

Author: Sierra Wireless		Date: December 10, 2009										
APN Content Level	BASIC	✓	INTERMEDIATE	ADVANCED	Confidentiality	Public	✓	Private				
Software Compatibility*	FW: L10_0 Ogg	Open AT® SW Suite:	N/A	Plug-Ins:	TCP/IP	N/A	C-GPS	N/A	Compiler Used:	N/A	Reference Hardware	No
		M2mpower	N/A		Internet	N/A	Bluetooth	N/A		Reference Software	No	
					MQTT	N/A	M2MC	N/A				RTE :
* refer to software compatibility matrix section for more detail												
Wireless CPU Compatibility	Plug & Play:		Integra M2106B	Fastrack Supreme	Fastrack Xtend	Fastrack GO						
	Quik (CDMA):		Q2438F	Q2438R	Q26 Elite							
	Quik (GSM):		Q2400A	Q2406A	Q2406B	Q2426B	Q52 Omni					
			GR64	GS64	Q2686H	Q2687H	Q26 Extreme					
	Wireless Microprocessor® :		WMP50	WMP100	WMP120	WMP150						
	WISMO Family :		WISMO218	WISMO228	✓							

1 Version

Application Notes may be updated over their lifetime. To ensure you design with the correct version, please check the application notes page in www.wavecom.com for latest versions.

2 Introduction

This Application Note (APN) is provided to Sierra Wireless distributors and clients to aid more rapid development of embedded applications using the Sierra Wireless portfolio of cellular solutions. To request a new application note, contact your regional Sierra Wireless Product Marketing Manager.

3 Glossary

Term	Definition
DNS	Domain Name System

4 Application Note Description

This document describes the steps required to retrieve the IP address (in DOT format) for any issued domain (URL). This conversion is possible using the DNS resolver functionality from the network provider.

For example, if the user issues the domain `www.google.com`, then using the explanation and AT Command examples below, the IP address associated with that URL, ("`74.125.53.99`" in the `www.google.com` example) is retrieved.

5 Determining a Domain IP Address

For the DNS feature to be activated, the WISMO module must be connected to the network and the PDP context must be activated. With the PDP context (IP address) the service provider/Network always assigns the DNS1 (primary DNS) and DNS2 (Secondary DNS). This DNS performs all the required DNS resolve functionality.

Therefore, to retrieve the IP address of any domain (URL), use this DNS facility from the service provider and perform the required conversion. Refer to the following section for the AT commands to be used in this case.

6 AT Command Examples

Action	Response	Description
AT+WIPCFG = 1	OK	Enable the TCP/IP Stack.

Action	Response	Description
AT+WIPBR = 1, 6	OK	Open the GPRS Bearer.
AT+WIPBR = 2, 6, 11, "APN name"	OK	Set the GPRS setup parameters. The APN parameter in this case.
AT+WIPBR = 2, 6, 1, "Username"	OK	Set the Username.
AT+WIPBR = 2, 6, 0, "Password"	OK	Set the Password.
AT+WIPBR = 4, 6, 0	Ok	Start the PDP Context activation.
AT+WIPBR = 3, 6, 15	+WIPBR" 6, 15, "10.10.15.238" OK	Check the PDP context (IP Address) that is achieved.
AT+WIPBR=3, 6, 17	+WIPBR" 6, 17, "172.18.7.170" OK	Check for the DNS1 (primary) that is assigned by the network.
AT+WIPBR=3, 6, 18	+WIPBR" 6, 18, "172.18.7.170" OK	Check for the DNS2 (secondary) that is assigned by the network.
AT+WIPCREATE = 1, 1, 80, "www.google.com", 80	+WIPREADY: 1, 1 OK	Create a UDP socket connection to the Web site (URL) for which an IP address needs to be retrieved.
AT+WIPOPT = 1, 1, 1, 2	+WIPOPT: 1, 2, "74.125.53.99" OK	Retrieve the IP address of the connected Web site (URL mentioned above). The IP address retrieved in this command response is the IP address of the Domain/URL.(www.google.com in this example)
AT+WIPCLOSE = 1, 1	OK	Close the UDP socket created.

Note: The above mentioned procedure holds good only if the Network (Service Provider) provides the DNS1 and DNS2 after the PDP context. If the DNS1 and DNS2 are "0.0.0.0" after achieving the PDP context then the DNS resolve functionality cannot be achieved. In such cases external Domain name server details have to be set for DNS1 and DNS2 parameters

7 Reference Documents

	Filename	Comment
[1]	WA_DEV_W228_UGD_002	TCP/IP AT Commands manual for WISMO228.

8 Software Compatibility Matrix

Current software configurations compatible with this application note include:

Open AT® FW	Open AT® SDK	Open AT® Plug-Ins
L10_00gg	N/A	N/A

9 Support

For direct clients: contact your Sierra Wireless FAE

For distributor clients: contact your distributor FAE

For distributors: contact your Sierra Wireless FAE

10 Document History

Version	Date	History
001	December 10, 2009	Creation

11 Legal Notice

Important Notice

Due to the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices such as the Sierra Wireless modem are used in a normal manner with a well-constructed network, the Sierra Wireless modem should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. Sierra Wireless accepts no responsibility for damages of any kind resulting from delays or errors in data transmitted or received using the Sierra Wireless modem, or for failure of the Sierra Wireless modem to transmit or receive such data.

Safety and Hazards

Do not operate the Sierra Wireless modem in areas where blasting is in progress, where explosive atmospheres may be present, near medical equipment, near life support equipment, or any equipment which may be susceptible to any form of radio interference. In such areas, the Sierra Wireless modem MUST BE POWERED OFF. The Sierra Wireless modem can transmit signals that could interfere with this equipment. Do not operate the Sierra Wireless modem in any aircraft, whether the aircraft is on the ground or in flight. In aircraft, the Sierra Wireless modem MUST BE POWERED OFF. When operating, the Sierra Wireless modem can transmit signals that could interfere with various onboard systems.

Note Some airlines may permit the use of cellular phones while the aircraft is on the ground and the door is open. Sierra Wireless modems may be used at this time.

The driver or operator of any vehicle should not operate the Sierra Wireless modem while in control of a vehicle. Doing so will detract from the driver or operator's control and operation of that vehicle. In some states and provinces, operating such communications devices while in control of a vehicle is an offence.

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