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EMI REPORT (DoC)

Axesstel Inc.

6480 Weathers Place Suite 300 San Diego, CA
92121, United States

Date of Issue: November 21, 2007

Test Report No.: HCT-F07-1115

Test Site: HCT CO., LTD.

MODEL:


PG110

Classification/ Standard(s):	FCC PART 15 Subpart B / CISPR 22 CLASS B
Equipment (EUT) Type:	Fixed Wireless Phone
Trade Name/Model(s):	Axesstel Inc. / PG110
Port/ Connector(s):	DC Input Port / Signal Port

The device bearing the trade name and model specified above, has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.4-2003. (See Test Report if any modifications were made for compliance)

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

HCT certifies that no party to application has been denied the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse of 1988, 21 U.S.C.853(a).


Report prepared by
: Doo Hwan Ryu
Test engineer of EMC Tech.Part

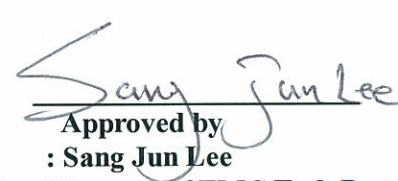

Approved by
: Sang Jun Lee
Manager of EMC Tech.Part

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1. GENERAL INFORMATION

1.1 Product Description

The Axesstel Inc. PG110 Fixed Wireless Phone. Its basic purpose is used for communications. It transmits from GSM850 (824.20 – 848.80) MHz, PCS1900 (1850.20 – 1909.80) MHz and receives from GSM850 (869.20 – 893.80) MHz, PCS1900 (1930.20 – 1989.80) MHz.

MODEL	PG110
EUT Type	Fixed Wireless Phone
TX Frequency	824.20 MHz – 848.80MHz (GSM850) / 1850.20MHz – 1909.80MHz (PCS1900)
RX Frequency	869.20 MHz – 893.80MHz (GSM850) / 1930.20MHz – 1989.80MHz (PCS1900)
Modulation	GSM850 / PCS1900

1.2 Related Submittal(s) / Grant(s)

ORIGINAL SUBMITTAL ONLY

1.3 Tested System Details

The Model names for all equipment, plus descriptions used in the tested system (including inserted cards) are:

DEVICE TYPE	MANUFACTURER	MODEL NUMBER/ PART NUMBER	FCC ID / DoC	CONNECTED TO
EUT	Axisstel Inc.	PG110	PH7PG110	Travel Adaptor
Travel Adaptor	-	DSA-0131F-05	-	EUT
PC	DELL	OPTIPLEX GX620	-	EUT
Monitor	DELL	1704FPTt	-	PC
Mouse	DELL	MO56U0	-	PC
Keyboard	DELL	SK-8115	-	PC
Printer	H.P	C4569A	-	PC

1.4 Cable Description

Product Name	Port	Power Cord Shielded (Y/N)	I/O Cable Shielded (Y/N)	Length (M)
EUT	DC-In	N	N/A	1.5 (P)
	USB	N/A	Y	1.0(D)
PC	USB(Mouse)	N/A	Y	1.8(D)
	USB(Keyboard)	N/A	Y	1.8(D)
	D-Sub(Monitor)	N/A	Y	1.6(D)
	Parallel(Printer)	N/A	Y	1.8(D)
	AC-In	N	N/A	1.8(P)
Monitor	AC-In	N	N/A	1.8(P)
Printer	AC-In	N	N/A	1.8(P)

The marked "(D)" means the Data Cable and "(P)" means the Power Cable.

1.5 Noise Suppression Parts on Cable. (I/O CABLE)

Product Name	Port	Ferrite Bead (Y/N)	Location	Metal Hood (Y/N)	Location
EUT	DC-In	N	-	Y	EUT end
	USB	Y	EUT end	Y	PC end
PC	D-Sub	Y	Both end	Y	Both end
	USB(Keyboard)	N	-	Y	PC end
	USB(Mouse)	N	-	Y	PC end
	Parallel(Printer)	N	-	Y	Both end

1.6 Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4/2003. Radiated testing was performed at an antenna to EUT distance of 3 meters.

