Security Configuration using AT Command at WIZ610wi

Version 1.00

Document Revision History

Date	Revision	Changes
2013-03-21	V1.00	Official Release

WIZnet's Online Technical Support

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1. Summary

Generally, security configuration is done by using web page. But depending on development environment, only AT Commands are allowed to configure. In that case, this document will be needed.

2. Format

1. 'GU' Input Format

Authentication Method	Format
None	<GU(1)_(2)>
WEP / WPA(1/2)-PSK	<GU(1)_(2)_(3)_(4)_(5)_(6)>
WPA(1/2)-Radius	<GU(1)_(2)_(3)_(4)_(5)_(6)_(7)_(8)_(9)>

2. 'DU' Response Format

Authentication Method	Format
None	<S(1)_(2)>
WEP / WPA(1/2)-PSK	<S(1)_(2)_(3)_(4)_(5)_(6)>
WPA(1/2)-Radius	<S(1)_(2)_(3)_(4)_(5)_(6)_(7)_(8)_(9)>

3. Format Details

■ (1) Authentication Mode:

0	Open/Shared	1	Open	2	802.1x
3	Shared	4	WPA-Radius	5	WPA-PSK
6	WPA2-Radius	7	WPA2-PSK		

■ (2) Encryption Mode:

0	None	1	WEP	2	TKIP
3	AES	4	TKIP_AES		

■ (3) Default Key Index:

Range	1 ~ 4

■ (4) Key Length mode:

0	None	1	WEP64	2	WEP128

■ (5) Key/Passphrase Format:

0	ASCII	1	HEX		

■ (6) Default-Key/Passphrase Value

■ (7) Radius Password

■ (8) Radius IP

■ (9) Radius Port

* (3) ~ (4): Available only at WEP mode.

* (7) ~ (9): Available only at Radius(Enterprise) mode.

3. 'DU' Response Details

1. Response of each mode - Access Point, Gateway Mode

Auth	Encr	Response
Open/Shared	None	<S0_0>
Open/Shared	WEP64	<S0_1_(DefKeyIdx)_1_(ASCII/HEX)_(DefKeyVal)>
Open/Shared	WEP128	<S0_1_(DefKeyIdx)_2_(ASCII/HEX)_(DefKeyVal)>
Open	None	<S1_0>
Open	WEP64	<S1_1_(DefKeyIdx)_1_(ASCII/HEX)_(DefKeyVal)>
Open	WEP128	<S1_1_(DefKeyIdx)_2_(ASCII/HEX)_(DefKeyVal)>
802.1x	-	<S2_1_(x)_(x)_(x)_(x)_(Password)_(RadiusIP)_(RadiusPort)>
Shared	WEP64	<S3_1_(DefKeyIdx)_1_(ASCII/HEX)_(DefKeyVal)>
Shared	WEP128	<S3_1_(DefKeyIdx)_2_(ASCII/HEX)_(DefKeyVal)>
WPA-Radius	TKIP	<S4_2_(x)_(x)_(x)_(x)_(Password)_(RadiusIP)_(RadiusPort)>
WPA-Radius	AES	<S4_3_(x)_(x)_(x)_(x)_(Password)_(RadiusIP)_(RadiusPort)>
WPA_PSK	TKIP	<S5_2_(x)_(x)_(x)_(Passphrase)>
WPA_PSK	AES	<S5_3_(x)_(x)_(x)_(Passphrase)>
WPA2-Radius	TKIP	<S6_2_(x)_(x)_(x)_(x)_(Password)_(RadiusIP)_(RadiusPort)>
WPA2-Radius	AES	<S6_3_(x)_(x)_(x)_(x)_(Password)_(RadiusIP)_(RadiusPort)>
WPA2_PSK	TKIP	<S7_2_(x)_(x)_(x)_(Passphrase)>
WPA2_PSK	AES	<S7_3_(x)_(x)_(x)_(Passphrase)>

