

CERTIFICATE OF ACCREDITATION

In terms of section 22(2) (b) of the Accreditation for Conformity Assessment, Calibration and Good Laboratory Practice Act, 2006 (Act 19 of 2006), read with sections 23(1), (2) and (3) of the said Act, I hereby certify that:-

CONCILIUM TECHNOLOGIES (PTY) LTD
Co reg no: 1999/013330/07

Facility Accreditation Number: **506**

is a South African National Accreditation System accredited Calibration laboratory
provided that all SANAS conditions and requirements are complied with

This certificate is valid as per the scope as stated in the accompanying schedule of accreditation,
Annexure "A", bearing the above accreditation number for

TIME AND FREQUENCY METROLOGY

The facility is accredited in accordance with the recognised International Standard

ISO/IEC 17025:2005

*The accreditation demonstrates technical competency for a defined scope and the operation of a
laboratory quality management system*

While this certificate remains valid, the Accredited Facility named above is authorised to
use the relevant SANAS accreditation symbol to issue facility reports and/or certificates

Mr R Josias
Acting Chief Executive Officer

Effective Date: 28 February 2007
Certificate Expires: 28 February 2012

ANNEXURE A

SCHEDULE OF ACCREDITATION

TIME AND FREQUENCY METROLOGY

Laboratory Accreditation Number: 506

<p>Permanent Address of Laboratory: Concilium Technologies (Pty) Ltd Building No 3 Highgrove Office Park 50 Tegel Avenue Highveld Technopark Centurion 0157</p> <p>Postal address: PO Box 67611 Highveld 0169</p> <p>Tel : (012) 678-9211 / 9215 Fax : (012) 665-4160 Email : bart_bremmer@concilium.co.za</p>		<p>Technical Signatories : Mr BJH Bremmer : Mr GD Schuster : Mr P Hugo</p> <p>Nominated Representative : Mr BJH Bremmer</p> <p>Issue No. : 09 Date of issue : 14 October 2009 Expiry date : 28 February 2012</p>		
ITEM	FUNCTION	NOMINAL RANGE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	NOTES
1	Frequency	Specific values 1 MHz; 5 MHz; 10 MHz 100 kHz Other values 2 mHz to 10 GHz 10 GHz to 40 GHz 40 GHz to 50 GHz	$1 \cdot 10^{-12} \cdot f$ $1 \cdot 10^{-10} \cdot f$ $1 \cdot 10^{-9} \cdot f + 100 \mu\text{Hz}$ $1 \cdot 10^{-10} \cdot f$ $1 \cdot 10^{-9} \cdot f$	1
2	Time Interval Average	0 to 10 s	$1 \cdot 10^{-7} \cdot t + 2 \text{ ns}$	

Original date of accreditation: 1980

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Note 1: For a continuous observation time of 10^5 seconds

Note 2: Generate only

The CMC, expressed as an expanded uncertainty of measurement, is stated as the standard uncertainty of measurement multiplied by a coverage factor $k = 2$, corresponding to a confidence level of approximately 95%

Field Manager