1.7 Test Facility

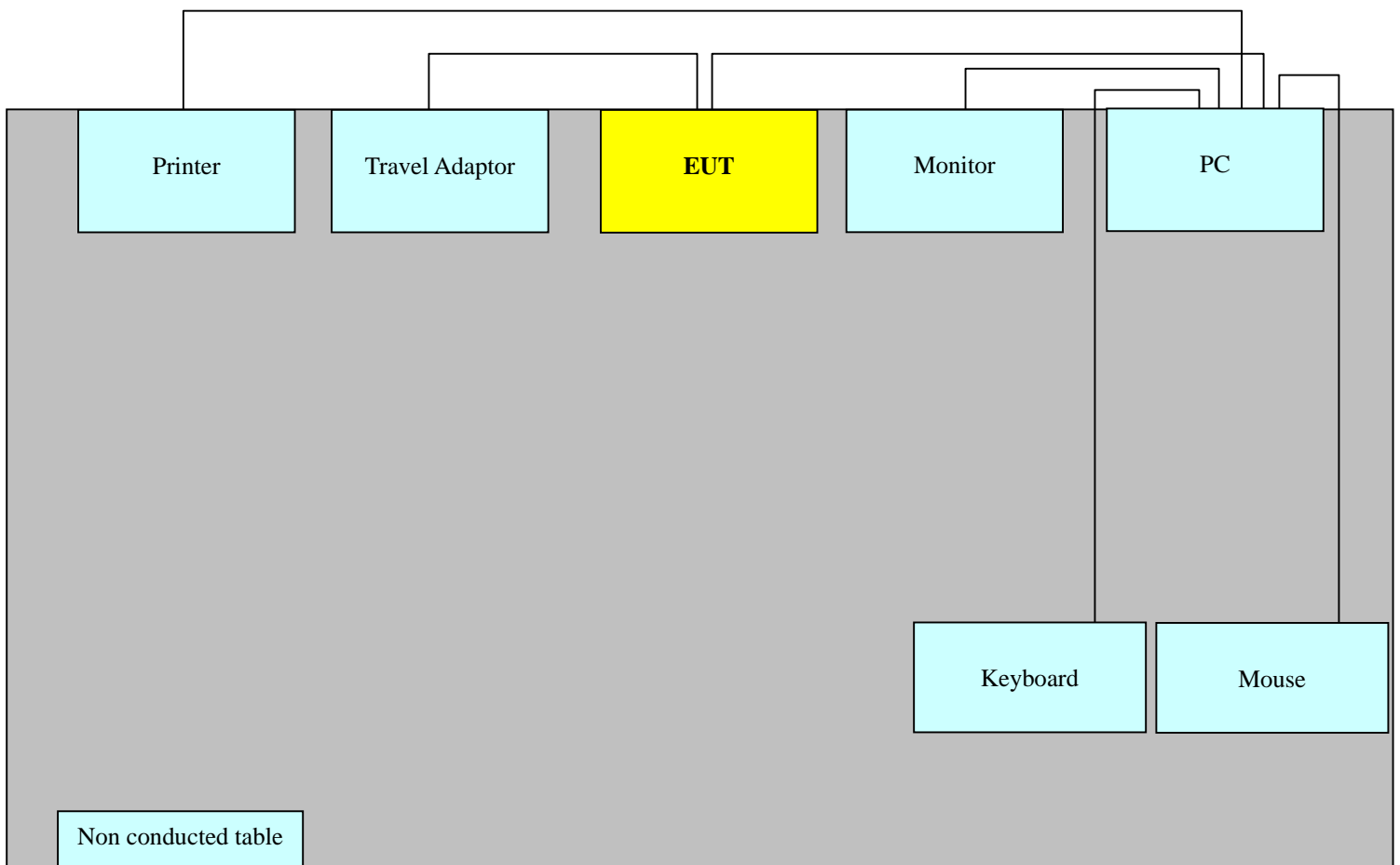
The open area test site and conducted measurement facility used to collect the radiated data are located at the 254-1, Maekok-Ri, Hobup-Myun, Ichon-Si, Kyoungki-Do, 467-701, KOREA. The site is constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. Detailed description of test facility was submitted to the Commission and accepted dated July 6, 2006(Registration Number: 90661)