* (x): Don't Care

2. Response of each mode - Client Mode

Auth	Encr	Response
Open	None	<S1_0>
Open	WEP64	<S1_1_(DefKeyIdx)_1_(ASCII/HEX)_(DefKeyVal)>
Open	WEP128	<S1_1_(DefKeyIdx)_2_(ASCII/HEX)_(DefKeyVal)>
Shared	WEP64	<S3_1_(DefKeyIdx)_1_(ASCII/HEX)_(DefKeyVal)>
Shared	WEP128	<S3_1_(DefKeyIdx)_2_(ASCII/HEX)_(DefKeyVal)>
WPA_PSK	TKIP/AES	<S5_4_(x)_(x)_(x)_(Passphrase)>
WPA_PSK2	TKIP/AES	<S7_4_(x)_(x)_(x)_(Passphrase)>

* (x): Don't Care

4. 'GU' Input Details

1. Input of each mode

Just change 'S' to 'GU' at the 'DU' Response Details

2. Examples of each mode input - Access Point, Gateway Mode

Auth	Encr	Input Example	
Open/Shared	None	<GU0_0>	
Open/Shared	WEP64	<GU0_1_1_1_0_12345>	:ASCII
		<GU0_1_1_1_1_3132333435>	:HEX
Open/Shared	WEP128	<GU0_1_1_2_0_1234567890123>	:ASCII
		<GU0_1_1_2_1_31323334353637383930313233>	:HEX
Open	None	<GU1_0>	
Open	WEP64	<GU1_1_1_1_0_12345>	:ASCII
		<GU1_1_1_1_1_3132333435>	:HEX
Open	WEP128	<GU1_1_1_2_0_1234567890123>	:ASCII
		<GU1_1_1_2_1_31323334353637383930313233>	:HEX
802.1x	-	<GU2_1_0_0_0_0_12345_100.101.102.103_1812>	
Shared	WEP64	<GU3_1_1_1_0_12345>	:ASCII
		<GU3_1_1_1_1_3132333435>	:HEX
Shared	WEP128	<GU3_1_1_2_0_1234567890123>	:ASCII
		<GU3_1_1_2_1_31323334353637383930313233>	:HEX
WPA-Radius	TKIP	<GU4_2_0_0_0_0_12345_100.101.102.103_1812>	
WPA-Radius	AES	<GU4_3_0_0_0_0_12345_100.101.102.103_1812>	
WPA_PSK	TKIP	<GU5_2_0_0_0_12345678>	
WPA_PSK	AES	<GU5_3_0_0_0_12345678>	
WPA2-Radius	TKIP	<GU6_2_0_0_0_0_12345_100.101.102.103_1812>	
WPA2-Radius	AES	<GU6_3_0_0_0_0_12345_100.101.102.103_1812>	
WPA2_PSK	TKIP	<GU7_2_0_0_0_12345678>	
WPA2_PSK	AES	<GU7_3_0_0_0_12345678>	

* Reference:: 1812 is the Port number of Official Radius Protocol which is registered by IANA.

3. Examples of each mode input - Client Mode

Auth	Encr	Response	
Open	None	<GU1_0>	
Open	WEP64	<GU1_1_1_1_0_12345>	:ASCII
		<GU1_1_1_1_1_3132333435>	:HEX
Open	WEP128	<GU1_1_1_2_0_1234567890123>	:ASCII
		<GU1_1_1_2_1_31323334353637383930313233>	:HEX
Shared	WEP64	<GU3_1_1_1_0_12345>	:ASCII
		<GU3_1_1_1_1_3132333435>	:HEX
Shared	WEP128	<GU3_1_1_2_0_1234567890123>	:ASCII
		<GU3_1_1_2_1_31323334353637383930313233>	:HEX
WPA_PSK	TKIP/AES	<GU5_4_0_0_0_12345678>	
WPA_PSK2	TKIP/AES	<GU7_4_0_0_0_12345678>	