

Model Number: M505N

Product Description: ADSL2+ / Ethernet WAN Residential Gateway featuring:

Qty 4 10/100 Ethernet Port Qty 1 USB 2.0 802.11b/g/n 2T2R

To Contact VisionNet for Tier 2 Support:

Voice:+ 1 925 730 3940Email:support@visionnetusa.comOnline:http://www.visionnetusa.com/ticketportal

TABLE OF CONTENTS

SECTION 1: GUI ACCESS

1.1 Accessing the GUI

SECTION 2: TROUBLESHOOTING

2.1	View WAN Statistics	6
2.2	View WAN Details	7
2.3	View DSL Statistics	8
2.4	View ATM Statistics	9
2.5	View DHCP Statistics	10
2.6	View ARP Statistics	11
2.7	View LAN Statistics	12
2.8	Verify Connectivity via Ping	13
2.9	Verify Connectivity via Trace Route	15
2.10	Remote / Local System Log Recording	17
2.11	PPP Debug System Logging	19
2.12	NAT Inspection via Command Line Interface	20

SECTION 3: WAN CONFIGURATION

3.1	Changing DSL Parameters	21
3.2	WAN Logic Overview	22
3.3	Selecting a WAN Interface to Create	23
3.4	Creating a DSL Interface	24
3.5	Creating a PTM Interface	25
3.6	Creating an Ethernet Interface	26
3.7	Creating an IPoE WAN Service	28
3.8	Creating a PPPoE WAN Service	30
3.9	Creating a Bridge WAN Service	36
3.10	WAN Interface Prioritization	38
3.11	Gateway Prioritization	39
3.12	Universal Static Gateway Service	40
3.13	DNS Prioritization	41
3.14	Universal Static DNS Service	43

SECTION 4: PUBLIC WAN IP ADDRESS ALLOCATION

4.1	Public IP Allocation – Public Subnet (WAN Interface within Subnet)	45
4.2	Public IP Allocation – Virtual Public Subnet (WAN Interface not within Subnet)	48
4.3	Public IP Allocation – 1:1 NAT Public Subnet	52
4.4	Public IP Allocation – PPPIP Extension (Single Public IP)	56

SECTION 5: LAN CONFIGURATION

5.1	LAN Service Configuration	58
5.2	Reserving a Public IP Address	59
5.3	IGMP Force	60

SECTION 6: SECURITY CONFIGURATION

6.1	Port Forwarding	61
6.2	Port Triggering	64
6.3	DMZ Host	68
6.4	UPnP	69
6.5	Algorithm Enable / Disable	70
6.6	WAN Access Control (Parental Control)	71
6.7	URL Filtering (Parental Control)	72
6.8	IP Filtering	73
6.9	Bridge Access Control	74

4

SECTION 7: QUALITY OF SERVICE

7	7.1	QoS Enable / Disable	75
7	7.2	QoS Interface Configuration	76
7	7.3	QoS Classification	77

SECTION 8: SERVICE GROUPING

8.1	Service Group Logic	78
8.2	Service Group Creation	79
8.3	Service Group LAN Management	80

SECTION 9: CONFIGURATION SETTINGS

9.0	Configuration File Logic	81
9.1	Save Backup Configuration	82
9.2	Over-Writing the Default Configuration	83
9.3	Update the Running Configuration	84
9.4	Restoring the Default Settings	85
9.5	Updating the Modem Firmware	87
9.6	Rebooting the Modem	88
9.7	ACS Configuration	89
9.8	SNMP Configuration	90
9.9	NTP Configuration	91
9.10	IP Restriction (Management ACLs)	92
9.11	Remote Access	93

SECTION 10: WI FI

10.1	Wireless Channel Configuration	94
10.2	SSID Configuration	95
10.3	Wireless Configuration	96
10.4	Global Settings	97
10.5	MAC Filtering	99
10.6	Wireless Bridge	100

SECTION 11: PRODUCT DEPICTIONS AND BEHAVIOR

11.1	LED Behavior	101
11.2	Product Depiction	102

SECTION 12: Troubleshooting

12 1	Port Mirroring	103
12.1	Port Mirroring	103

SECTION 1: GUI ACCESS

Section 1.1 - Accessing the GUI

Step 1: Accessing the GUI via a web browser

1.A Open your Web Browser

Enter the WAN IP Address of the device in the address bar to access the modem remotely

ie: http://67.125.108.137

Use the modem's LAN IP Address to access the GUI locally

http://192.168.1.254



1.B Once the modem responds, you will be challenged for a User Name and Password

Remote Access

Privileged

Username: support Password: ISP Specific

Restricted

Username: techsupport Password: ISP Specific

Local Access

Privileged

Username: admin Password: ISP Specific

Restricted

Username: enduser Password: password

Windows Security	
The server 192.	168.5.254 at DSL Router requires a username and password.
Warning: This s sent in an insec connection).	erver is requesting that your username and password be sure manner (basic authentication without a secure
	User name Password Remember my credentials
	OK Cancel

1. C You will be directed to the Main GUI Page

Gateway QuickView	Device Info				
🝚 WAN	Board ID:	96328ang			
🐙 LAN	Build Timestamp:	20110525_1649			
🗑 Security	Manufacturer:	DQ Technology, Inc.			
Custin of femiles	ProductClass:	M505N			
Contraction of the service	SerialNumber:				
Nouting	Software Version:	GAN5.CZ56T-B-DQ-R4B050-US.EN			
🛍 DNS	Bootloader (CFE) Version:	1.0.37-106.24			
Print Server	DSL PHY and Driver Version:	A2pD035a.d23c			
Network Access Storage	Wireless Driver Version:	5.60.120.11.cpe4.406			
Network Access Storage	Wireless Driver Version: This information reflects the o	5.60.120.11.cpe4.406	nection.		
💊 Network Access Storage 🗞 Service Groups 🏠 IPSEC	Wireless Driver Version: This information reflects the o Line Rate - Upstream (Kbps):	5.60.120.11.cpe4.406 current status of your WAN con	nnection.		
Network Access Storage Service Groups In IPSEC Certificates	Wireless Driver Version: This information reflects the o Line Rate - Upstream (Kbps): Line Rate - Downstream (Kbp	5.60.120.11.cpe4.406 current status of your WAN con 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	nection.		
Network Access Storage Service Groups IPSEC Certificates Wireless	Wireless Driver Version: This information reflects the o Line Rate - Upstream (Kbps): Line Rate - Downstream (Kbp LAN IDv4 Address:	5.60.120.11.cpe4.406 current status of your WAN con 0 35): 0 192.168.1.254	mection.		
Hetwork Access Storage Service Groups PSEC Cettificates Wireless Qatewary Diagnostics	Wireless Driver Version: This information reflects the of Line Rate - Upstream (Kbps): Line Rate - Downstream (Kbp LANI IPv4 Address: Default Gateway:	5.60.120.111.cpe4.406 current status of your WAN con c 0 ps): 0 192.168.1.254	inection.		
Network Access Storage Service Groups PSEC Cetificates Wireless Catagonatics Constructions	Wireless Driver Version: This information reflects the o Line Rate - Upstream (Kbps) Line Rate - Downstream (Kbp LAN IPv4 Address: Default Gateway: Primary DHS Server:	5.60.120.11.cpe4.406 current status of your WAN con b 0 b 0 b 0 b 0 b 0 b 0 b 0 b 0 b 0 b 0	inection.		
Hetwork Access Storage Service Groups BSEC Certificates Wireless Cateway Diagnostics Gateway Statistics	Wireless Driver Version: This information reflects the of Line Rate - Upstream (Kbps) Line Rate - Downstream (Kbp LANI IPv4 Address: Default Gateway: Primary DIIS Server: Secondary DIIS Server:	5.60.120.11.cpe4.406 urrrent status of your WAN con	inection.		
	Wireless Driver Version: This Information reflects the Line Rate - Upstream (Kbps) Line Rate - Downstream (Kbp Link Rate - Downstream (Kbp Link Rate - Downstream (Kbp Default Gateway: Primary DIIS Server: Secondary DIIS Server: LAII IP-6 Address:	5.60.120.11.cpe4.406 urrent status of your WAH con	nection.		

PLEASE NOTE:

ONLY the End User Login should be given to End Users. NEVER RELEASE ANY OTHER LOGIN INFORMATION.

SECTION 2: TROUBLESHOOTING

Section 2.1 - View WAN Status

Step 1: Access the GUI to find the WAN Status

1.A Select the <u>"Gateway Quickview"</u> tab located within the left-hand frameset.



WHAT THESE STATISTICS MEAN:

This page will verify that the WAN connection is operating correctly, and that the modem has obtained a WAN IP Address

Section 2.2 - View WAN Statistics

Step 1: Access the GUI to find WAN Statistics

1.A Select the <u>"Gateway Statistics"</u> tab located within the left-hand frameset.

	VisionNet		Login: admin	English •
	(Gateway QuickView	WAII Statistics		
	🗄 🍚 WAN			
	🗄 🧈 LAN	Overview WAN		
	🗈 👻 Security	ViewInterface Identifier PVC VLAN Type NAT Firewall Status IP Address		
	Quality of Service	ppp0 pppoe_0_0/35 0/35 Disable PPPoE Enable Enable Unconfigured (null) pnp1 pppoe_0_0/24 0/24 Disable PPOE Enable Unconfigured (null)		
Then scroll to the "WAN Section	E- 🚱 Routing	Z hhhy hhhad_afata ata basana tu askusana susata husauilaa sa (usa)		
	🕀 🕰 DNS			
	🗈 🚠 Print Server			
	🗈 💊 Network Access Storage	Statistics WAN		
~	🗄 😤 Service Groups	Interface Description Connected Time Received Transmitted		
Calcut the Revenue of the the	B- 🗍 IPSEC	Bytes Pkts Errs Drops Bytes Pkts Errs Drops		
Select the initial loon next to the	🗈 🄜 Certificates	ppp1 pppoe_0_34 / 0 0 0 0 0 0 0 0 0		
active WAN connection	🗈 🙌 Wireless			
	🗈 🔀 Gateway Diagnostics	Reset Statistics		
	🖻 🛁 Gateway Statistics			
	> Device Info			
	···· · xDSL			
	> ATM			
	• WAN			
	EAN			
	P Hosts			
	- vvieness Clients			
	DHCP			
	🗉 💊 Management			

1.A Select the "Gateway Quickview" tab located within the left-hand frameset.





This page will verify that data is being received and transmitted. You will also be able to view detailed IPV4, IPV6, and Configuration Settings

Section 2.3 - View DSL Statistics

Step 1: Access the GUI to find DSL Statistics

1.A Select the <u>"Gateway Statistics"</u> tab located within the left-hand frameset.



WHAT THESE STATISTICS MEAN:

This page will verify DSL Link, and will provide information regarding line characteristics and capacities.

Section 2.4 - View ATM Statistics

Step 1: Access the GUI to find ATM Statistics

1.A Select the <u>"Gateway Statistics"</u> tab located within the left-hand frameset.





This page will verify ATM Operation, and specify the type of packets being sent

Section 2.5 - View DHCP Statistics

Step 1: Access the GUI to find DHCP Statistics

1.A Select the <u>"Gateway Statistics"</u> tab located within the left-hand frameset.





This page will provide the IP Addresses assigned by the modem's DHCP server, the MAC addresses of dynamically assigned devices, and the amount of time that the device has spent on the network.

Section 2.6 - View ARP Statistics

Step 1: Access the GUI to find ARP Statistics

This step may be used to view all connected LAN devices, and is especially useful when using the "Reserve an IP Address" feature.

1.A Select the <u>"Gateway Statistics"</u> tab located within the left-hand frameset.



WHAT THESE STATISTICS MEAN:

This page will provide the MAC Addresses of all recognized devices connected to the modem. A device will only be recognized once it has requested data from the modem.

Section 2.7 - View LAN Statistics

Step 1: Access the GUI to find LAN Statistics

1.A Select the <u>"Gateway Statistics"</u> tab located within the left-hand frameset.



WHAT THESE STATISTICS MEAN:

This page will verify that LAN Devices are communicating.

Section 2.8 - Verify Connectivity via Ping

In the event that you cannot access a LAN client, or access an internet page, you may wish to use the Ping command to test the connection.

Step 1: Access the GUI to find the Ping Tool

1.A Select the <u>"Gateway Diagnostics"</u> tab located within the left-hand frameset.



1.B You may use this tool to ping either a domain name or an IP Address



TO TEST LOCAL LAN DEVICES:

Enter the IP Address of the LAN Device and select "Ping Request"

ie: 192.168.1.64

TO TEST REMOTE WAN IP ADDRESSES:

Enter the WAN IP Address and select <u>"Ping Request"</u>

ie: 4.2.2.4

TO TEST REMOTE WAN DOMAIN NAMES:

Enter the Domain Name and select <u>"Ping Request"</u>

Ie: www.bing.com

If you can Ping a local device:

The local device has an IP Address (this does not guarantee that the Device has WAN Access)

If you can Ping the WAN Gateway:

The modem's DHCP Client has properly obtained an IP Address

If you can Ping a WAN IP Address:

The modem can access the internet, but this does not necessarily mean that DNS resolution is operational

If you can Ping a WAN Domain Name

The modem can access the internet correctly



Section 2.9 - Verify Connectivity via Trace Route

In the event that you cannot access a web page, or have sporadic internet access even though the WAN gateway is operating correctly, you may perform a Trace Route.