2.SYSTEM TEST CONFIGURATION

2.1 Configuration of Test system

Line Conducted Test : EUT was connected to LISN, all other supporting equipment were Connected to another LISN. Preliminary Power line Conducted Emission tests were performed by using the procedure in ANSI C63.4/2003 7.2.3 to determine the worst operating conditions.

Radiated Emission Test : Preliminary Radiated Emission tests were performed by using the procedure in ANSI C63.4/2003 8.3.1.1 to determine the worst operating condition. Final Radiated Emission tests were performed at 3 meter open area test site.



Power Line: 110V AC

[Configuration of Tested System]

3. PRELIMINARY TEST

3.1 Conducted Emission Test

During Preliminary Tests, the following operating mode was investigated

Operation Mode	The worst operating condition
Idle (850,1900) Mode	

3.2 Radiated Emission Test

During Preliminary Test, the Following operation mode was investigated

Operation Mode	The worst operating condition
Idle (850,1900) Mode	

4. CONDUCTED AND RADIATED EMISSION TESTS SUMMARY

4.1 Conducted Emission Test

The following table shows the highest levels of conducted emissions on both polarization of hot and neutral line.

```

=====
Limit apply to           : CISPR 22 CLASS B
Result                   : PASSED BY – 16.9 dB
Operating Condition      : Idle mode
Detector                 : Quasi-Peak, Average (6 dB Bandwidth: 9 kHz)
Temperature              : 17.0 °C
Humidity Level           : 37.0 %
Test Date                : 11. 21. 2007
    
```

Power Line Conducted Emissions				FCC Class B	
Frequency (MHz)	Amplitude (dBuV)	Conductor	Result	Limit (dBuv)	Margin (dB)
0.1776	46.9	HOT	Quasi-Peak	65.0	-17.7
0.6250	28.7	HOT	Average	46.0	-17.3
0.1901	43.0	NEUTRAL	Quasi-Peak	64.0	-21.0
0.1951	36.9	NEUTRAL	Average	54.0	-16.9

Line Conducted Emissions Tabulated Data

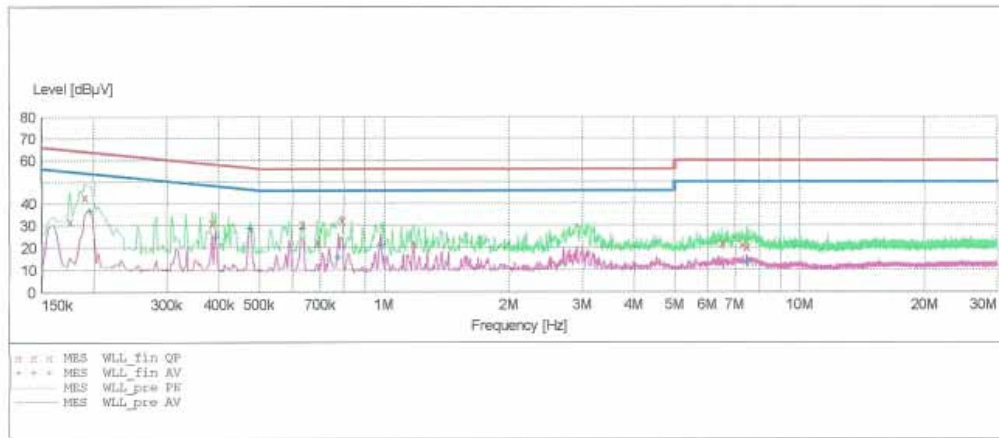
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EMC TEST LAB.

