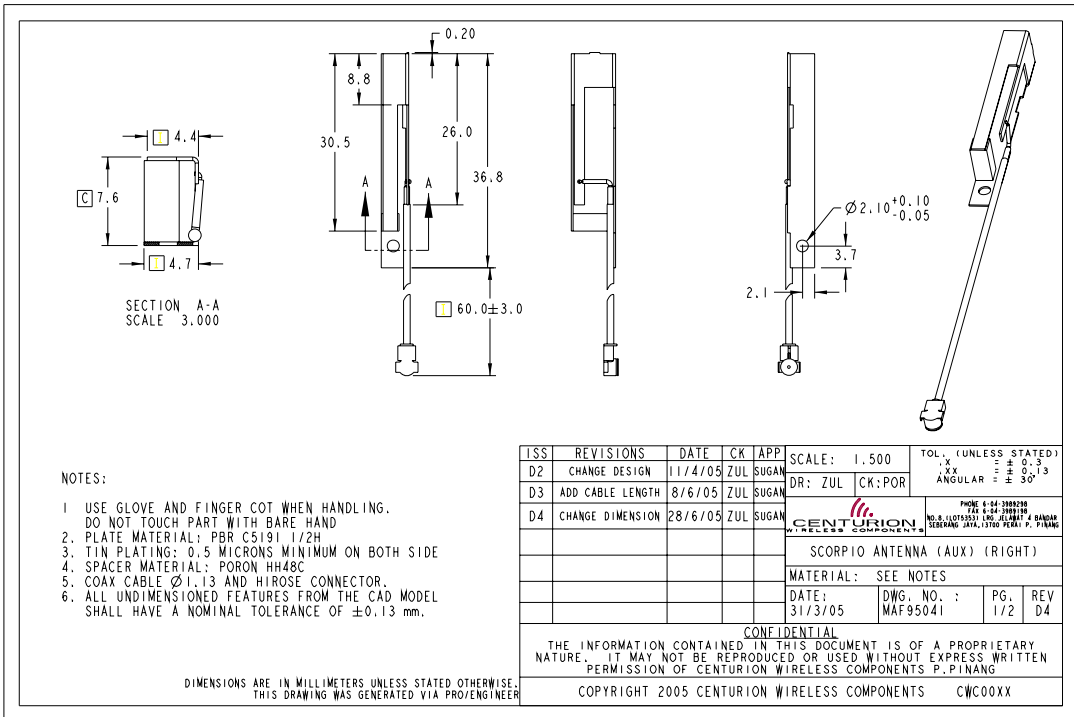
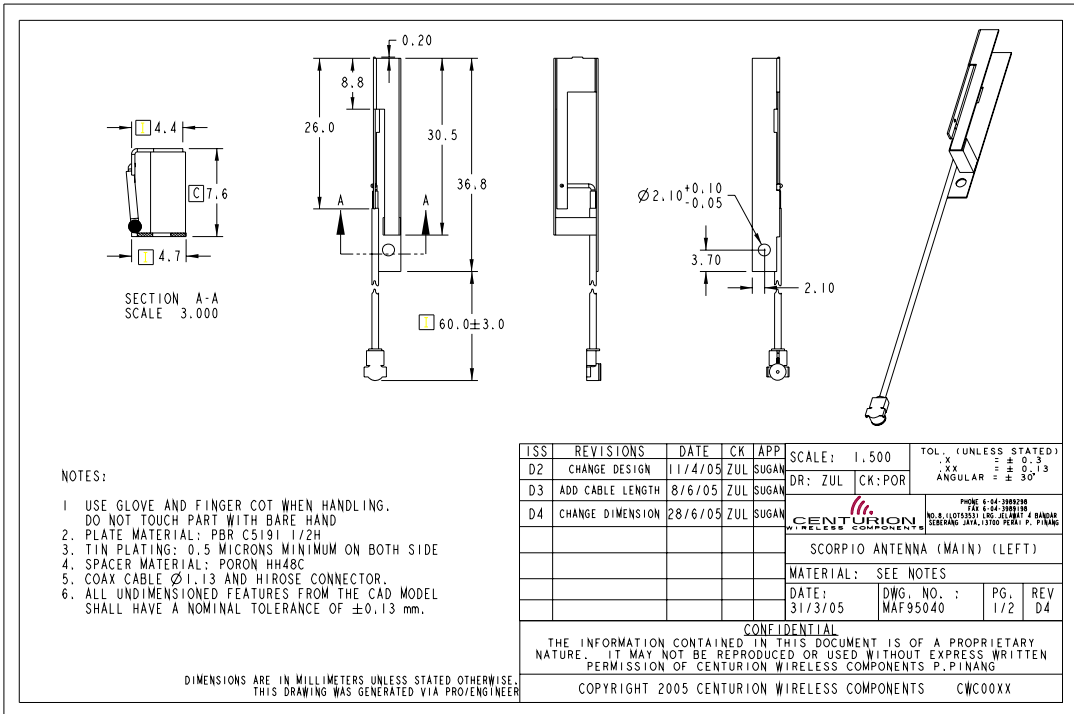


