

The HPMC-010A, is a 30MHz -3000MHz, 8 way multi-coupler. It is a solution for coupling up to 8 wideband receivers to a single antenna. The HPMC-010A has 2 RF inputs, one covering 30MHz-1300MHz and a separate Input for 1300MHz to 3000MHz. Using current state of the art components, exceptional linearity and low noise performance is achieved, resulting in a high dynamic range unit. The unit is provided in a 19" 1U high rack mounted case. Health monitoring is provided. Local LED indicates 'STATUS', an optional relay alarm output allows remote indication of 'STATUS'.



Figure 1 Similar unit shown

## Specification:

### Parameter

### Limits

Freq Input A:	30MHz to 1300MHz
Freq Input B:	1300MHz to 3000MHz.
Freq Outputs:	30MHz to 3000MHz
Test Port input ave. (-26dB):	-26dB +/- 1.5dB (Full band 30-3000MHz)
Test Port variation	+/-2dB
<u>Band 30MHz to 1300MHz Gain:-</u>	
30-100MHz	8.5+/- 1.5dB.
100-200MHz	6.5+/-1.5dB.
200-1300MHz	5+/-2dB.
<u>Band 1300MHz to 3000MHz Gain:-</u>	
1300-3000MHz	4+/-2dB.
Noise Figure 30-3000MHz:	7dB max.
Number of inputs:	2
Number of outputs:	8
3 <sup>rd</sup> Order o/p Intercept 30-2400MHz	>+18dBm
3 <sup>rd</sup> Order o/p Intercept 2400-3000MHz	>+15dBm
2nd order > +32dBm min	
VSWR input 50 Ohm, 30-2400MHz	2.0:1 max. (Return Loss >10dB)
VSWR input 50 Ohm, 2400-3000MHz	2.3:1 max. (Return Loss >8dB)
VSWR output 50 Ohm, 30-2400MHz	2.0:1 max. (Return Loss >10dB)
VSWR output 50 Ohm, 2400-3000MHz	2.3:1 max. (Return Loss >8dB)
Isolation, adjacent output to output:	Freq 30-1000MHz >10dB. (Typ. 13dB) Freq 1000-2400MHz >15dB. (Typ. 20dB) Freq 2400MHz to 3000MHz > 10dB. (Typ. 13dB)
Isolation, non-adjacent output to output:	>15dB 30-3000MHz
Isolation output to input:	>40dB min
Max. input signal CW	+18dBm cont.

Power: OPT1. Mains 115/230V, rear panel selectable, max power 10W  
OPT2. DC 24V.

## Alarms CCT

Alarms – The multicoupler has a 'on board' health monitoring circuit which monitors the operation of the active amplifier. Should a fault occur the 'Status' LED on the front panel will change from 'Green' to 'Red'.

In addition an relay NO or NC (factory set) is activated to provide remote alarm operation (Option). The remote alarm pins are available on the rear panel (mini fit jnr) connector.

## Mechanical

Connectors i/p	RF N-Type female sockets. (BNC/SMA available on request)
Connectors o/p	RF BNC female sockets. (SMA available on request)
Power Supply	IEC 60320 type C14
Dimensions:	19", 1U rack mount.

Colour – Front panel is Black and the rest of the case is Natural Aluminium.

## Environmental

Temp range:	Operating: -10°C to +55°C Storage: -20°C to +70°C
Humidity	5% to 95% (Non condensing )
MTBF	>100,000hrs (25°C, Ground Benign, MIL-HDBK-217F)
EMC – Conducted and Radiated	EN55011/EN55022-B, FCC-B.