Please Note that the Trace Route function takes several minutes, and you cannot navigate away from the page during this process.

Step 1: Access the GUI to find the Trace Route Tool

1.A Select the <u>"Gateway Diagnostics"</u> tab located within the left-hand frameset.

	VisionNet		Login: admin	English •
	(Gateway QuickView	Inbound Diagnostics		
	🕀 🔮 WAN	This diagnostic toolist allows remote support providers to "peer into" the Local Area Network and confirm		
	E 🥊 LAN	communication with local hosts. This tool may also be used to confirm IPSec VPN Tunnel operation.		
	🖲 👻 Security			
Then. In the left-hand frameset.	Quality of Service	Select a LAN interface Default *		
a la statith an «Inda anna d Ta a llatt»	E- 🚱 Routing	Test Inbound DNS or IP Addresses		
select either <u>Indound Ioolkit</u>	🕑 🕰 DN S	Ping Request Trace Route		
	🕑 🚊 Print Server			
	🗈 💊 Network Access Storage			
(LAN) or "Outbound looikit"	🗈 🔔 Service Groups			
(WAN)	I IPSEC			
(IIIII)	🖲 🔜 Certificates			
	⊕-00 Wireless			
	Gateway Diagnostic System Diagnostic Hobound ToolKit Outbound ToolKit			
	🕑 📢 Gateway Statistics			
	😟 😪 Management			

1.B You may use this tool to trace the path of either a domain name or an IP Address

TO TEST LOCAL LAN DEVICES:

Enter the IP Address of the LAN Device and select <u>"Trace Route"</u>

ie: 192.168.1.64

This test should not show more than one "hop"

TO TEST REMOTE WAN IP ADDRESSES:

Enter the WAN IP Address and select <u>"Trace Route"</u>

ie: 4.2.2.4

This test will show you the path of the data being sent to the internet.

IP Addresses are not checked against a DNS Server

TO TEST REMOTE WAN DOMAIN NAMES:

Enter the Domain Name and select <u>"Trace Route"</u>

ie: www.google.com

This test will show you the path of the data being sent to the internet

This path includes resolving the Domain Name with a DNS Server

Firefox *		
http://192.168.	254/	C 📩 Feedback is
DSL Router	+	
VisionNet		Login: admin English 👻
Sateway QuickView	3 * * *	· · · · · · · · · · · · · · · · · · ·
🗄 🔮 WAN	4***	
🗄 🧈 LAN	5 * * *	
🗄 👻 Security	6 * * *	
Cuality of Service	7***	
E S Routing	8***	
🖲 🍕 DNS	9***	
🖲 💼 Print Server	10 * * *	
• Network Access Storage	11***	
E Service Groups	12***	
E- C IPSEC	13 * * *	
🗄 🌄 Certificates	14***	
⊞-00 Wireless	15***	
E K Gateway Diagnostics	16***	
System Diagnostic	17***	
Outbound ToolKit	18***	
🗄 📢 Gateway Statistics	19***	
🗄 😪 Management	20***	
	21***	
	22***	
	23 * * *	

Section 2.10 - Local / Remote System Logging

Step 1: Access the GUI to begin SysLog Configuration

1.A Select the <u>"Management"</u> tab located within the left-hand frameset.



1.B Select the <u>"Configure System Log"</u> Button



System Log dialog allows you to view the System Log and configure the System Log options. Click 'View System Log' to view the System Log. Click 'Configure System Log' to configure the System Log options.

View Security Log View System Log Configure System Log

English •

Login: admin

Step 2: Configure the System Log

Α.	Enable the System Log
og:	Enabled
	Both
de:	Enables Internal and PC Server Logging
g and splay vels:	Debugging
	Default 192.168.1.239
1	This must match the IP of the computer running Kiwi : VisionNet suggests that the
	computer running Kiwi be statically assigned to 192.168.1.239
ver l	JDP 514

2.B Select <u>"Save/Apply"</u>

Section 2.11 - PPP Debug for System Logging

Step 1: Select the appropriate WAN Service for modification

1.A Select the <u>"WAN"</u> tab located within the left-hand frameset.



1.B Select the <u>"Edit"</u> Button associated with the relevant PVC (ie: 0/34 or 0/35)



2.A Edit the PPP Authentication Page

	VisionNet	Login: admin English 👻
	(Gateway QuickView	PPP Username and Password
PPP DEBUG Enabled	Image: Second	PP Username and Password PP Username: xooccocccccccccccccccccccccccccccccccc
		Enable (MM) Debug Made

2.B Proceed through the remainder of the edit section.

PLEASE NOTE: THIS IS TEMPORARY ONLY, AND MUST NOT BE LEFT AS A PERMANENT CONFIGURATION

Section 2.12 - NAT INSPECTION VIA COMMAND LINE

Step 1: Open a Telnet Client

Point the Telnet Client at the IP Address of the CPE 1.A



1.B Login using the appropriate username and password

Enter the following command:



SECTION 3: WAN CONFIGURATION

Section 3.1 - Changing DSL Parameters

DSL Protocol	Status
G.DMT	Enabled
G.Lite	Enabled
T1.413	Enabled
ADSL2	Enabled
ADSL2+	Enabled
Annex L	Enabled
Annex M	Disabled
Bitswap	Enabled
SRA	Disabled
PhyR	Disabled

VisionNet modems come pre-configured with the following DSL Settings

ALL VDSL2 PROTOCOLS ARE ENABLED, BY DEFAULT, FOR VDSL2 CPEs

During troubleshooting, you may be requested to change DSL Modulation settings. The below instructions will guide you through making these changes.

Step 1: Direct Your Browser to the LAN Configuration Page

1.A Select the <u>"WAN"</u> tab located within the left-hand frameset.



- 1.B For Each DSL Protocol, a checked box indicates that it is enabled; while an unchecked box indicates that it is disabled.
- **1.C** Only select <u>"Inner Pair"</u> under the section titled "Select the Phone Line Pair".

Changing these settings will change physical characteristics that may prevent proper operation and/or troubleshooting in the future.

WAN INTERFACE / SERVICE CONSTRUCTION AND DECONSTRUCTION - A BRIEF INTRO

In the past, creating a WAN Service was a single operation in which the WAN Interface and WAN Service were created at the same time. This was because there was only one WAN Interface to choose from. Now that there are multiple WAN Interfaces to choose from, you must create the WAN Interface and the WAN Service separately.

NEW METHOD

PREVIOUS METHOD

ngress: Gatewa	ау		
\bigcirc	t	IP Interface:	Layer 3 and 4
	herne	VLAN Tagging:	None / 802.1q
	IP Et	ENCAPSULATION:	Service Category / 802.1x
		QoS:	Service Category / 802.1x
		SERVICES:	Single or Multiple / Include VLAN
	ATM	PACKETS:	ATM or Ethernet
		ENCAPSULATION:	LLC or VC Mux
		FRAMES:	ATM



Egress: DSLAM

SO WHAT CHANGED?

VisionNet Gateways now support

- ATM (Traditional DSL)
 - PTM (Used for VDSL2 and PTM over ADSL2+)
- Ethernet (Used for Ethernet WAN Port Operation)

Which means that there are now two separate processes

BUILDING A WAN SERVICE

Create WAN Interface

Create WAN Service associated with WAN Interface

→

TEARING DOWN (REMOVING) A WAN SERVICE

Delete WAN Service associated with WAN Interface

 \rightarrow

Delete WAN Interface

Section 3.3 - Selecting a WAN Interface to Create

The VisionNet modem comes pre-configured. Unless you have VLAN Mux Enabled, you can only use one interface per physical port. Hence, do not attempt to build a new interface until you have removed any conflicting interfaces.

Step 1: Selecting the WAN Interface to Create

1.A Select the <u>"WAN"</u> tab located within the left-hand frameset.



Step 1: Selecting the WAN Interface to Create

1.A Select the <u>"WAN"</u> tab located within the left-hand frameset.







Step 2: Configuring the WAN Interface

2.A Select the <u>"WAN"</u> tab located within the left-hand frameset.

VPI:	ISP Specific		
VCI:	ISP Specific		
DSL Latency	ONLY Path0 Should be checked		
	<u>EoA</u>		
Select DSL Link	IPOE/MER, PPPOE, Bridged		
	<u>PPPoA</u>	C S (http://192.168.1.254/	D - 2 C X 50 Stoter ×
	<u>IPoA</u>	VisionNet Sateway QuickView	Logn dem Englich -
Select	<u>Default Mode</u> Standard (Single Service)	VEAN VEAN FTH Insurfaces POSL Insurfaces VEAL INSURFACE VEAL VEAL INSURFACE VEAL VEAL INSURFACE VEAL VEAL	ATH MYC Configurations the configuration of the co
Connection Mode:	<u>VLAN MUX</u> Multiple VLANs over a	B * LAN Sourity Gould try of Service Gould try of Service Gould try of Service	Selet DSL Literry DP pith0 DP pith1 Selet DSL Liter Type (EAA is for PPPoE, IPOE, and Bridge.) E EAA
Encapsulation Mode:	ISP Specific	B: B: Print Server Server Service Groups B: Price Groups B: Price Groups B: Price Groups Contributes	PoA Selet Connecton Mode Orlande - Strigte service over one connection VLAN MUX Mode - Mubple Van service over one connection Encapsulation Mode: ULOSMAP-BRIDGING
Service Category:	ISP Specific	Of Wireless Cateway Diagnostics Gateway Statistics Of Q Anagement	Service Category: UBR Without PCR Select 3P QoS Scheduler Aporthm Strict Prince Precedence of the default quarter: Weight Kalue of the default quarter: Weight Value of the default quarter: B
	Strict Policy Standard for single service config		Back) Apply/See
Select ISP QoS	Weighted Fair Queuing Use multiple service configurations IE: Data PVC - 1/8 IE: IPTV PVC - 1/1		

2.B Select <u>"Apply Save"</u>

						_					
VisionNet									Logi	n: admin	Engli
Gateway QuickView					OSL ATM Interface	Configura	tion				
E - G WAN				Choose Ad	d, or Remove to conf	gure DSL	ATM interfaces.				
	Interface Vpi	Vci DSL La	itency Category	Link Type	Connection Mode	IP QoS	Scheduler Alg	Queue Weight	Group Precedence	Remove	
+ DSL Interfaces	atm0 0	35 Pa	th0 UBR	EoA	VlanMuxMode	Enabled	WFQ	1	1	21	
					Add Rem	nove					
🕀 🚚 LAN											
🕢 🤪 Security											
Quality of Service											
+- 🚱 Routing											
🗄 🎕 DNS											
🖲 🚠 Print Server											
🗈 💊 Network Access Storage											
🗈 👷 Service Groups											
III- 🙆 IPSEC											
E Certificates											
e 00 Wineless											
E Kateway Diagnostics											
E Gateway Statistics											

You will see the Interface reflected in the updated Interface Table

Section 3.5 – Creating a PTM Interface

Step 1: Selecting the WAN Interface to Create

1.A Select the <u>"WAN"</u> tab located within the left-hand frameset.







Step 2: Configuring the WAN Interface

2.A Select the <u>"WAN"</u> tab located within the left-hand frameset.

DSL Latency	ONLY Path0 Should be chee	ked			
	Normal Priority				
Select PTM					
Priority	High Priority		D + ⊠ C × ⊘ DSLRouter ×		n x o
	(Pre-Emption)	VisionNet		Login: admin	English •
	Default Mode	Sateway QuickView	PTM Configuration		
	Standard (Single Service)	WAN FETH Interfaces	This screen allows you to configure a PTM connection.		
Select Connection		P FTM Interfaces DSL Interfaces WAN Services WAN Services	Select DSL Latency		
Mode:	VLAN MUX	B 🛃 LAN	Select PTM Priority		
	Multiple VLANs over a sing	Security	 Normal Priority High Priority (Preemption) 		
	PVC	C (a) Guainy or service	Select Connection Mode		
	Strict Policy	🕀 🔩 DNS	Default Mode - Single service over one connection VLAN MUX Mode - Multiple Vlan service over one connection		
	Standard for single service		Select IP QoS Scheduler Algorithm		
	souffa	🕀 🐣 Service Groups	Precedence of the default queue: 8 (lowest)		
	comig	B- C IPSEC	Weight Value of the default queue: [1-63]		
Select ISP QoS		E Certificates	MPAAL Group Precedence: 8 -		
	Weighted Fair Queuing	E-X Gateway Diagnostics	Back Apply/Save		
	Use multiple service	🕀 📲 Gateway Statistics			
	configurations	tt 🔧 Management			

2.B Select <u>"Apply Save"</u>

	🗲 🔿 🌀 http://192.168.1.254/			+ ۵	월 Ĉ X 🥝 DSL Re	uter	×				n ★ ¤
	VisionNet								L	ogin: admin	English •
	Gateway QuickView Gateway QuickView WAN D	DSI, PTM Interface Configuration Choose Add, or Remove to configure DSI, PTM Interfaces.									
		Interface ptm0	Path0	PTM Priority Normal	Connection Mode VlanMuxMode	IP QoS Enabled	Scheduler Alg	Queue Weight	Group Precedence	Remove	
	DSL Services				A	dd Rem	ove				
You will see the Interface reflected	Outlify of Service Service Service										
	B 🌜 DNS B 🚊 Print Server										
	Solution of the second se										
	P SEC P G C Crificates P M Wretess										
	Gateway Diagnostics Gateway Statistics										
	🗄 💊 Management										

Section 3.6 – Creating an Ethernet Interface

Step 1: Selecting the WAN Interface to Create

Interface

1.A Select the <u>"WAN"</u> tab located within the left-hand frameset.