EUT: PG110
 Manufacturer: AXESSTEL
 Operating Condition: IDLE MODE
 Test Site: SHIELD ROOM
 Operator: DH.RYU
 Test Specification: CISPR 22 CLASS B
 Comment: N

SCAN TABLE: "CISPR 22 Voltage"

Short Description:		CISPR 22 Voltage					
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer	
Frequency	Frequency	Width					
150.1 kHz	500.0 kHz	2.5 kHz	MaxPeak	10.0 ms	9 kHz	None	
			Average				
500.0 kHz	5.0 MHz	5.0 kHz	MaxPeak	10.0 ms	9 kHz	None	
			Average				
5.0 MHz	30.0 MHz	5.0 kHz	MaxPeak	10.0 ms	9 kHz	None	



MEASUREMENT RESULT: "WLL_fin QP"

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Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.175100	32.00	10.0	65	32.7	---	---
0.190100	43.00	10.0	64	21.0	---	---
0.385100	31.20	10.0	58	26.9	---	---
0.635000	30.50	10.1	56	25.5	---	---
0.690000	22.30	10.1	56	33.7	---	---
0.790000	32.80	10.1	56	23.2	---	---
6.510000	22.20	10.8	60	37.8	---	---
7.265000	21.50	10.9	60	38.5	---	---
7.460000	20.40	10.9	60	39.6	---	---

MEASUREMENT RESULT: "WLL_fin AV"

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Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.195100	36.90	10.0	54	16.9	---	---
0.392600	24.50	10.0	48	23.5	---	---

MEASUREMENT RESULT: "WLL_fin AV"

(continued)

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.475100	29.00	10.1	46	17.4	---	---
0.635000	28.90	10.1	46	17.1	---	---
0.775000	15.80	10.1	46	30.2	---	---
0.980000	21.30	10.1	46	24.7	---	---
7.460000	14.10	10.9	50	35.9	---	---
7.480000	13.90	10.9	50	36.1	---	---
7.500000	13.90	10.9	50	36.1	---	---

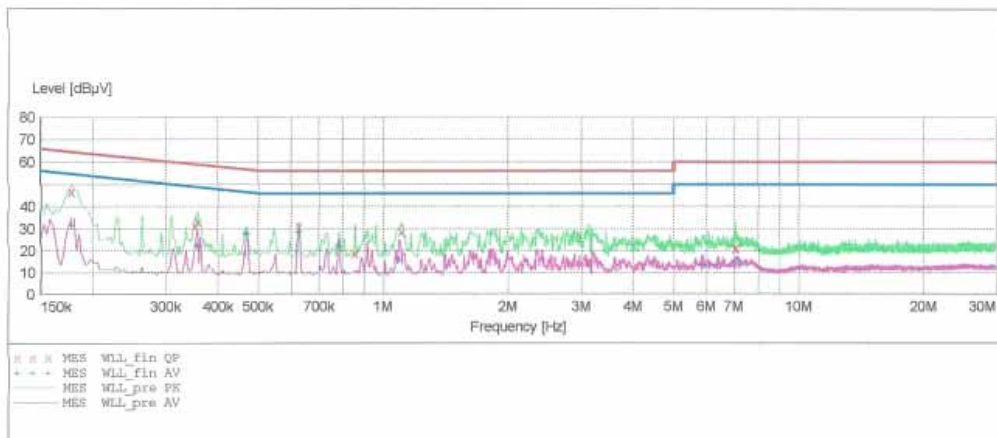
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EMC TEST LAB.