Cooling Case is vented top and bottom

Options: - The complete part number is made as follows:-

## HPMC-010A/(PSU)/(DC)/(ALM)1U

HPMC-003A – The core specified Multicoupler

PSU - Mains PSU – uses a low noise std rectifier, 115-230VAC (Option)

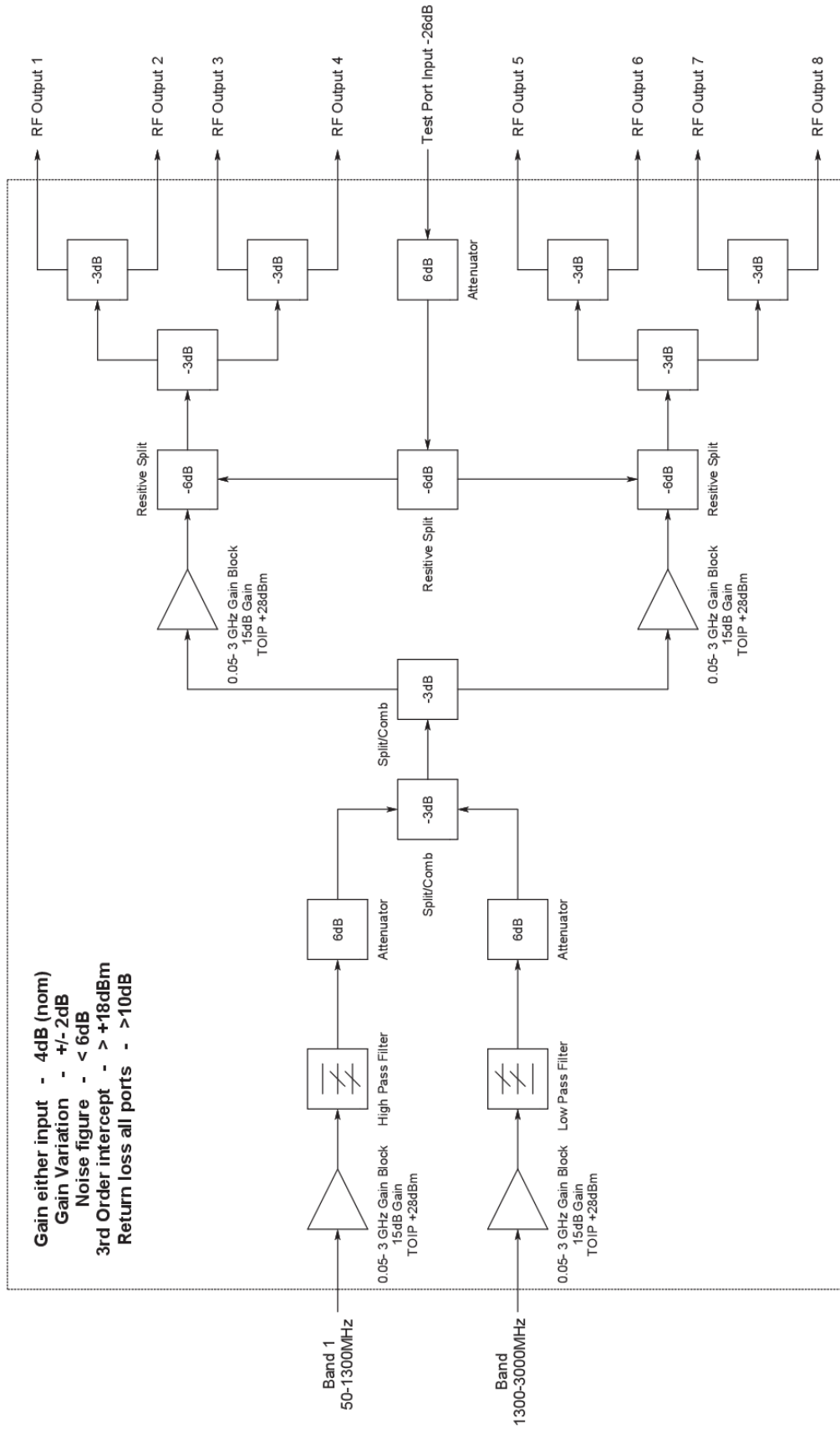
ALM – A remote alarm can be made available on eth rear panel.

DC – Allows external powering via a DC source. Eg DC24 = 24 DC external power (Option).