Step 2: Configuring the WAN Interface

2.A Select the <u>"WAN"</u> tab located within the left-hand frameset.



2.B Select <u>"Apply Save"</u>





Section 3.7 – Creating an IPOE WAN Service

Step 1: Selecting the WAN Service to Create

Interface

1.A Select the <u>"WAN"</u> tab located within the left-hand frameset.



1.B Select <u>"Add"</u>



1.C Select the desired WAN Interface



Step 2: Configuring the WAN Service

2.A WAN SERVICE CONFIGURATION.

Select WAN			♪ + 器CX OS Router ×		ħ★≎
Service Type:	IPOE	VisionNet		Login: admin	English •
Enter Service Description	Will not affect service - no spaces allowed	Cateway QuickView WANI BTH Interfaces DBL Interfaces DBL Interfaces WANA Services	WAR Service Configuration Select WAN service type: PP over Ethernet (PPGE) P over Ethernet Bridging		
802.1P Tag (Only for VLAN Mux Services)	<u>-1 Untagged</u> Otherwise, choose approp tag	DSL Services Deal LAN Security Galaxity of Service D-Salaxity Routing	Enter Service Description: pppoe_0_35 For tagged service, enter welld 802.1P Priority and 802.1Q VLAN ID. For untagged service, set -1 to both 802.1P Priority and 802.1Q VLAN ID. Enter 802.1P Priority for-71:		
802.1Q Tag (Only for VLAN Mux Services)	<u>-1 Untagged</u> Otherwise, choose approp tag	 ⊕ € DHS ⊕ ≥ Print Server ⊕ Network Access Storage ⊕ ≥ Service Groups ⊕ ∞ mano 	Enter 802.1Q VLAN ID [0+094]: -1 Enable IPv6 for this service		
	- тар	B) (Back Heat		

2.B Select <u>"Next"</u> and Proceed to "WAN IP Settings"

		← → @ http://192.168.1.254/		D + 2 C × OSL Router	×		↑ ★ \$
Obtain IP		VisionNet				Login: admin	English •
Address	For DHCP Service	Sateway QuickView	WAN IP Settings				
Automatically		ETH Interfaces	Enter information provided to you by Notice: IF "Obtain an IP address auto	/ your ISP to configure the WAN IP settings. "matically" is chosen, DHCP will be enabled for PVC	in IPoE mode.		
	Only if specified	PTM Interfaces DSL Interfaces WAN Services	If "Use the following Static IP addre: Obtain an IP address automatics	ss is cnosen, enter the WAN IP address, subnet m ally	nask and interface gateway.		
Options 55 to	by your Network	> DSL Services	Option 55 Request List :	(e.g:1,3,6,12)			
4	0 M	🗄 🚅 LAN	Option 58 Renewal Time:	(hour)			
01	Ops Manager	🕀 👻 Security	Option 59 Kepinding Time:	(nour)			
		🗈 🔞 Quality of Service	Option 61 IAID:	(8 hexadecimal digits)			
		🗄 🛞 Routing	Option 61 DUID:	(hexadecimal digit)			
Use the		🕀 🎕 DNS	Option 125:	ble			
f II	Enter appropriate	🕀 🚊 Print Server	Use the following Static IP addr WAN IP Address:	ress:			
TOIIOWING	information	E 🗞 Network Access Storage	WAN Subnet Mask:				
Static IP	mormation	🗄 💑 Service Groups	WAN gateway IP Address:				
otatio ii		B- 🗍 IPSEC	MTU[46-1518]: 1500				
	1500 unless specified by	E Certificates					
MTU	your Network Operations	⊞-0¢0 Wireless					
	Jour network Operations	🕀 🔀 Gateway Diagnostics					
	Manager	🕀 📢 Gateway Statistics					
		🗉 😪 Management					
				Back Ne			

			Attp://192.168.1.254/	ρ - E C × ③ DS. Router ×	¢
Enable	NAT	be allocated to the LAN	VisionNet	Logir admin English •	
Enable Full Cone <u>Disabled</u> NAT		Cateway QuickView WIAN FITH Interfaces FTTH Interfaces FTTH Interfaces WIAN Services WAN Services	Hetwork Address Translation Settings Network Address Translation (NAT) allows you to share one Wole Area Network (WAN) IP address for multiple computers on your Local Area Network (LAN). Enable NAT Enable Fulctore NAT		
Enable Firewall Enabled unless Public IPs a be allocated to the LAN		DSL Services Security Quality of Service			
IGMP I	Multi - Cast	Disabled Unless IGMP Multi Cast is t used for IPTV (IGMP Proxy	Service S	Back Hoot	
2.D	Routing –	Default Gateway			
	The DHCP allocated f Gateway" This can b The gatew from Top f Gateways, will not be Table	Interface should be to the "Selected Default Interfaces. e changed later. ray priority is arranged to Bottom , that are not allocated, e used for the Routing	Antiperiod 221681254 Antiperiod 221681254 Antiperiod 221681254 Antiperiod 221681254 Antiperiod 221681255 Antiperiod 221681255 Antiperiod 221681255 Antiperiod 22168125 Antiperiod 2216812	P ∈ B ∈ X Op Roar Let w Let w Let w Eget •	
2.E	DNS Serve	er Configuration			
	You may p DNS Serve or You may s	rioritize the Dynamic rs pecify static DNS Servers	Comp. 122101123 VisionNet With	Constant Constant	

2.F When complete you may approve the settings. You will see the service populated in the "WAN Services" table

Section 3.8 - Creating a PPPoE WAN Service

Step 1: Selecting the WAN Service to Create

1.A Select the <u>"WAN"</u> tab located within the left-hand frameset.



1.B Select <u>"Add"</u>



1.C Select the desired WAN Interface



Step 2: Configuring the WAN Service

2.A WAN SERVICE CONFIGURATION.

Select WAN Service Type:	РРРоЕ	VisionNet	ρ + ≧ C X g∂ DΩ Roder x	Login: admin	nt ★ ☆ English ▼
Enter Service Description	<u>Will not affect service – no</u> <u>spaces allowed</u>	Caleway QuickView WMN Caleway QuickView Caleway Cale	WAII Service Configuration Select WWI service type: # PPP over Ethernet Power Ethernet Bridging		
802.1P Tag (Only for VLAN Mux Services)	<u>-1 Untagged</u> Otherwise, choose approp tag	OSL Services Scutty Gastly of Service Gastly Routing	Enter Service Description: pppoe_0_0_33 For togged service, ereter valid 802.1P Priority and 802.1Q VLAN ID. For untigged, pervice, set-1 to both 802.1P Priority and 802.1Q VLAN ID. Enter 802.4P Priority 10-71:		
802.1Q Tag (Only for VLAN Mux Services)	<u>-1 Untagged</u> Otherwise, choose approp tag		Enter 802.1Q VLAN ID [0-4094]: -1 Enable IPv6 for this service Back Heat		
		B 00 Wireless D 2 Gateway Diagnostics D 4 Gateway Statistics D 4 Management			

2.B Select <u>"Next"</u> and Proceed to "PPPoE Username and Password"

PPP Username	Enter unique Username						
PPP Password	Enter unique Password						
PPPoE Service Name	Leave blank unless specified by your Network Ops Manager						
Authentication Method	AUTO unless specified by your Network Operations Manager						
MTU	1492 unless specified by your Network Operations Manager	O Interpr/1921 O Interpr/1921 O VisionNet O Storeg Gum/ves D Interpr/1923	668.1.254/ PPP Username and Password PPP username that you have a user name and password	D ~ B C X ③ DSk Router	f password that your ISP has provided to you.	Logir: admin	ft 🛧 S
Enable NAT	Enabled, unless otherwise specified by Network Operations	- ETV (methods - ETV) (methods - OU, perform - OD, perform - O	DPD Username: myspoorame DPD Passout Autorocos Madol: AUTO ▼ MTU(18-500): 1492				
Enable Full-Cone NAT	Disabled, unless specified otherwise by Network Operations	2: Call Samily torons 2: Call Studies 2: Call Studies 3: Call	Ø Enable NAT Enable Fulkere NAT Ø Enable Freexail Dial on demark (with site smeaut smer)				
Dial on Demand	Disabled unless specified otherwise by Network Operations	10 C PRO 10 C Callesia 10 O Works 10 C Diverses 10 C Callesia 10 C Callesia	OPD (19 estavision Une Static 10-v4 Address				
PPPIP Extension	Disabled unless specified otherwise by Network Operations		Enable PPP Oebrg Mode Bridge PPPoE Frames Between WAN and Local Ports Multicast Preasy Enable IOM Mulcicat Preay				
Use Static IPv4 Address	Only use for static IP Settings			(And) (See			
Enable PPP Debug Mode	Disabled – this is only for sending PPP packets to the Syslog for temporary troubleshooting	,					
Bridge PPPoE Frames	Disabled - this will allow Clients to tunnel through the firewall to create a second PPPoE Session						
MultiCast Proxy	Disabled unless specified otherwise by Network						

2.C Routing - Default Gateway

Operations

			0 5 4 4 70			
	C http://192168.1.254/		ン - 習 C X 🏼 🍊 DSL Router	×		n x Q
The DHCP Interface should be	VisionNet				Login: admin	English •
allocated to the "Selected Default	Sateway GuickView	Routing Default Gateway				
Gateway" Interfaces	E WAN	Default gateway interface list can have mu	ultiple WAN interfaces served as system default ga	teways but only one will be used acco	rding to the priority with th	1e first
Galeway Interfaces.	PTM Interfaces PDSL Interfaces	being the higest and the last one the lowe:	ist priority if the WAN interface is connected. Priori	y order can be changed by removing	all and adding them back	n again.
	DSL Services	Selected Default Gateway Interfaces	Available Routed WAN Interfaces			
This can be changed later.	B 🚅 LAN	atm0.1				
	Calify of Service					
The gateway priority is arranged	E - M Routing	-				
from Top to Bottom	E T Print Server					
·	🖲 💊 Network Access Storage					
Catowaya that are not allocated	E 🐣 Service Groups					
Galeways, that are not anotaled,	B Certificates					
will not be used for the Routing	⊕—0;0 Wireless					
Table	Gateway Diagnostics		Back Next			
	E 😪 Management					
	← → ③ http://192.168.1.254/		ρ - B C × 🧐 DSL Router	×		nt ★ ¤
	VisionNet				Login: admin	English •
	Sateway GuickView	DNS Server Configuration				Â
	ETH Interfaces	Select DNS Server Interface from available static IPoE protocol is configured, Static D	e WAN interfaces OR enter static DNS server IP ad NS server IP addresses must be entered.	dresses for the system. In ATM mode	, if only a single PVC with	IPoA or
Very many and existing the Domessia	PTM Interfaces PDSL Interfaces	higest and the last one the lowest priority	ie WAN interfaces served as system and servers bi if the WAN interface is connected. Priority order ca	it only one will be used according to t in be changed by removing all and ad	ine priority with the first be Iding them back in again.	ing the
You may prioritize the Dynamic	DSL Services	Select DNS Server Interface from	m available WAN interfaces:			
DNS Servers	E 🚅 LAN	Selected DNS Server Interfaces	Available WAN Interfaces			
	Quality of Service	atm0.1				Е
or	E S Routing	->				
	B a Print Server	<-				
You may specify static DNS Servers	E Network Access Storage					
, , ,	E Service Groups					
	E Gertificates	Use the following Static DNS IP a Primary DNS server:	ddress:			
	•••••••••••••••••••••••••••••••••	Secondary DNS server:				
	Cateway Statistics					
	III 😪 Management					

2.E When complete you may approve the settings. You will see the service populated in the "WAN Services" table

Section 3.9 - Creating a Bridge WAN Service

Step 1: Selecting the WAN Service to Create

Interface

1.A Select the <u>"WAN"</u> tab located within the left-hand frameset.



1.B Select <u>"Add"</u>



1.C Select the desired WAN Interface


Step 2: Configuring the WAN Service

2.A WAN SERVICE CONFIGURATION.