EUT: PG110
 Manufacturer: AXESSTEL
 Operating Condition: IDLE MODE
 Test Site: SHIELD ROOM
 Operator: DH.RYU
 Test Specification: CISPR 22 CLASS B
 Comment: H

SCAN TABLE: "CISPR 22 Voltage"

Short Description:		CISPR 22 Voltage					Transducer
Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.		
150.1 kHz	500.0 kHz	2.5 kHz	MaxPeak	10.0 ms	9 kHz	None	
500.0 kHz	5.0 MHz	5.0 kHz	Average	10.0 ms	9 kHz	None	
5.0 MHz	30.0 MHz	5.0 kHz	MaxPeak	10.0 ms	9 kHz	None	



MEASUREMENT RESULT: "WLL_fin QP"

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Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.177600	46.90	10.0	65	17.7	---	---
0.352600	31.40	10.0	59	27.5	---	---
0.357600	33.40	10.0	59	25.4	---	---
0.625000	31.40	10.1	56	24.6	---	---
0.855000	19.00	10.1	56	37.0	---	---
1.105000	28.90	10.2	56	27.1	---	---
7.015000	20.90	10.9	60	39.1	---	---
7.035000	21.50	10.9	60	38.5	---	---
7.050000	21.40	10.9	60	38.6	---	---

MEASUREMENT RESULT: "WLL_fin AV"

11/21/2007 10:41AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.177600	31.80	10.0	55	22.8	---	---
0.357600	22.70	10.0	49	26.1	---	---

MEASUREMENT RESULT: "WLL_fin AV"

(continued)

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Line	PE
0.467600	28.30	10.1	47	18.3	---	---
0.625000	28.70	10.1	46	17.3	---	---
0.780000	22.70	10.1	46	23.3	---	---
1.090000	16.00	10.2	46	30.0	---	---
5.875000	13.60	10.7	50	36.4	---	---
6.395000	12.50	10.8	50	37.5	---	---
7.105000	14.60	10.9	50	35.4	---	---

4.2 Radiated Emission Test

The following table shows the highest levels of Radiated Emissions on both polarization of horizontal and vertical.

```

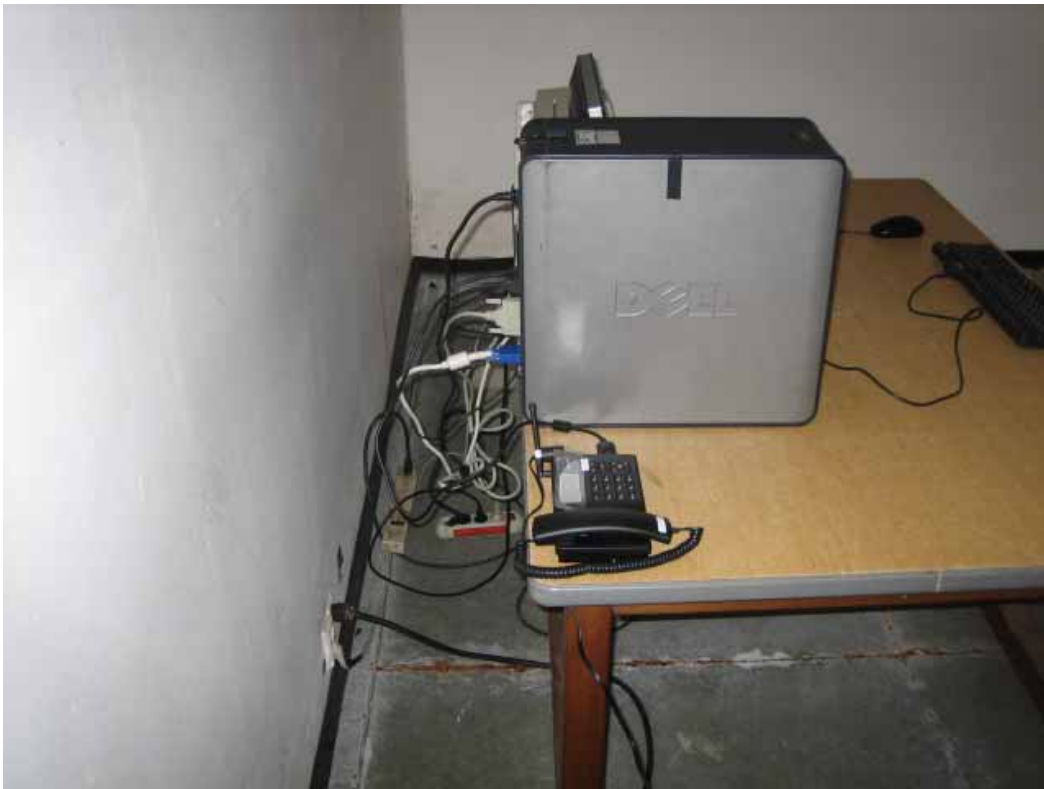
=====
Limit apply to           : FCC PART 15 Subpart B
Result                   : PASSED BY -10.1 dB
Operating Condition      : Idle mode
Detector                  : Quasi-Peak (6 dB Bandwidth: 120 kHz)
Temperature               : 18.0 °C
Humidity Level           : 42.0 %
Test Date                : 11. 13. 2007
  