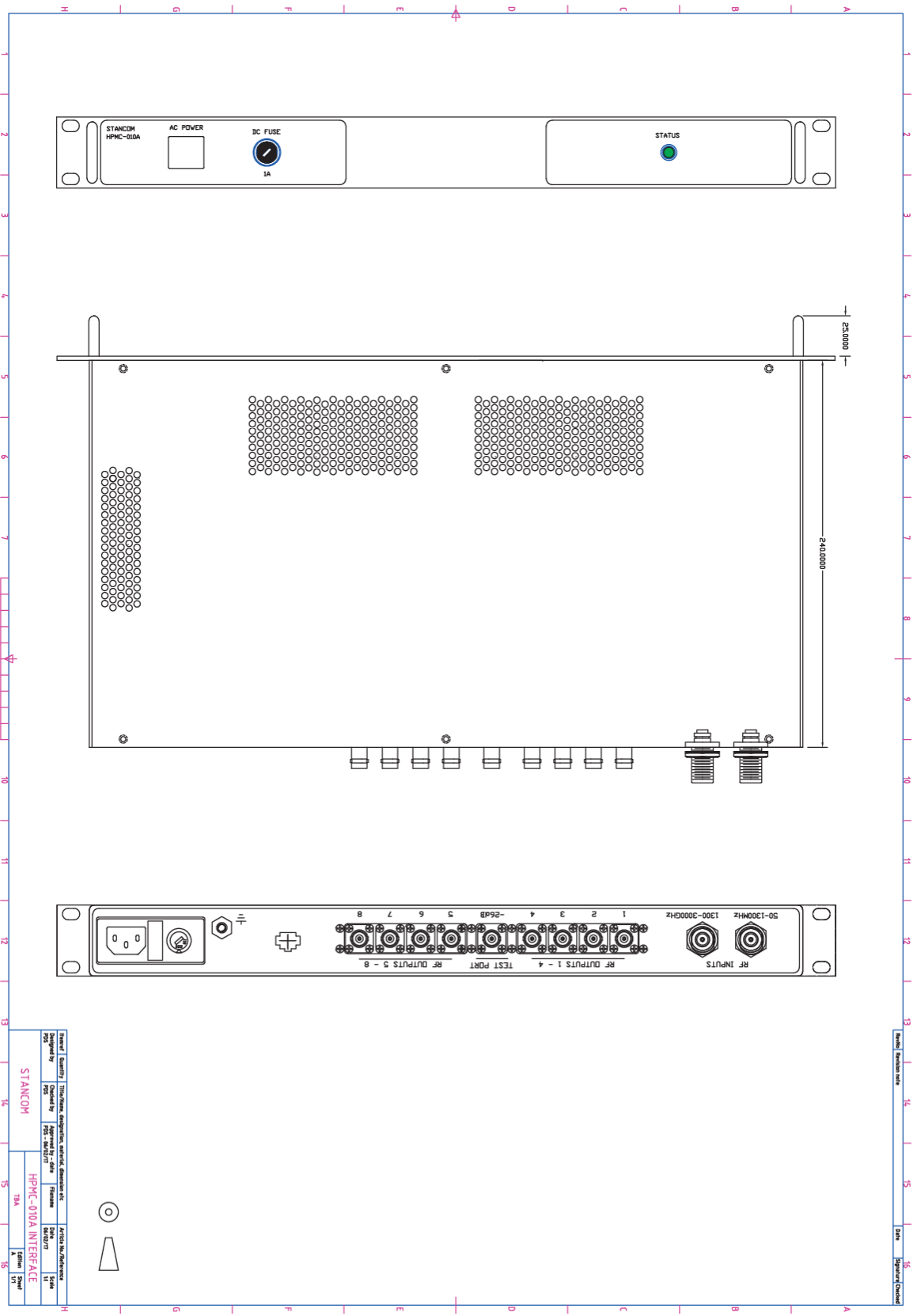
1U – The whole package is in a 1U chassis.

Note when AC and DC are both specified AC is the master supply and the DC is the secondary supply. An internal relay switches between the two should the AC supply fail.

# Block Diagram



# Mechanical layout



All rights reserved – Copyright © 2018 – Stancom Pty Ltd  
 9 Schooner Circuit, Manly West, QLD 4179, Australia  
 Tele: +61 (0)7 3393 4163 Email: [Sales@stancomm.com.au](mailto:Sales@stancomm.com.au)  
 ABN 25 085 781 39