Select W/AN		(-) (-) http://192.168.1.254/	▷ - 둘 순 X 🎯 DSL Route	a ×		nt ★ ¤
Service Type:	Bridging	VisionNet			Login: admin	English •
Enter Service Description	<u>Will not affect service – no</u> <u>spaces allowed</u>	O derway GuickVew WAN Service O	onfiguration ce type: met (PPPoE) net			
802.1P Tag (Only for VLAN Mux Services)	<u>-1 Untagged</u> Otherwise, choose approp tag	CAN Enter Service Des Construction Const	scription: br_0_0_33 e, enter valid 802.1P Priority and 802.1Q VLAN ID. vice, set -1 to both 802.1P Priority and 802.1Q VLAN ID. rsty [0-7]: 1 vib ID (0-4094);			
802.1Q Tag (Only for VLAN Mux Services)	<u>-1 Untagged</u> Otherwise, choose approp tag	B	for this service	ack] [Reat]		
		ny maguataway taosiana Di 🚱 Management				

2.B Select <u>"Next"</u> to complete the Bridge WAN Service

VisionNet						Login: admin	English
ateway QuickView	WAN Setup - Summa	ary					
WAN ETH Interfaces	Make sure that the set	ttings below match	the settings provided by	your ISP.			
PTM Interfaces	Connection Type:	Bridge					
-> DSL Interfaces	NAT:	Disabled					
DSL Services	Full Cone NAT:	Disabled					
1 AN	Firewall:	Disabled					
Carl .	IGMP Multicast:	Not Applicable					
y accumy Quality of Service Routing DHS Print Server	Quality Of Service: Click "Apply/Save" to h	Enabled	to be effective. Click "Bac	K" to make any modifica Back Apply/Sa	ations. ave		

Select "Apply / Save"

Section 3.10 - WAN Interface Prioritization

You may wish to support either the DSL or ATM Interface. You may choose the WAN Interface priority for your VisionNet gateway.

Step 1: Access the GUI to find the WAN Interface Page

1.A Select the <u>"WAN"</u> tab located within the left-hand frameset.



1.B Select the appropriate setting under <u>"WAN INTERFACE SELECTION"</u>

ATM Interface	DSL ONLY	WAN Interface Selection
Omni-Port Interface	Ethernet ONL	
Activate Omni-Port when no DSL Sync is present	DSL Primary, Ethernet Secondary	 ATM Interface Omni-Port Interface
Timeout Period	Time, after bo up, without E Sync prior to Ethernet Upli enabled	Activate Omni-Port when no DSL Sync is present timeout period 120 seconds Apply/Save

Section 3.11 - Gateway Prioritization

The VisionNet modem is designed to utilize each WAN specific gateway for it's intended purpose. You may specify which WAN Services are used for outbound traffic, and in which order, through Gateway Prioritization

Step 1: Access the GUI to find the Gateway Page

1.A Select the <u>"Routing"</u> tab located within the left-hand frameset.

	A http://192.168.1.254/	D-BCX Manager x
	VisionNet	Login admin English •
Then, In the left-hand frameset, select <u>"Default Gateway"</u>	Gateway GuickView With With With Guidy of tervice Guidy of tervice	Roting - Default Roteway Characterization of the lower wildsite VANI interfaces served as system default geteways but only one will be used according to the promy with the first served as system default geteways but only one will be used according to the promy will be first in association of the VANI interfaces is connected. Priority order con be charaged by removing all and adding them back in association of the VANI interfaces is connected. Priority order con be charaged by removing all and adding them back in association of the VANI interfaces is connected. Priority order con be charaged by removing all and adding them back in association of the VANI interfaces. Default Default Image: Static Default Cateway P Address Image: Static Default Eather Priority order on the Interfaces as the type default Prior geteway. Address: Static Default Eather Prior

1.B Check <u>"Select Default Gateway Interfaces"</u>

	Http://192168.1.254/	D - B C X ≤ 50, Roster ×
	VisionNet	Login: admin English 🝷
Gateways are prioritized from top to bottom	 Otherway GuidektWere Image: Second Sec	Rotage befault Cateway Constrained in the loss of the loss o

1,C Select "Save"

Section 3.12 - Universal Static Gateway Service

In the event that you would like to specify a universal gateway address, You may do so via the Gateway Prioritization Page

Step 1: Access the GUI to find the Gateway Page

1.A Select the <u>"Routing"</u> tab located within the left-hand frameset.

VisionNet	Login: admin English
Sateway QuickView	Routing Default Gateway
Bernel State Bernel State	Default geleway interface list can have multiple WAN interfaces served as system default geteways but only one will be used according to the priority with the first being the highest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in again.
🕀 🕼 Wireless 🕀 🔏 Gateway Diagnostics	Selected WAN Interface NO CONFIGURED INTERFACE

Then, In the left-hand frameset, select <u>"Default Gateway"</u>

1.B Check <u>"Enable Static Gateway IP Address"</u>

	A http://192168.1.254/	,Ω + ⊞ C X 👩 03, Reder ×
	VisionNet	Lögin admin English •
Enter the desired Static Gateway	Statuway Guick/New Image: Status Image: Status	Roted — Default Gateway Constrained in the last one the lower purple WAW interfaces use one default gateways but only one well be used according to the priority with the first method. Image: State Default Cateway Part is a state Default Cateway P Address Image: State Default Cateway P Address Too: Prior ***********************************

1,C Select "Save"

Section 3.13 - DNS Prioritization

You may use the DNS Server page to prioritize DNS Selection based upon WAN Services.

Step 1: Access the GUI to find the DNS Server Page

1.A Select the <u>"DNS"</u> tab located within the left-hand frameset.

	VisionNet	Login admin English •
Then, In the left-hand frameset, select <u>"DNS Server"</u>	Contraction of the second sec	DIS Server Configuration ************************************

1.B Select <u>"Select DNS Server Interfaces from available WAN Interfaces"</u>

VisionNet	Login admin English 💌
 ♦ Gateway QuickView ♦ ♦ WAN ♥ ↓ LAN ♥ ↓ Socurity 	DBS Server Configuration Select DIG Server Interface from available WAN interfaces OR enter static DNS server IP addresses for the system. In ATM mode, if only a single PVC with IPoA or static IPIC protocol is configured, Static DNS server IP addresses must be entered. DNS Server Interfaces can have multiple WAN interfaces server as system in servers but only one will be used according to the priority with the first being the highest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in again.
	DSelect DMS Server Interface from available WANI Interfaces: Selected DMS Server Available WANI Interfaces Pop0 pop1 co co
Conflicates Of Wireless Cadavay Diagenetics One Conflication On	Use the following Static DIS IP address: Primary DIS server: 8.8.8.8 Secondary DIS server: 8.8.4.4

	u gen o un mi
🛞 Gateway QuickView	DNS Server Configuration
🕀 🝚 WAN 🕀 🐙 LAN 🖻 👻 Security	Select DIS Server Interface from available WMM interfaces OR enter static DIS server P addresses for the system. In ATM mode, if only a single PPC with PbA or static PEP protocols is configured, Static DIS server P addresses must be entered. DIS Server Interfaces can have multiple WAM interfaces served as system dis servers but only one will be used according to the priority with the first being the highest and the size on the lower priority of the WAM interfaces is concelled. Privily order can be dranged by removing all and adding them loads in again.
B Quality of Service Quality of Service Quality of Service Oris Oris Oris Due Relined Oris Server Por Server Quality of Server	Disdect DHS Server Interface from available WAH interfaces: Selectad DMS Server Interfaces Interfaces Disdect DHS Server Available WAH Interfaces
P P	Use the following Static DHS IP address: Primary DHS server: 8.8.8.8 Secondary DHS server: 8.8.4.4

1.D Select <u>"Apply / Save"</u> and then reboot the modem

Otherwy Gustiver O Delect DIS Server Interface from available WAH interfaces: Second DIS Server Interfaces Available WAH interfaces: Second DIS Server Interfaces Available WAH interfaces Second DIS Server Interfaces Available WAH interfaces Available WAH interfaces Available WAH interfaces Second DIS Server Interfaces Available WAH interface	VisionNet	Login: admir	English •
Image: Second Diffs Server Available WAN Interfaces: Image: Second Diffs Server: Image: Second Diffs Server: Image: Sec	Gateway QuickView		
JAN Selected IDI Server Auslable WM Interfaces Selected IDI Server Auslable WM Interfaces Selected IDI Server Image: Selected IDI Server	- 🎱 wan	O DSelect DNS Server Interface from available WAN interfaces:	
Verify Verify	E P LAN	Selected DNS Server Available WAN Interfaces	
Cashiy of favories DDD01 Cashiy of favories DDD01 Cashiy of favories DDD01 DD01 favories DD01 DD02 favories DD01 DD02 favories DD02 DD02 favories DD02 DD02 favories DD02 DD02 favories B.B.B.B DD02 favories	🖯 💗 Security		
Insuring Image: State Stat	Quality of Service	ppp0 ppp1	
Q ons Image: Construction of the second and point of the	Routing		
	DNS Dynamic DNS DNS User Redirect DNS Server		
Settemp Access Binage Wee the following Static DBS IP address: Primary DBS Server: 8.8.8.8 Converse	Print Server		
Point Primary DIS Server: 8.8.8.8 Point Secondary DIS server: 8.8.4.4 Point Secondary DIS server: 8.8.4.4 Point Secondary DIS server: 8.8.4.4 Point Secondary DIS server: 8.8.8.8 Point Secondary DIS server: 8.8.4.4	Network Access Storage	Use the following Static DHS IP address:	
Generation	Service Groups	Primary DNS server: 8.8.8.8	
© Conflicters © Withours ▷ Add Streams ▷ Add Streams Statistics ○ Add Statement	- C IPSEC	Secondary DNS server: 8.8.4.4	
8:00 Miteeless 5: A dialogy Stagnotos 5: Ad Conteney Rotations 5: Ad Conteney Rotations	Certificates		
in ∑ advances ≪ ∎ Contrary Statistics ⊙ © Matagianes	0-00 Wireless		
e 🖬 Cateway Statistics	Cateway Diagnostics		
© 🚱 Management	Gateway Statistics		
	🖓 💊 Management		

Section 3.14 - Universal Static DNS Addresses

The VisionNet Modem may be assigned different DNS addresses for each WAN Service. In the event that Static IPs are to be used, you may update and change the settings with the following procedure.

Step 1: Access the GUI to find the DNS Server Page

1.A Select the <u>"DNS"</u> tab located within the left-hand frameset.

	VisionNet	Login admin English •
Then, In the left-hand frameset, select <u>"DNS Server"</u>	 Adversy QuestVier Adversy Ques	DIS Server Configuration Miss Every Endrafts from andiable WAN interfaces (Bx enter addresses for the system, is ATM mode, if only a single PPC with TM-A or exits the prevent is configured, Sale; DIS server: Enderses served as grader with the first being the highest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in egan. • Dedect DIS Server Interfaces (Data WAN interface): Selved DIS Server: Available WAN interfaces: Selved DIS Server: Available WAN interfaces: Display Available WAN interfaces: Display

1.B Select <u>"Use the following Static DNS IP Address"</u>

VisionNet	Login; admin English •
O Gateway QuickView ⊕ ↓ WAN ⊕ ↓ LAN ⊕ ↓ ↓ Security ⊕ ↓ ↓ Quality of Service	DRS Server Configuration Solute DRS Server Totafone from available WMI interfaces OR exter state DRS server IP addresses for the system. In ATM mode, if only a single PVC with PisA or state: Pice protocols is configured. State DRS server IP addresses and the external. DRS Server Interfaces can have nulliple WMI interfaces served as system dns servers but only one will be used according to the priority with the first being the higher and the late one the lowest priority if the WMI interfaces are considered. Priority order can be changed by removing all and adding them back in again.
Browing Offs Offs	Selected DItS Server Available WAN Interfaces
Br (crifficates Br ON Workss X dateway Diagnostics Br ↓ Gateway Statistics Br ↓ Gateway Statistics Br ↓ Gateway Statistics	the the following Static DIIS IP address: Primary DIS server: 8.8.8.8 Secondary DIS server: 8.8.4.4

1.C Enter the Primary and Secondary WAN DNS Addresses

VisionNet	Login: admin English	-
Gateway QuickView	DHS Server Configuration	
🔮 wan	Select DNS Server Interface from available WAN interfaces OR enter static DNS server IP addresses for the system. In ATM mode, if only a single PVC with IPoA or	
🐙 LAN	static IPoE protocol is configured, Static DNS server IP addresses must be entered. DNS Server Interfaces can have multiple WAN interfaces served as system dns servers but only one will be used according to the priority with the first being the	
👻 Security	higest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in again.	
Quality of Service		
Nouting	OSelect DNS Server Interface from available WAN interfaces:	
C DNS	Selected DNS Server Available WAN Interfaces	
	pppu ppp1	
Print Server	->	
Network Access Storage		
🖧 Service Groups		
IPSEC		
Certificates		
🙌 Wireless	Use the following Static DRS IP address:	
K Gateway Diagnostics	Primary DNS server: 8.8.8.8	
dateway Statistics	Secondary Uns Server: 6.8.4.4	
Nanagement		

1.D Select <u>"Apply / Save"</u> and then reboot the modem

VisionNet			2		 	Login: admin	English	•
👀 Gateway QuickView								
E 🔮 WAN	O DSelect DI	IS Server Interface	from available WAN inter	rfaces:				
E 🚅 LAN	Selected DNS Se Interfaces	rver	Available WAN Interface	es				
e) 👻 Security	[===0							
Quality of Service	ppp0 ppp1							
E S Routing								
🖯 🌊 DN S								
> Dynamic DNS		<-						
DNS User Redirect								
Print Server								
Network Access Storage	Use the format in the second secon	llowing Static DNS I	P address:					
Service Groups	Primary DNS ser	ver: 8.8.8.8						
D () IPSEC	Secondary DNS :	server: 8.8.4.4						
E Gertificates								
0:0 Wireless								
Cateway Diagnostics								
🗈 📢 Gateway Statistics								
🖲 😪 Management								

