SAR Evaluation

Applicant Name and Address:	**Corventis** 1400 Energy Park Drive, Suite 1 St. Paul, MN 55108
Test Location:	**MET Laboratories, Inc.** 3162 Belick Street Santa Clara, CA 95054 USA

EUT:	Gen 1 Gateway (zLink™)		
Device Category:	Portable		
RF exposure environment:	Uncontrolled Exposure / General Population		
RF exposure category:	Portable		
Production/prototype:	Production		
Antenna:	Internal		
Modulations Tested:	GPRS		
Duty Cycle:	1:4		
TX Range:	824 – 848 MHz		
Frequencies Tested:	Frequency	Channel	**SAR 1g (mW/g)**
	836.4 MHz	190	0.069

Shawn McMillen
SAR Compliance Manager

Gen 1 Gateway (zLink™) BODY-WORN SAR MEASUREMENT RESULTS (850MHz) Band										
Freq (MHz)	**Chan**	**Mode Test ed**	**Cond. Pwr. Before (dBm)**	**Battery Type**	**Body-Worn Accessories**	**Antenna Position**	**EUT Test Position**	**Phantom Section**	**Host Sep. Dist. (cm)**	**Measured SAR 1g (W/kg)**
836.4	Mid	GSM/ GPRS	33.19	Li-Ion	Holster	Internal Front Side	Front Face	Planar	1.5	0.069
ANSI/IEEE C95.1 1992 – SAFETY LIMITBODY: 1.6 W/kg (averaged over 1 gram) Spatial Peak – Uncontrolled Exposure / General Population										
Measured Mixture Type			835 MHz Body			**Date Tested**				November 29th, 2010
Dielectric Constant εr			**IEEE Target**	**Measured**		**Duty Cycle**				1:4
			55.2	55.6		**Ambient Temperature (C)**				23.4
Conductivity σ (mho/m)			**IEEE Target**	**Measured**		**Fluid Temperature (C)**				23.0
			0.97	0.926		**Fluid Depth**				≥15cm

SYSTEM PERFORMANCE CHECK

Prior to the SAR evaluation a system check was performed in the planar section of the SAM phantom with an 835MHz. The dielectric parameters of the simulated body fluids were measured prior to the system performance check using an 85070D Dielectric Probe Kit and an 8722D Network Analyzer. A forward power of 250mW was applied to the dipole and the system was verified to a tolerance of ±5%.

Test Date	835MHz Equivalent Tissue	SAR 1g (W/kg)		Permittivity Constant εr		Conductivity σ (mho/m)		Ambient Temp. (C)	Fluid Temp. (C)	Fluid Depth (cm)
		Calibrated Target	Measured	IEEE Target	Measured	IEEE Target	Measured			
11/29/10	Body	2.53±5%	2.59	55.2 ±5%	55.6	0.97±10%	0.93	23.4	23.0	≥15

TEST EQUIPMENT LIST

Test Equipment	Serial Number	Calibration Date
DASY4 System Robot ET3DV6 DAE3 835MHz Dipole SAM Phantom V4.0C EUT Planar Phantom Validation Phantom	 FO3/SX19A1/A/01 1793 584 4d110 N/A N/A N/A	 N/A April 2010 April 2010 November 2010 N/A N/A N/A
85070D Dielectric Probe Kt	N/A	N/A
Agilent N9310A Signal Generator	CN0115000737	April 2010
HP E4418B Power Meter	GB40205140	October 2010
HP 8482A Power Sensor	2607A11286	May 2010
HP 8722D Vector Network Analyzer	3S36140188	July 2010
HP EPM-442A Power Meter	GB37480766	June 2010
Agilent Power Sensor	MY41496163	December 2009
Mini-Circuits Power Amplifier	D111903#8	N/A