# Specification of Centurion Internal, Embedded Multi-band WLAN Antenna V2.1 for MC3090 Handheld PDA

Frequency Range	Multi-Band 802.11b and 802.11g : 2.4~2.5 GHz 802.11a : 4.9~5.875 GHz
Antenna Type	Internal (PIFA), with coaxial cable attachment
Topology	Diversity scheme; Two separate Multi-Band elements - each using a diplexer or equivalent
Matching Network	N/A
Nominal Impedance	50 $\Omega$
VSWR	Maximum 2.2 : 1    Typical 2:1
Gain for All the Planes	802.11g band: Max Peak 2.7 dBi 802.11a band: Max Peak 4.9 dBi
Polarization	Linear
Radiation Pattern	See the report
Maximum Input Power	2 Watts(CW)
Operating Temperature	-20 °C to +60 °C
Storage Temperature	-40 °C to +85 °C
Interconnect Cable Assembly & Connector	Hirose U.FL connector with 1.13 cable
Mechanical Volume & Shape	Mechanical drawing files in SDRC-IDEAS and/ or IGES file format to detail available volume





## Antenna Summary Sheet

General Information			
Customers:	Universal Scientific Industrial (USI) & Symbol Technologies		
Date:	29 <sup>th</sup> June 2005		
Frequency Band (MHz) Multi-Band	2400 – 2500, 4900 – 5000, 5150 – 5350, 5750 – 5875		
Antenna Type:	PIFA		
Prepared by:	Sugan	File:	C:\Chamber\Pattern02\2Dpattern\USI\Gun Type
Comments:			
<ul style="list-style-type: none"> <li>Antennas tested without matching network.</li> </ul>			

Electrical Performance Summary: S11			
Specification	Unspecified		
Measurement Configuration	Data		
	Frequency (MHz)	VSWR	
		MAIN Antenna	AUX Antenna
- Fixture No.: Gun Type	2400	1.9	1.3
- Free space	2500	1.6	1.6
	4920	2.1	2.1
	5875	1.9	1.5

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Tel: 604- 398 9298, Fax: 604-398 9198



## Antenna Summary Sheet

Electrical Performance Summary: Average & Maximum Gain (dBi)					
Specification:	Unspecified				
Measurement Configuration	Data				
- Fixture No.: GUN TYPE - Free Space  - Azimuth Plane - THETA = 0° to 360°	Freq. (MHz)	Maximum Gain (dBi)		Average Gain (dBi)	
		MAIN Antenna	AUX Antenna	MAIN Antenna	AUX Antenna
	2400	-0.6	1.0	-3.9	-2.6
	2450	-0.5	1.5	-3.5	-1.8
	2500	-0.4	1.6	-3.5	-2.0
	4900	4.4	3.3	-1.0	-1.6
	5000	4.6	3.0	-0.7	-1.6
	5150	3.8	3.2	-1.5	-2.2
	5250	4.2	3.7	-1.2	-2.0
	5350	4.1	3.8	-0.9	-1.6
5750	2.9	3.6	-1.9	-2.0	
5875	3.1	4.5	-1.6	-2.0	

Electrical Performance Summary: Average & Maximum Gain (dBi)					
Specification:	Unspecified				
Measurement Configuration	Data				
- Fixture No.: GUN TYPE - Free Space  - 30° Tilted - THETA = 0° to 360°	Freq. (MHz)	Maximum Gain (dBi)		Average Gain (dBi)	
		MAIN Antenna	AUX Antenna	MAIN Antenna	AUX Antenna
	2400	0.6	2.1	-3.6	-1.6
	2450	0.9	2.7	-3.1	-1.1
	2500	0.6	2.4	-3.0	-1.2
	4900	4.1	3.8	-1.2	-1.3
	5000	4.0	3.5	-1.1	-1.4
	5150	3.3	2.2	-2.0	-2.6
	5250	3.7	3.1	-1.7	-2.4
	5350	3.7	3.2	-1.3	-2.0
5750	2.5	4.1	-2.3	-2.0	
5875	2.8	4.9	-2.1	-1.8	

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## Antenna Summary Sheet

Electrical Performance Summary: Average & Maximum Gain (dBi)					
Specification:	Unspecified				
Measurement Configuration	Data				
- Fixture No.: GUN TYPE - Free Space  - Elevation Phi=90 Plane - THETA = 0° to 360°	Freq. (MHz)	Maximum Gain (dBi)		Average Gain (dBi)	
		MAIN Antenna	AUX Antenna	MAIN Antenna	AUX Antenna
	2400	-1.2	1.7	-4.5	-3.9
	2450	-1.6	1.8	-4.6	-3.8
	2500	-1.1	1.4	-4.6	-4.2
	4900	-1.0	-0.7	-3.8	-4.2
	5000	-0.1	-0.9	-3.5	-4.2
	5150	-0.4	-1.0	-4.1	-4.6
	5250	-0.5	-1.0	-4.1	-4.3
	5350	-0.5	-1.2	-3.8	-4.3
	5750	0.5	0.8	-4.6	-4.6
5875	1.9	2.1	-4.4	-4.7	

Electrical Performance Summary: Average & Maximum Gain (dBi)					
Specification:	Unspecified				
Measurement Configuration	Data				
- Fixture No.: GUN TYPE - Free Space  - Elevation Phi=0 Plane - THETA = 0° to 360°	Freq. (MHz)	Maximum Gain (dBi)		Average Gain (dBi)	
		MAIN Antenna	AUX Antenna	MAIN Antenna	AUX Antenna
	2400	-0.9	0.8	-3.3	-1.9
	2450	-0.3	1.7	-2.5	-1.6
	2500	0.3	1.7	-2.2	-1.7
	4900	4.2	3.9	-0.7	-0.5
	5000	3.9	3.9	-0.8	-0.5
	5150	3.3	3.4	-1.6	-1.3
	5250	3.8	3.6	-1.5	-1.0
	5350	3.4	3.8	-1.5	-0.5
	5750	2.9	3.1	-1.8	-1.1
5875	2.9	4.8	-1.6	0.3	

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## Azimuth Position