SECTION 4: PUBLIC WAN IP ADDRESS ALLOCATION

Section 4.1 - Public IP Allocation - Public Subnet (WAN Interface within Subnet)

Prior to configuring the modem for a Public WAN Subnet, you must obtain the following information:

- 1) The WAN Subnet to be used: (ie: 172.16.100.9 /29)
- 2) The WAN Gateway to be used
- 3) The WAN DNS Addresses to be used

Designation		IP Address	Subnet
Network ID	Â	172.20.111.144	255.255.255.248
Gateway WAN IP	-	172.20.111.145	255.255.255.248
Host B		172.20.111.146	255.255.255.248
Host C		172.20.111.147	255.255.255.248
Host D		172.20.111.148	255.255.255.248
Host E		172.20.111.149	255.255.255.248
Host F		172.20.111.150	255.255.255.248
Broadcast	(())	172.20.111.151	255.255.255.248

Step 1: Select the appropriate WAN Service for modification

1.A Create the desired WAN Interface

Enter the required Public IP

Information

				Login: admin	English
Gateway QuickView	WAN IP Settings				
B- WAN	Enter information provided Notice: If "Obtain an IP add If "Use the following Static :	to you by your ISP to con Iress automatically" is ch IP address" is chosen, er	nfigure the WAN IP settings. osen, DHCP will be enabled for PVC in IPoE mode. iter the WAN IP address, subnet mask and interface gateway.		
WAN Services	Obtain an IP address a	automatically			
DSL Services	Option 55 Request List :		(e.g:1,3,6,12)		
- 🚅 LAN	Option 58 Renewal Time:		(hour)		
1 in the second	Option 59 Rebinding Time:		(hour)		
- Jecuny	Option 60 Vendor ID:				
Quality of Service	Option 61 IAID:		(8 hexadecimal digits)		
Routing	Option 61 DUID:		(hexadecimal digit)		
🚯 DNS	Option 125:	Disable	© Enable		
all Print Server	Use the following Stati	ic IP address:			
	WAN IP Address:	172.20.100.146			
Thermork Access storage	WAN Subnet Mask:	255.255.255.248			
🗄 😤 Service Groups	WAN gateway IP Address:	172.20.100.145			
- 🗍 IPSEC	MTU[46-1518]:	1500			
- Grificates					
- 🕪 Wireless					
Gateway Diagnostics					
Gateway Statistics					
Shanapement					

1.B Ensure the following settings

NAT must be DISABLED

Firewall must be DISABLED

IGMP must be DISABLED



Step 2: Configure the Default Gateway

2.A You may need to specify the gateway interface if you are using a PPP connection. Select <u>"Routing"</u>



2.B You may also specify the static DNS Page by access "DNS" and then "DNS SERVER"

	VisionNet	Login admin English
You may enter the Static DNS Information	 O Safeway AudoNew O Mail O Mail O Link O Southy of Sarvice O Southy of Sarvice O Southy of Sarvice O Southy of Sarvice O Southy Sarvice O Sarvice Groups <li< th=""><th>DIS Server Configuration Act DIS Server Interfaces from scalable WWN interfaces acreated RDS server P addresses for the system. Is ATM mode, if only a single PVC with PAA as a system dis servers that do not will be used according to the prorry with the first being the links and the lower provide and adding them back in agent. Control Dis Server Interfaces can have multiple WWN interfaces served a system dis servers the date can be used with a control back with the first being the links and the lower provide in the date of the lower provide and adding them back in agent. Control Dis Server Interfaces from available WWN interfaces Test Dis Server Interface in control bit in the first being the WMN interfaces in the date of the date of the WMN interfaces in the date of the date of the WMN interfaces in the date date</th></li<>	DIS Server Configuration Act DIS Server Interfaces from scalable WWN interfaces acreated RDS server P addresses for the system. Is ATM mode, if only a single PVC with PAA as a system dis servers that do not will be used according to the prorry with the first being the links and the lower provide and adding them back in agent. Control Dis Server Interfaces can have multiple WWN interfaces served a system dis servers the date can be used with a control back with the first being the links and the lower provide in the date of the lower provide and adding them back in agent. Control Dis Server Interfaces from available WWN interfaces Test Dis Server Interface in control bit in the first being the WMN interfaces in the date of the date of the WMN interfaces in the date of the date of the WMN interfaces in the date date

2.C Select <u>"Save / Apply"</u>

3.A From the "LAN" page located in the left hand frameset under "Advanced Setup"

IP Address:	Same as the WAN Address	IP	
Subnet Mask:	255.255.255.248 (appropriate)	or	
Enable UPnP	Disabled		
Enable IGMP Snooping:	Disabled		
Enable LAN Side Firewall	Disabled	VisionNet Coal Area Retwork (LAR) Setup	Login: admin English 🗸
DHCP Server:	Enabled (Or Disab depending)	Configure the Broadband Router IP Address and Subnet Mask for LAN interface. Grouptame Default	
Start IP Address:	Second Host IP Address	B: We storely Enable ICMP Snooping D: District of storece 0 D: Distrece 0 <th>F</th>	F
End IP Address:	6 th Host IP Addres	■ (a) For Marcov ● Dosble OHCF Server ■ (b) For Marcov ● Control Endle OHCF Server ● (b) For Marcov ● Control Endle OHCF Server ● (b) For Marcov ● Control Endle OHCF Server ● (b) For Marcov ● Control Endle OHCF Server ● (c) For Marcov ● Control Endle OHCF Server ● (c) For Marcov ● Control Endle OHCF Server ● (c) For Marcov ● Control Endle OHCF Server	
Subnet Mask:	255.255.255.248	Orlinoiday Uris Sarties	
DNS Servers	Enter primary anc Secondary	Caube BinRy Relay DHCP Server Relay DHCP Server IP Address:	
Leased Time (hour):	24		
Reserve IP Address	Unnecessary		
Configure Secondary IP Address:	Unchecked		

3.B Once complete, select "Save/Reboot"

LEASE NOTE THAT LAN DEVICES MUST BE REBOOT PRIOR TO OBTAINING NEW, PUBLIC, IP ADDRESSES

PLEASE NOTE: THIS IS ONLY FOR BUSINESS CUSTOMERS WHO HAVE BEEN ASSIGNED A SERIES OF STATIC IP ADDRESSES. PLEASE OBTAIN APPROVAL FROM A SUPPORT MANAGER BEFORE BEGINNING THIS PROCEDURE

Prior to configuring the modem for a Public WAN Subnet, you must obtain the following information:

The WAN Subnet to be used: (ie: 172.16.100.144 /29)

Designation		IP Address	Subnet
Network ID	Â	172.20.111.144	255.255.255.248
Secondary LAN IP	<u>_</u>	172.20.111.145	255.255.255.248
Host B		172.20.111.146	255.255.255.248
Host C		172.20.111.147	255.255.255.248
Host D	-	172.20.111.148	255.255.255.248
Host E		172.20.111.149	255.255.255.248
Host F		172.20.111.150	255.255.255.248
Broadcast	((ı))	172.20.111.151	255.255.255.248

Why Virtual IP Allocation

You may wish to allocate IP Addresses, directly to devices, that are assigned to the customer; but not the primary WAN Interface of the Gateway



Step 1: Edit an existing WAN Connection

1.A In the left-hand frameset select "WAN"

		VisionNet Ordenova GustaVieve Ordenova GustaVieve Ordenova GustaVieve Ordenova Orden	Login admin English • Wide Area Retwork (WAV) Service Setup Choose Add, Remove or Edit to configure a VAV service over a selected interface. Interface Decorption Type VLand021/ VLand021/ Spane RAT, Friewall Divected Unabled Control Divector RAT Memory Edit ppp0 ppoce_0_0_35 Pype VLAN0 N/A N/A Divector Lando1 Deabled Deabled Deabled Deabled ppp1 ppoce_0_3/31 Pype VLAN0 N/A N/A Divector Lando1 Deabled
Then select "WAN Services"		 Curit Curit Curit Curit Curit Curit Curit Prot Server Curit Curit<!--</td--><td>Add Remove</td>	Add Remove
1.B	Choose the appropriate WAN Service, and select "Edit"	Construction Cons	<image/> <section-header><section-header><text><text></text></text></section-header></section-header>
1.C	Disable "Firewall" ONLY "ENABLE NAT" SHOULD BE ENABLED!!!	VisionAcia VisionAci	P Username and Password P Username and Password to establish your connection. In the boxes below, enter the user name and password that your ISP has P Username: COCCCCCCQMmyNrch.net P Service Nume: P Username: AUTO P Service Nume: P P P service Nume: P Service Nume: P Service Nume: P Service Nume: P Service Num: P Service Num: P Service Nume

1.D Review the WAN Setup Summary



Step 2: Direct Your Browser to the LAN Configuration Page

2.A Select the <u>"LAN"</u> tab located within the left-hand frameset.

	Casterway QuickView	IP Address: 192.168.1254 Login: add Subnet Mesix: 255.255.0	nin English •
Then, In the left-hand frameset,		Enable LAN side firewall Disable DHCP Server Enable DHCP Server Start PAddress: 192.168.1.64 End IP Address: 192.168.1.253 Primary DHS Server: 192.168.1.254 Secondry DHS Server: 182.68.8.8	
select <u>LAN IP Configuration</u>	B 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Lessof Time (Dov): 74 Stolic PL Steak Lift (A maximum 32 entries can be configured) Edit DHCP Option Edit DHCP Option 60 MAC Address IP Address Remove Add Entries Remove Entries	E
		Configure the second IP Address and Subnet Mask for LAN interface Apply/Save	

2.B Select Configure the Second IP Address and Subnet Mask for LAN Interface

	VisionNet		Login: admin	English •
	Sateway QuickView B WAN C VAN LAN LAN LAN LAN LAN LAN	Local Area Retwork (LAN) Setup Contgurs the Broadband Router IP Address and Submit Mask for LAN interfaces. GroupHame. Default P Address: ISS.365.1.1 Schem Holm 10.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.		
	 → IPv8 LAN Config → IGMP Force ⊕ Security ⊕ (all evolution of service) 	Sadmet Masi: (28.55.516.8)		
Enter the first usable Host within the desired subnet	B 🚱 Routing B 🕥 DNS B 🝙 Print Server B 🗞 Network Access Storage	Image: Enable LMX side freewall Dashib DHCP Server Enable DHCP Server Start IP Advisors Start IP Advisors End IP Advisors End IP Advisors		
Enter the Subnet Mask (255.255.255.248)	B 🔥 Service Groups B 🏠 IPSEC B 🔜 Certificates B - M Wireless	Wrang UDS Server (1) E2248.1.1 Secondary DS Server (1) E42.6.2.7 Leased Tree (hour): 18 Setcle TP uses List (A reactions 2) Betters can be configured Edit DH2P codom): Edit DH2P codom (2) Edit DH2P codom): Edit DH2P codom (3) EMC Advances stup: (MACAdvance () Madvance framework () Advances reaction () Advances framework () Adva		
	0 🔀 Gateway Diagnostics 0 📲 Gateway Statistics 10 😪 Management	(And Lantes) (Lancous Lantes)		
		12 Address (272-2011.1.1 Subnet Maak: 255 355 340 Apply(Save)		
	~			

Step 3: Configure Hosts

3.A EACH HOST MUST BE CONFIGURED WITH THE FOLLOWING SETTING

r

	Network Connection Detail	s 📃 🔀
	Network Connection Details	
	Property	Value
	Connection-specific DN Description Physical Address	Realtek RTL8102E/RTL8103E Family PC 00-1E-68-92-24-97
le Host	DHCP Enabled IPv4 Address	No 172.20.111.2
.255.255.248	IPv4 Subnet Mask IPv4 Default Gateway	255.255.255.240 172.20.111.1
able Host (CPE	IPv4 DNS Server IPv4 WINS Server	8.8.8.8
ose appropriate	NetBIOS over Tcpip En Link-local IPv6 Address IPv6 Default Gateway IPv6 DNS Server	Yes fe80::543b:8029:3e94f74d%12
	<	Þ
		Qose
	[

IP ADDRESS: Usable Host

Subnet Mask: 255.255.255.248

Gateway: First Usable Host (CPE LAN IP Address)

DNS Address: Choose appropriate Birch DNS Servers

Section 4.3 - Public IP Allocation - 1:1 NAT Public Subnet

Prior to configuring the modem for a Public WAN Subnet, you must obtain the following information:

- 1) The WAN Subnet to be used: (ie: 172.16.100.144 /29)
- 2) The WAN Gateway to be used
- 3) The WAN DNS Addresses to be used

Designation	IP Address	Subnet
Network ID	172.20.111.144	255.255.255.248
Host A	172.20.111.145	255.255.255.248
Host B	172.20.111.146	255.255.255.248
Host C	172.20.111.147	255.255.255.248
Host D	172.20.111.148	255.255.255.248
Host E	172.20.111.149	255.255.255.248
Host F	172.20.111.150	255.255.255.248
Broadcast ((w)	172.20.111.151	255.255.255.248

Why 1:1 NAT (Multi-NAT)

Multi-NAT will allow you to forward traffic, destined for a WAN IP Address within the assigned subnet, to an internal Host assigned with a private LAN IP.