```

Frequency MHz	Reading dBuV	Ant. Factor dB	Cable Loss dB	ANT POL (H/V)	Total dBuV/m	Limit dBuV/m	Margin dB
35.3	13.8	12.3	1.4	V	27.5	40.0	-12.5
47.2	14.1	12.5	1.6	V	28.2	40.0	-11.8
58.3	15.8	11.8	1.7	V	29.3	40.0	-10.7
143.7	16.0	12.6	2.8	V	31.4	43.5	-12.1
161.8	16.7	12.9	3.0	V	32.6	43.5	-10.9
190.3	20.6	9.5	3.3	V	33.4	43.5	-10.1

*** For measurement over 1 GHz, noise level is more than 10 dB below the limit.

4.3 Test Setup Photos

4.3.1 Conducted Emission



4.3.2 Radiated Emission



5. Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor.

The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF$$

where FS = Field Strength

RA = Receiver Amplitude

AF = Antenna Factor

CF = Cable Attenuation Factor

Assume a receiver reading of 21.5 dBuV/m is obtained. The Antenna Factor of 7.4 dB and a Cable Factor of 1.1 dB is added. The 30 dBuV/m value is mathematically converted to its corresponding level in uV/m.

$$FS = 21.5 + 7.4 + 1.1 = 30 \text{ dBuV/m}$$

Radiated emission limits

Frequency of emission	Field strength	
	$\mu\text{V} / \text{m}$	$\text{dB } \mu\text{V} / \text{m}$
30 ~ 88	100	40.0
88 ~ 216	150	43.5
216 ~ 960	200	46.0
Above 960	500	54.0

6. Test Equipment

<u>Type</u>	<u>Manufacture</u>	<u>Model Number</u>	<u>Next CAL Date</u>
EMI Test Receiver	Rohde & Schwarz	ESI40	2008.11.06
EMI Test Receiver	Rohde & Schwarz	ESCI	2008.06.01
LISN	EMCO	703125	2008.02.03
LISN	Rohde & Schwarz	ESH2-Z5	2008.04.20
LISN	Rohde & Schwarz	ESH3-Z5	2008.06.13
LISN	EMCO	3816/2	2008.06.13
Attenuator	Rohde & Schwarz	ESH3-Z2	2008.10.30
TRILOG Antenna	Schwarzbeck	VULB9168	2008.03.19
Communication Antenna	TDK	LPDA-0802	N/A
Antenna Position Tower	HD	240/520/00	N/A
Turn Table	EMCO	1060	N/A
AC Power Source	PACIFIC	Magnetic Module	N/A
Base Station	Rohde & Schwarz	CMU 200	2008.02.27
Horn Antenna	Schwarzbeck	BBHA 9120D	2008.03.31
RF-Amplifier	MITEQ	AMF-6D-00101800-35.20P.PS	2008.01.24
Bluetooth Base Station	TESCOM	TC-3000A	2008.01.19

7. Conclusion

The data collected shows that the Axesstel Inc.

Fixed Wireless Phone. MODEL: PG110 Complies with §15.107 and §15.109 of the FCC Rules.