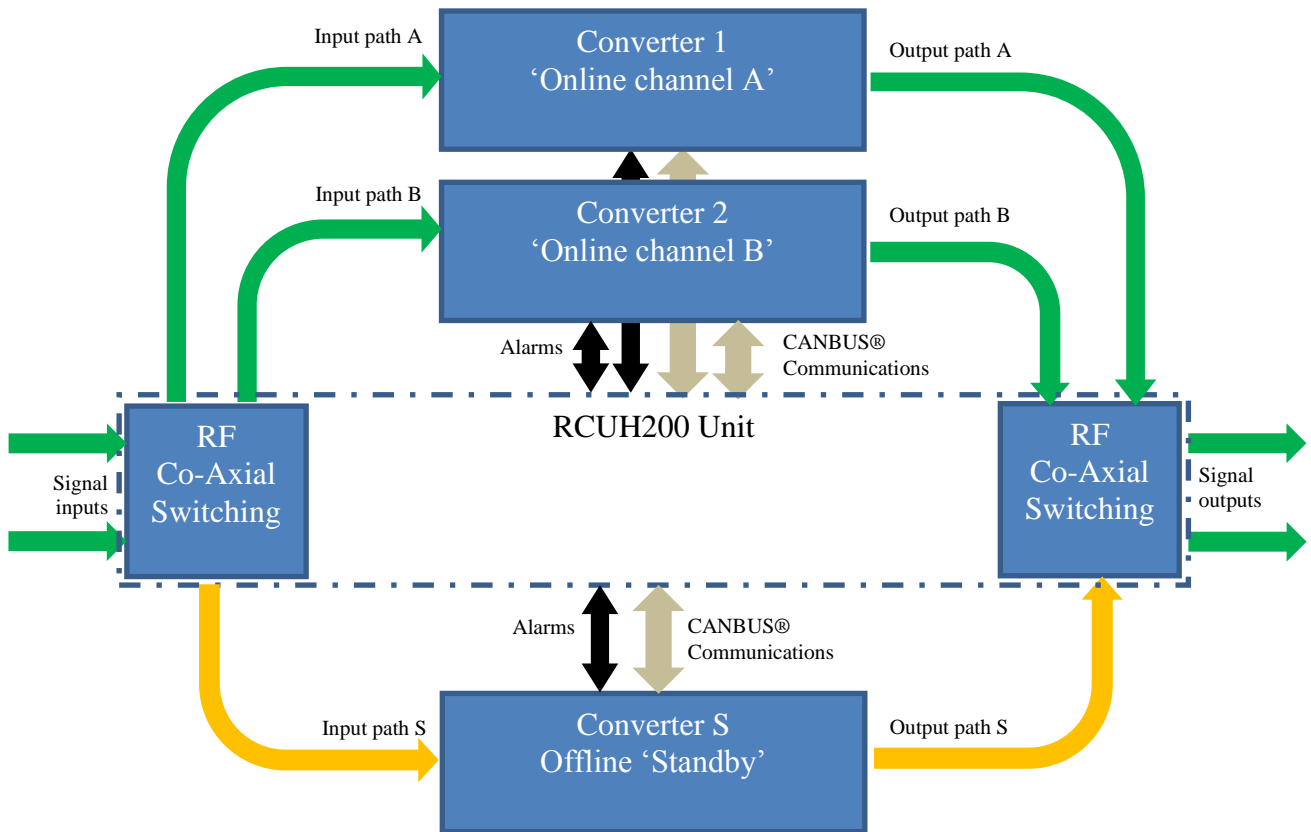
In '**AUTO**' [**A**] mode, the RCUH200 unit will automatically configure the gain and frequency settings (unless this facility is deactivated by the user) of the 'Stdby' [**S**] converter unit to replicate the appropriate online converter at the time of change-over. This is performed via the CANBUS® interface.

*Path attenuation offset*; this facility allows a standby converter gain 'offset' value to be entered to compensate for differences in the IF and RF signal path losses through the RCUH200 system, and therefore minimize the difference in levels when the standby is switched into an online path.

*Priority*; can be set so that in the event of both online converters becoming faulty, the standby unit is switched to the highest priority path.

*Behaviour (latching or non-latching)*; this facility can be used to prevent unnecessary switch-overs in the event of a previously faulty unit becoming serviceable again. i.e. a unit taken off line due to an alarm, will remain 'off line' even if it returns to the non-alarm state.

In addition the *Alarm clear wait time* allows a time period to be set before the RCUH200 unit will accept that a previously faulted unit is now free of the fault condition.



**P7xxx series Converter in 2+1 redundancy using RCUH200**