Step 1: Edit an existing WAN Connection

1.A In the left-hand frameset select "WAN"

I.a Choose the appropriate WAN Service, and select "Edit" I.a Disable "Firewall" I.a Disable "Firewall"				
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Then select "WAN Services"			PTM Interfaces DSI Interfaces	Interface Description Type Vlan8021p VlanMuxId Igmp NAT Firewall IPv6 Mid Remove Edit
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tring subsets B So Mangement			Colored Colored Colored	Use Static IPV4 Address
10 Ng Management			and answer statistics	
			🗄 🔫 Management	

1.D Review the WAN Setup Summary



Step 2: Apply Static LAN IPs to Devices to that will have direct WAN Access

2.A Please see section 4.2 for further instruction

Step 3: Configure 1:1 NAT

3.A In the left-hand frameset select "Security"





3.C Review the NAT Table



Section 4.4 - Public IP Allocation - PPPIP Extension

Why PPPIP Extension?

- You may wish for the modem to manage the PPP Authentication
- You may wish for the IP Address, obtained by the Gateway, to forward to a LAN Host
- You may not wish for a full subnet to be assigned

PPPIP Extension will forward the Gateway's WAN IP to the first LAN Host that makes a DHCP request

Step 1: When creating a WAN Connection

1.A PPP Configuration



1.B	NAT must be DISABI FD	A -					
		VisionNet				Login: admin	English -
		Sateway QuickView	WAN Setup - Summa	iry			
	Full Cone NAT must be DISABLED	E 🔮 WAN	Make sure that the sett	ings below mat	tch the settings provided by your ISP.		
		PTM Interfaces	Connection Type:	Bridge			
		> DSL Interfaces	NAT	Enabled	-		
	Circurall mount has DICADIED	FWAN Services	Full Case NAT	Disabled	-		
	FIREWAIL MUST DE DISABLED	- DSL Services	Full Colle RAT:	Disabled			
		🕀 🧬 LAN	Firewaii:	Disabled			
		🖲 🤪 Security	IGMP MURICAST:	Not Applicable			
		The Country of Security	Quality Of Service:	Disabled			
		Contraction of the service	Click "Apply/Save" to ha	ave this interfac	ace to be effective. Click "Back" to make any modifications.		
		E 😏 Routing			Back Apply/Save		
		E CNS					
		🖲 🚠 Print Server					
		1 Network Access Storage					
		🗈 😤 Service Groups					
		E (IPSEC					
		E Gertificates					
		🛨 🐶 Wireless					
		E 🔏 Gateway Diagnostics					
		🗈 📢 Gateway Statistics					
		🗈 🍳 Management					

1.C The LAN Section will be modified automatically

· · · · · · · · · · · · · · · · ·		,D ~ B C × G DSL Router ×	ń 🕇	3
VisionNet			Login: admin English	•
Gateway QuickView	Local Area Netwo	rk (LAII) Setup		
S WAN	Configure the Broad	band Router IP Address and Subnet Mask for LAN interface. GroupName Default •		
LAN LAN IP Configuration IPv6 LAN Config IGMP Force	IP Address: Subnet Mask:	192.168.1.254 255.255.255.0		
Security	Enable IGMP Si	tooping		
Quality of Service				
Routing				
C DNS	Enable LAN sid	e firewall		
Print Server				
Network Access Storage				
Service Groups				
IPSEC				
Certificates				
(i) Wireless				
X Gateway Diagnostics				
Gateway Statistics				
S Management				

SECTION 5: LAN CONFIGURATION

Section 5.1 - Configuration LAN Services

Step 1: Direct Your Browser to the LAN Configuration Page

Configure the LAN IP Characteristics

1.A Select the <u>"LAN"</u> tab located within the left-hand frameset.

	VisionNet	Login	admin	English -	
	Caterway QuickView Cr WAN Cr VAN Cr LAN IP Configuration 	Local Area Network (LAN) Setup Configure the Broadband Router IP Address and Subnet Mask for LAN interface. GroupHame Default IP Address: 192.168.1.254 Subnet Mask: 255.255.0			
Then, In the left-hand frameset, select <u>"LAN IP CONFIGURATION"</u>	 Standy Standy Standy Stands Standy Cost Standy Cost Stands 	Enable IZMP Snooping Enable IZMP Snooping Deable DMCP Server Enable DMCP Server Set DM Address: 192.164.1.64 End P Address: 192.164.1.23 Primary DMS server: 0.0.0.0 Second PMCP Address: 192.164.1.23 Primary DMS server: 0.0.0.0 Second PMCP Address: 192.164.1.23 End DMCP Option DE Edit DMCP Option 60 DMCP Advance setup Add Entrines Remove Entries Remove Entries			Ξ

Step 2: Configure LAN Settings

2.A

IP Address:	192.168.1.254
Subnet Mask:	255.255.255.0
Enable IGMP Snooping:	Unchecked
DHCP Server:	Enabled
Start IP Address:	192.168.1.64
End IP Address:	192.168.1.10
Primary DNS Server:	192.168.1.25
Secondary DNS Server:	WAN DNS Ad
Leased Time (hour):	24
All other settings	Unnecessary
Configure Second IP Address:	Unchecked

2.B Select <u>"Apply / Save"</u>

Section 5.2 - Reserving an IP Address Within the DHCP Server

DEFINITION OF RESERVED IP

Some applications (Such as Port Triggering and DMZ Host) require a Static IP Address. Some devices, however, do not support Static IP Addresses or are portable in nature.

These devices may be provided a Static IP Address via the DHCP Server. When a Reserved IP Address is specified, the modem will consistently provide the same dynamic IP Address to the specified MAC Address. The Reserved IP Address will not be assigned to any other LAN Devices.

Prior to Assigning the Reserved IP Address, you must determine the MAC Address of the target LAN Device. You may copy the MAC Address from the ARP Table located within the Device Info Section of the GUI.

Step 1: Direct Your Browser to the LAN Configuration Page

1.A Select the <u>"LAN"</u> tab located within the left-hand frameset.

		() Vision Not				Logic advice	English -
		Visioniver	IP Address:	192.168.1.254		Login: admin	million .
		🛞 Gateway QuickView	Subnet Mask:	255.255.255.0			ŕ
		🗉 🔮 WAN	Enable IGMP Snoon	na			
		🖻 🚅 LAN					
		IPv6 LAN Configuration IPv6 LAN Config IGMP Force					
		🖲 💓 Security	Enable LAN side fire	wall			
		🗄 🔞 Quality of Service	O Disable DHCP Serve	r			
		🗉 🛞 Routing	Enable DHCP Server Start IP Address:	102 168 1 64			
		🕀 🔩 DNS	End IP Address:	192.168.1.253			
	Then, in the left-hand frameset,	🗄 💼 Print Server	Primary DNS server	192.168.1.254			
	select "I AN IP Configuration"	E-S Network Access Storage	Secondary DNS serv	ver: 8.8.8.8			
	Scient LAITIN Coningulation	🗄 💑 Service Groups	Leased Time (hour) Static IP Lease List:	: 24 (A maximum 32 entries can be configured)			
		IB- 🕼 IP SEC	Edit DHCP Op	tion Edit DHCP Option 60 D	HCP Advance setup		E
		E-	MAC Address	IP Address Remove			
		E-40 Wireless	Add Entries	Remove Entries			
		E 🔀 Gateway Diagnostics					
		🗈 ┥ Gateway Statistics					
		🗄 💊 Management					
			Configure the second	IP Address and Subnet Mask for LAN interface	3		
					Apply/Save		-
1 D	Select "Add Entries"						
1.D	Select Add Entries						
		VisionNet				Login: admin	English •
		Gateway QuickView	DHCP Static IP Lease				
		🗈 🕒 wan	Enter the Mac address a	nd Static IP address then click Apply/Save .			
		I LAN IP Configuration	MAC Address:	11:22:33:AA:BB:CC			
		IGMP Force	IP Address:	192.168.1.201			
	You will be re-directed to the	🗈 🥡 Security					
	"DUCD Static ID Lease" Bage	Quality of Service			Apply/Save		
	DHCP Static IP Lease Page	Routing					
		🕀 🕰 DN S					
	Entox the NAAC Address of the	🖲 🚊 Print Server					
	Enter the MAC Address of the	Network Access Storage					
	intended LAN Host, and the IP	🗈 💑 Service Groups					
	Addross that you would like to	D () IPSEC					
	Address that you would like to	Certificates					
	permanently allocate to that host.	⊕-00 Wireless					
		Gateway Diagnostics					
		Gateway Statistics					
		🖲 😪 Management					

Section 5.3 - IGMP Force

IGMP Rules

When IGMP Proxy is used, you may force the IGMP values and conventions.

There are times that you may wish to define one protocol exclusively (IE IGMP v3 in lieu of v2)

Step 1: Direct Your Browser to the LAN Configuration Page

1.A Select the <u>"LAN"</u> tab located within the left-hand frameset.

	C 🔿 🧭 tttp://192.168.1.254/		ρ - ≣ ¢ × 🩆 DSL Ro	uter ×		n+¢
	VisionNet				Login: admin	English 💌
	(Gateway QuickView	IGMP Configuration				Â.
	🕀 🥌 WAN	Enter IGMP protocol configuration fields if you	want modify default values sh	own below.		
Then, In the left-hand frameset, select <u>"IGMP Force"</u>	 ⇒ Mat → Mat MP Configuration → Mat MP Configuration →	Default Version: Query Intervol (c): Query Response Intervol (1/10s): Last Member Query Intervol (1/10s): Robustness Value: Mastimum Multicast Group Members: Rat Leave Enable: LAN to LAN (fran LAN) Multicast Enable: BYTV Acceleration Enable:	3 125 100 2 2 25 25 25 25 27 27 27 27			н
	D ∩ #EC D ∩ Certificates D 0 Networks D × A abovey Disposition D • • • • • • • • • • • • • • • • • • •	MLD Configuration Enter MLD protocol (IPv6 Multicast) configurab Default Version: Query Intervol (s): Query Response Intervol (1/106): Lost Nember Query Intervol (1/106): Robustness Value: Modimum Multicast Concesses //co.2140.02	on fields if you want modify de 2 125 100 10 2 10 10 10 10 10 10 10 10 10 10 10 10 10	stault values shown below.		

1.B Make desired changes

Select <u>"Apply Save"</u> 1.C

SECTION 6: SECURITY CONFIGURATION

Section 6.1 – Port Forwarding

VISIONNET MODEMS ARE PRE-CONFIGURED FOR THE FOLLOWING APPLICATIONS:

XBOX:

UPnP will resolve most XBOX issues, however should you need to do further trouble-shooting the following Port Forwarding Rules may be enabled

Designation	WAN Port	LAN IP	LAN Port	Protocol
XBOX Live	88	192.168.1.230	88	TCP/UDP
XBOX Live	3074	192.168.1.230	3074	TCP/UDP

The most effective method of utilizing these rules, is to request that the end-user change the IP Address of their XBOX to the following Static IP settings:

XBOX Configuration			
IP Address 192.168.1.230			
Subnet Mask	255.255.255.0		
Gateway Address	192.168.1.254		
DNS Address	192.168.1.254		

IP CAMERAS:

IP Camera Port Forwarding Rules have been enabled

Designation	WAN Port	LAN IP	LAN Port	Protocol
Camera 1	6231	192.168.1.231	80	TCP/UDP
Camera 2	6232	192.168.1.232	80	TCP/UDP
Camera 3	6233	192.168.1.233	80	TCP/UDP
Camera 4	6234	192.168.1.234	80	TCP/UDP

The most effective method of utilizing these rules, is to request that the end-user change the IP Address of their Camera to the following Static IP settings:

IP Camera Configuration			
IP Address	192.168.1.23x		
Subnet Mask 255.255.255.0			
Gateway Address	192.168.1.254		
DNS Address	192.168.1.254		

The customer will remotely access their camera by pointing their browser to the Public IP Address of the modem, and appending the appropriate port number. (ie: 67.126.108.104:6231)

The customer should have either a static IP, or a DynDNS URL Account to ensure that they may access the camera consistently. The customer can configure DynDNS settings via the end-user login.

Step 1: Direct Your Browser to the Port Forwarding Configuration Page

1.A Select the <u>"Security"</u> tab located within the left-hand frameset.



1.B Select the <u>"Add"</u> Button.

Please Note: If the port to be assigned is already specified in the existing Port Forwarding Table, you must remove the rule containing this port prior to creating a new one.

Step 2: Configure the Port Forwarding Rule

2.A	Choose the nai	me of the rule
L ./	choose the nul	ne or the rule

Choose the appropriate WAN	VisionNet						Login: admin	English
Interface:	Sateway QuickView	NAT Virtual Serve	rs					
	🕀 🝚 WAN	Select the service nam	e, and enter the ser	rver IP addr	ess and click "Apply/S	save" to forward IP packe	ts for this service to the specified server.	
	🗄 🍠 LAN	"Internal Port Start	, then "Internal I	Port End" v	will be set to the sa	me value as "Internal	Port Start".	y
f the Service vou would like to	E 👻 Security	Remaining number o	r entries that car	1 be config	ured:32			
, have is already available in the		Use Interface Service Name:	pppoe_0_0_35/p	pp0 -				
lave is alleady available in the	Port Forwarding	Select a Service:	Select One			-		
<u>"Select a Service"</u> menu, you may		U Custom Service:						
select this service for auto-	DMZ Host Algorithm	Server IP Address:	192.168.1.					
						Apply/Save		
population.	Bridge Access Control	Colored Dock Chart	whereas Death Faul	Onataon	d Jahamal Dash C	ant Internal Dept Cod		
	Quality of Service	external Port Start	xternal Port Ellu	TCP	• Internal Port S	tartunternai Port End		
	🗷 🥎 Routing			TCP	•			
	🗉 🔩 DNS			TCP	•			
	🗉 🚊 Print Server			TCP	•			
lou mou creata a quetam Comica hu	E Network Access Storage			TOP	•			
ou may create a custom service by	E Service Groups			TCP	•			
electing <u>"Custom Service</u> " and	te- () IPSEC			тср	•			
entering a new rule name	E (1) Windows			TCP	•			
citering a new rule liame	E-X Gateway Diagnostics			TCP	-			
	Cateway Statistics			TCP				

2.B Enter the port rules

This is the port that will be used to

External Port Start	This is the port that will be used to access the device on the WAN Side	
External Port End	This should be the same as "External Port Start"	
Protocol	This should be "TCP/UDP" to avoid possible errors due to end-user mis- communication	Logn: admin English -)
Internal Port Start	This should be the port that the device "listens" on (see IP Came example)	NAT - Virtual Servers Solet the server and other the server IP address and click "Apply/Gave" to forward IP packets for this service to the specified server. NOTE: The "Internal Port Ed" cannot be modified directly, inormally, it is set to the same value as "External Port End". However, if you modify "Internal Port Start", the "Select associate internal Port Start". Use Interface pppe_0_0_3[sppp0 ~] Service Tame: • © Cuton Service: Server IP Address: 192.168.1.
External Port End	This should be the same as "Int _i Port Start"	Kpply/Sixe External Port Start External Port End TCP Internal Port End Internal Port End TCP TCP Internal Port End Internal Port End Internal Port End TCP TCP Internal Port End Internal Port End Internal Port End
Remote IP	This should left blank, unless on Contract of the should left blank, unless on Contract of the should left blank, unless on Contract of the should be allowed to access this pc	TCP Image: Constraint of the constra

2.C Select "Save/Apply"

2.D Considerations

For this rule to work properly, the LAN device must have either a Static IP, or a Reserved IP

The LAN Device, and modem, may should be reset to ensure that this rule continues to work correctly

Section 6.2 - Port Triggering

DEFINITION OF PORT TRIGGERING

Port Triggering is a dynamic version of Port Forwarding, in which the modem will dynamically create a temporary port forwarding rule based upon outbound activity. This is best applied for LAN devices that communicate with a remote server. Basic VPN functions are already supported by default, but some applications use non-standard communication methods.

An example would be port triggering configuration for the Nortel Contivity VPN Solution, which uses non-standard port VPN ports and requires Port Triggering to work.

The following are the port triggering rules required for Nortel Contivity VPNs.

	LAN Device Outbound Port	Outbound Protocol	Port Temporarily Forwarded to Initiating LAN Device	Inbound Protocol
Port Triggering for Nortel Contivity	500	TCP/UDP	500	TCP/UDP
VPINS	10001	TCP/UDP	10001	TCP/UDP

In this scenario, a LAN Device (ie: The end-user's laptop) will make an outbound UDP request on ports 500 and 10001. The modem responds to this by temporarily forwarding ports 500 and 10001 to the IP address of the initiating LAN Device (ie: The end-users laptop) for the life of the session.

Port Triggering is ideal for portable devices (ie:laptops, PDAs, etc) which require port forwarding, but for which a Static LAN IP would be antithetical to the device's common usage.

Step 1: Direct Your Browser to the Port Triggering Configuration Page

1.A Select the <u>"Security"</u> tab located within the left-hand frameset.

	VisionNet	Login: admin English •
	Gateway QuickView	NAT Port Triggering Setup
	E 🔮 WAN E 🚅 LAN	Some applications require that specific ports in the Router's firewall be opened for access by the remote parties. Port Trigger dynamically opens up the 'Open Ports' in the firewall when an application on the LAM initiates a 'CP/UPC connection to a remote party using the 'Triggering Ports'. The Adulter allows the remote party from the WAM idea to advalide new connections hard to the advalidation of the Market Advalidation and the Advalidation and
Then, In the left-hand frameset, select <u>"Port Triggering"</u>	Security Security	the work side is exaction here contractions sack of the application in the use of use dailing upper rots. A material of a final social data of the application from the original social
Select the "Add" Button	*	

1.B Select the <u>"Add"</u> Button.

Please Note: If the port to be assigned is already specified in the existing Port Triggering Table, you must remove the rule containing this port prior to creating a new one.

Step 2: Configure the Port Forwarding Rule

2.A Select the appropriate WAN Interface

		VisionNet	Login: admin English
If th have <u>"Sel</u> sele pop You sele ente	e Service you would like to e is already available in the <u>ect a Service</u> " menu, you may ct this service for auto- ulation. may create a custom Service by cting <u>"Custom Application</u> " and ering a new rule name	♥ Caterery Catalyler ♥ Wolt ♥ ♥ Wolt ♥ ♥ Search ● ♥ FileInition • ● Out Allowand Control • ● Out Allowand Control • ● ● Out Allowand Control <td>HC - Crit Trigent Box capacitations such as quench, values configurent succean applications and adhers negative that specific ports in the Router's framed beapend for data.com.com.com.com.com.com.com.com.com.com</td>	HC - Crit Trigent Box capacitations such as quench, values configurent succean applications and adhers negative that specific ports in the Router's framed beapend for data.com.com.com.com.com.com.com.com.com.com
B Ente	er the port rules		
Trigger Port Start	This is the port that the LAN de uses to initiate a session	vice	
Trigger Port End	however, may use a succession of p In this case you will enter the final that range. If these ports are not in succession	port in	
			English English
	must enter the next port as anothe	VisionNet	Login: admin Login: admin
	must enter the next port as anothe in the rule	VisionNef Oateway QuickView WAN	Lager: amm Lager:
Protocol	must enter the next port as anothe in the rule This should be "TCP/UDP" to av possible errors due to end-user	C VisionNet C VisionNet C VisionNet C VisionNet C VisionNet C VisionNet C VisionNet C VisionNet C VisionNet C Visi	Login annin Login annin Login annin Login anni Login anni Login anni Login annin Login ann
Protocol	must enter the next port as anothe in the rule This should be "TCP/UDP" to av possible errors due to end-user communication	Caterers Catalogue Caterers Catalogue Wat Caterers Catalogue Caterers Cater	It open antia I
rotocol Open Port tart	must enter the next port as another in the rule This should be "TCP/UDP" to an possible errors due to end-user communication This is the WAN Port that the remote server will reply on	Colorenzy CalcolVery Colorenzy CalcolVery Woll Woll Source of the second	Light atom Interpretations was a games, video conferencing, remote access applications and others require that specific ports in the Router's freewall be opened for access interpretations. You can configure the port satisfing from this scene by selecting an existing application or resting your own (Custom application)and click. With applications. You can configure the port satisfing from this scene by selecting an existing application or resting your own (Custom application)and click. With applications. You can configure the port satisfing from this scene by selecting an existing application or resting your own (Custom application)and click. With applications. You can configure the port satisfing from this scene by selecting an existing application or resting your own (Custom application)and click. With applications. You can configure the port satisfing from this scene by selecting application. Program front Start Trigger Port fort Trigger Port
rotocol Open Port itart	must enter the next port as another in the rule This should be "TCP/UDP" to an possible errors due to end-user communication This is the WAN Port that the remote server will reply on This will usually match the "Open F Start" parameter; some application however, may use a succession of p	Vision/Ver Vision/Ve	Control Control
rotocol Open Port tart Open Port ind	must enter the next port as another in the rule This should be "TCP/UDP" to an possible errors due to end-user communication This is the WAN Port that the remote server will reply on This will usually match the "Open F Start" parameter; some application however, may use a succession of p In this case you will enter the final that range.	Vision/Ver Vision/Ve	Light and Displayed and Sector Sec
Protocol Open Port Start Open Port End	 must enter the next port as another in the rule This should be "TCP/UDP" to an possible errors due to end-user communication This is the WAN Port that the remote server will reply on This will usually match the "Open P Start" parameter; some application however, may use a succession of p In this case you will enter the final that range. If these ports are not in succession must enter the next port as another in the rule 	Sources (Second Second Se	Light Wing Wing Wing Wing Wing Wing Wing Wing

2.C Select "Save/Apply"

2.D Considerations

It may be difficult to determine which ports must be used for a particular application. It is best to specify the LAN device as the DMZ host to see if this resolves the issue.

If this does not resolve the issue, the port triggering rule should be removed and replaced with port forwarding. Once port forwarding has been verified to work then port triggering may be re-visited. If port triggering does not work, then further research should be done to identify the behavior of the communication between the LAN device and the Server.

Section 6.3 - DMZ Host

DEFINITION OF DMZ Host

In the event that a remote application attempts to communicate via an inactive, or unspecified, port; the port will be dynamically forwarded to the IP Address specified as the DMZ Host.

If a specific device is to be assigned as a DMZ host, this device should have either a Static IP or a Reserved IP.

Step 1: Direct Your Browser to the DMZ Host Configuration Page

1.A Select the <u>"Security"</u> tab located within the left-hand frameset.

Then, In the left-hand frameset, select <u>"DMZ Host"</u>	Constraints Constrain	NAT DNZ Host The Bradhaud Router will forward IP packets from the WANI that do not belong to any of the applications configured in the Virtual Servers to computer. Enter the computer's IP address and click 'Apply to activate the DMZ host. Clear the IP address field and click 'Apply' to deactivate the DMZ host. DMZ Host IP Address: Apply/Sere	Login: admin	English •
	B 🔹 DNS B 💼 Print Server B 🔊 Network Access Storage			
	B-Co Service Groups B-Ci IPSEC			
	Image: Certificates Image: Optimizer Statistics Image: Optimizer Statistics			

1.B Enter the desired DMZ Host IP Address

	VisionNet	Login: admin English 👻
	Sateway QuickView	NAT DMZ Host
	WAN Security Security Source of the filtering Poly of the filtering Pol	The Broadband Router will forward IP packets from the WANI that do not belong to any of the applications configured in the Virtual Servers table to the DMZ host computer. Enter the computer's IP address and click 'Apply' to activate the DMZ host. Clear the IP address field and click 'Apply' to deactivate the DMZ host. DMZ Host IP Address: 1921.168.1.11
will receive all non-specified traffic.	Housi Nat Housi Nat	Apply/Stwe
This device should have either a Static IP or Reserved IP	B Quality of Envirol Quality of Envirol Quality of Envirol Quality Data Prod Envirol Quality Prod Envirol Quality Prod Envirol Quality Prod Envirol Quality Quality Quality Quality Quality Quality Quality Quality	

1.C Select the <u>"Save/Apply"</u> Button.

Section 6.4 - UPnP

UPnP Definition

Some applications, such as the XBOX, will require UPnP for operation. UPnP will dictate how devices share information on the LAN, and the Dynamic port rules to be used for Internet Content.

Step 1: Direct Your Browser to the UPnP Page

1.A Select the <u>"Security"</u> tab located within the left-hand frameset.



Section 6.5 – Algorithm Enable / Disable

Algorithms Defined

The VisionNet gateway can open ports, based on industry standards and conventions, when certain traffic is detected. You must enable or disable these algorithms to adjust operation.

These algorithm port conventions are only honored when the Firewall is enabled

Step 1: Direct Your Browser to the Algorithm Page

1.A Select the <u>"Security"</u> tab located within the left-hand frameset.



Section 6.6 - WAN Access Control (Parental Controls)

WAN Access Control

The VisionNet Gateway can allow / disallow WAN Access to LAN hosts by a weekly time schedule. MAC Addresses are used to identify devices.

Step 1: Direct Your Browser to the WAN Access Control Page

1.A Select the <u>"Security"</u> tab located within the left-hand frameset.



1.B Define Access Time Restrictions

UserName	This is simply for organizational purposes and does not affect performance	C D C Leger admin English · C Leger admin
	Browser's MAC Address:	This page adds time of day restriction to a special LAN device connected to the Router. The 'Browser's MAC Address' automatically displays the MAC address of the LAN device. To find out the MAC address of the other LAN device. To find out the MAC address of a Windows based PC, go to command window and type 'pocntig' Jan'.
MAC Address	MAC Address of host accessing the Other MAC Address: User Defined	Coupering if Haming User Taining Ver Faming Prof Founding Generation Coupering Couper
Days of the Week	Address Days of the Week that Blocking be applied	Apply/Save Genes G
Start / Stop Blocking Time	Time where device will be restri from the WAN	Dig Fried Sorver Dig Feldmark Access Strape Dig

Section 6.7 - URL Filtering (Parental Controls)

URL Filtering

The VisionNet Gateway can allow / disallow access to certain URLs.

Step 1: Direct Your Browser to the WAN Access Control Page

1.A Select the <u>"Security"</u> tab located within the left-hand frameset.


Section 6.8 - IP Filtering

IP Filtering

You may restrict inbound or outbound traffic based upon Layer 3 Identification

Step 1: Direct Your Browser to the WAN Access Control Page

Select the <u>"Security"</u> tab located within the left-hand frameset. 1.A



1.B **Define IP Filtering**

	🗲 🎯 🥖 http://192.168.1.254/		× 5 🛚 - Q	OSL Router	×		nt ★ ¤
	VisionNet					Login: admin	English 💌
Define at least one condition for identification of traffic	Solution Solution	Add IJ Filter Incoming The screen allows you to create a fi conditions in the filter rule must be Filter Name: Protocol Source By Address(scope) Source Pay Address(scope) Source Pay (or or portpart): Destination Pay Address(scope) Destination	Iter rule to identify iscoming satisfied for the rule to take name Pr4 • 8.8.0 8.8.0 8.8.0 8.8.0 8.8.0 8.8.0 8.8.0 9.0 8.0 8.0 9.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	g IP traffic by specifying a new effect. Click 'Apply/Seve' to se - [8.8.8.9 	filer name and at least one condition below. A we and activate the filter.	All of the specified	

1.C Select "Apply Save"

Section 6.9 - Bridge Access Control

Bridge Access Control

You may restrict or allow MAC based traffic for Bridge Interfaces

Step 1: Direct Your Browser to the WAN Access Control Page

1.A Select the <u>"Security"</u> tab located within the left-hand frameset.



1.C Select <u>"Apply Save"</u>

SECTION 7: Quality of Service

Section 7.1: QoS Enable / Disable

Step 1: Access the QoS Enable / Disable Page

1.A Select the <u>"Quality of Service"</u> tab located within the left-hand frameset.

	G http://192.168.1.254/	. ָ ָ ָ ָ ָ ָ ָ ָ ָ ָ ָ ָ ָ ָ ָ ָ ָ ָ ָ
	VisionNet	Login: admin English •
You may Enable QoS	Sateway QulokView	QoS Queue Management Configuration If Enable QoS checkbox is selected, choose a default DSCP mark to automatically mark incoming traffic without reference to a particular classifier. Click 'Apply/Seve' button to serve it.
Unless specified otherwise, do not change the Default DSCP Mark	Quality of Service Quality of Service Queue Configuration Queue Configuration Queue Configuration	Note: If Enable Qos checkbox is not selected, all QoS will be disabled for all interfaces. Note: The default DSCP mark is used to mark all egress packets that do not match any classification rules. []] Enable QoS
This will enable QoS rules within the device	D € ons D € mot server D € inductive Access Storage D € secc D € secc D € secc D € theses D € the	Select Default DSCP Mark Too Change(-1)

1.B Select "Save / Apply"

Section 7.2 - QoS Interface Configuration

You may add, enable, and remove the QoS Interface Prioritization Table within this page.

Step 1: Direct Your Browser to the QoS Interface Configuration Page

1.A Select the <u>"Security"</u> tab located within the left-hand frameset.

	C C Mttp://192168.1.254/		_		P - ⊠ C	🛛 X 🧉 DSL Ri	outer	×					† ★∃
	Control Contro	QoS Queue Setup In ATM mode, maximu In PTM mode, maximu For each Ethernet inter If you disable WMM fur	im 16 c im 8 qu rface, r nction i	queues can b Jeues can be maximum 4 q in Wireless P	e configured. configured. ueues can be con ge, queues relate	figured. Id to wireless w	ill not take	effect				Login: admin	English 👻
Then, In the left-hand frameset, select:	Q Quality of Service Qos Enable / Disable Ouse Configuration Ouse Configuration OsS Classification Review Review	Name WMM Voice Priority WMM Voice Priority	Key 1 2	Interface wi0 wi0	Scheduler Alg SP SP	Precedence 1 2	Weight	DSL Latency	PTM Priority	Enabled Enabled	Remove		
Queue Configuration	한 📢 DNS 한 🚖 Print Server 한 💊 Network Access Storage 한 🔗 Service Groups	WMM Video Priority WMM Video Priority WMM Best Effort	3 4 5	wi0 wi0 wi0	SP SP SP	3 4 5				Enabled Enabled Enabled			
	B () IP SEC B () Certificates B () Wireless B () Kireless B () Kireless	WMM Background WMM Background WMM Best Effort Default Queue	6 7 8 33	wi0 wi0 wi0 atm0	SP SP SP SP	6 7 8 8		Path0		Enabled Enabled Enabled			
	🔁 📢 Gateway Statistics	Default Queue Add Enable Rer	34 nove	atm1	SP	8		Path0		E			

Enable / Disable Rules 1.B

You must enable a rule for it to take precedence. You may also create Queue precedence for interfaces within this section

🗧 🔿 🙆 http://192.168.1.254/				Q + ₪	🖞 🗙 👩 DSL R	outer	×					* *
VisionNet											Login: admin	English •
S Gateway QuickView	QoS Queue Setup											
Ð 🔮 WAN	In ATM mode, maximi	ım 16	queues can b	e configured.								
e 🐙 lan	In PTM mode, maximu For each Ethernet inte	ım 8 q rface,	ueues can be maximum 4 (configured. queues can be con	figured.							
🗑 👻 Security	If you disable WMM fu	nction	in Wireless P	age, queues relat	ed to wireless w	rill not take	effect					
Quality of Service	The QoS function ha	is bee	n disabled.	Queues would n	ot take effect							
- CoS Enable / Disable	Name	Key	Interface	Scheduler Ala	Precedence	Weight	DSL Latency	PTM Priority	Enable	Remove	1	
- QoS Classification	WMM Voice Priority	1	wi0	SP	1		,		Enabled			
🗄 🥎 Routing	WMM Voice Priority	2	wi0	SP	2				Enabled			
- 🔹 DNS	WMM Video Priority	3	wi0	SP	3				Enabled			
💼 Print Server	W/MM Video Priority	4	win	CP	4				Enabled			
🗟 🗞 Network Access Storage	WRAM Death Effect			50					Cashled			
🖯 💑 Service Groups	WMM Best Errort	5	wito	56	5				Crabled			
- 🗍 IPSEC	wimm Background	0	WIU	50	0				chabled			
Certificates	WMM Background	-	WIU	SP	/				Enabled			
	WMM Best Effort	8	vil0	SP	8				Enabled			
- 🔀 Gateway Diagnostics	Default Queue	33	atm0	SP	8		Path0					
Gateway Statistics	Default Queue	34	atm1	SP	8		Path0					
🕂 💊 Management			1									
	Add Enable Re	move	1									

1.C Select "Apply Save"

Section 7.3 - QoS Classification

You may add, enable, and remove the QoS Configuration

Step 1: Direct Your Browser to the WAN Access Control Page

1.A Select the <u>"Security"</u> tab located within the left-hand frameset.

	O VisionNet	ρ - ≘ d × jog DS. Router × A Cogin: admin English •
	Sateway GuickView □ □	QoS Classification Setup A maximum 32 entries can be configured. Onose Add or Nemve to configure astronk traffic classes. If you deable WMM function in Wiveless Page, disalitation related to wiveless will not take effects The QeS function has been disabled. Classification rules would not take effects.
Then, In the left-hand frameset, select:	(a) Quality of Service (a) Quality of Service (a) Quality of Service (bable (b	CLASSIFICATION CRITERIA Class Grow Name Classification criteria Classification criteria Name Classification criteria Name Classification criteria Name Classification criteria Name Classification criteria Name Classification criteria Name Na
QoS Classification	 ⊕ Print Server ♥ Network Access Storage ⊕ ♥ Service Groups ⊕ ● SEC ⊕ ■ Certificates 	
	용·야 Wireless 용·값 Gateway Diagnostics 용·네 Gateway Statistics 용·	

1.B **Create a new QoS Classification**



1.C Select "Apply Save"

SECTION 8: Service Grouping

Section 8.1: Service Group Logic

The Service Group Operates similarly to port mapping of the past. A WAN interface may provide service, to particular Interfaces, independent of other services.

The key difference between Service Grouping, and Port Mapping of the past, is that the VisionNet device supports multiple NAT Sessions, DHCP Servers, and Network Conventions between Service Grouping.

A Service Group, Therefore, Operates similarly to a traditional VLAN; except that the VLAN Tagging conventions are transparent to the administrator.

Group's IP Services Operate Independently of Each Other



Step 1: Direct Your Browser to the Service Group Page

1.A Select the <u>"Service Groups"</u> tab located within the left-hand frameset.



1.B Select Add

You may select physical interfaces to be grouped together with specific WAN services. These will operate independently of the primary gateway operation.

You may also group clients by DHCP Vendor IDs (Boot P Classification)

	D - ≅ C X 👩 D3. Router ×	* ★ \$
VisionNet VisionNet Wat Wat Vision VisionNet VisionNet	Logic admin Eng 4. Click Apply/Save button to make the changes effective immediately HePORTANT If a vendor ID is configured for a specific client device, please REBOOT the client device attached to the modem to allow it to obtain an appropriate IP address. Group Rise: [PTV	lish 🔻
Image: Second	Automatically Add Clents With the following DHCP Vendor IDs	

1.C Select <u>"Apply Save"</u>

Section 8.3 – Service Group LAN Management

Step 1: Direct Your Browser to the LAN Page

select:

1.A Select the <u>"LAN"</u> tab located within the left-hand frameset.



1.B Select the appropriate GroupName

You may configure the Service Group LAN Settings independent of the Primary Service Group

🗲 🌀 🧭 http://192.168.1.254/	D + B C × G DSL Router ×	↑ ★¤
VisionNet		Login: admin English •
Image: Second Secon	Local Area Betevork (LAD) Setup Configure the Broadband Router P Address and Subbet Mask for LADI interface. GroupHame PTV • Product Mask Mathematic Broadband Book Broadband Book<	
		Ŧ

1.C Select "Apply Save"

SECTION 9: CONFIGURATION SETTINGS

Section 9.0 – Configuration File Logic

Ŕ	Running Configuration	Configuration in Use
Ø	Startup Configuration	 Automatically updated from Running Configuration
80	Default Configuration	• Default Settings retained during "reset"
**	Factory Configuration	• Only accessible from a board reclaim

Device Reset Behavior



Section 9.1 – Save Backup Configuration

When to save the Backup Configuration:

Prior to making remote changes to the modem

Where to save the backup configuration:

It is suggested that the backup configuration is kept on your PC Desktop and given a customer name

Step 1: Access the GUI to find Backup Configuration Tool

1.A Select the <u>"Management"</u> tab located within the left-hand frameset.

	VisionNet		Login: admin	English 👻
Then, In the left-hand frameset, select <u>"Settings"</u>	Or Sateway Guide/View Or Sateway Guide/View Or Sateway Guide/View Or Sateway Sateway Or Or Sateway Or Sateway Or Sateway Sateway	Backup Settings Backup Settings Update Settings Update Settings Update Settings Castor Default Settings		

1.B Select <u>"Backup Settings"</u> and choose your download location via your browser's download tool.



Section 9.2 - OverWrite Default Configuration

When to update the default configuration:

ONLY UPDATE THE DEFAULT CONFIGURATION WITH APPROVAL FROM A SUPPORT MANAGER.

The VisionNet modem comes with a pre-configured default configuration. In the event that you would like to access the original configuration, please ask the customer to hold the reset button for 5 seconds.

Behavior of the Default Configuration:

The default configuration is loaded to the running configuration when the customer holds the modem's reset button for 5 seconds. It is also loaded to the running configuration when <u>"Restore Default"</u> is selected within the GUI.

Step 1: Access the GUI to find the Default Configuration Page

1.A The "Update Default Configuration" page is hidden within the GUI to prevent un-authorized access.

http://XXX.XXX.XXX.XXX/customer	Backup Current Settings as User Settings
<u>main.html</u>	Backup current Broadband Router settings as the user settings.
	Backup Current Settings
Where XXX.XXX.XXX.XXX	
Is the IP address of the modem	
(either local or remote)	

- 1.B.1 You may select "Backup Current Settings" to save the running configuration as the default configuration Or -
- 1.B Select <u>"Browse"</u> button and choose your file location via your browser's upload tool.

	oad 🛛 🔀
	top 🕨 🤜 😽 Search Desktop 🔎
	ew folder 🚽 🗍 🔞
ect the <u>"Update User Settings"</u> son	Image: Second state Image: Second state Image: Second state Image: Second state
	Network System Folder File name: All Files (*.*) Open Cance

Section 9.3 - Update the Running Configuration

When to update the Running Configuration:

When you wish to test new settings without affecting the default configuration.

Behavior of the Running Configuration:

The running configuration only affects the modems functionality during operation and standard reboots. It is erased when the customer presses the reset button or the <u>"Restore Default"</u> function is activated.

Step 1: Access the GUI to find Backup Configuration Tool

1.A Select the <u>"Management"</u> tab located within the left-hand frameset.

	Vision Nat		Login: admin	English •
	Visioniver		Login, aurnin	Lightin
	Sateway QuickView	Backup Settings		
	🗉 🔮 WAN	Backup Broadband Router configurations. You may save your router configurations to a file on your PC.		
	🗄 🧈 LAN			
	🗉 👻 Security	Backup Settings		
Then, In the left-hand frameset,	E - O Quality of Service			
coloct "Cottings"	🗄 🥎 Routing	Undate Settings		
select <u>Settings</u>	🗉 🔩 DNS	opuace securitys		
	🗄 🚋 Print Server	Update Broadband Router settings. You may update your router settings using your saved files.		
	🗉 💊 Network Access Storage	Settings File Name: Browse		
	🗄 💑 Service Groups	Update Settings		
	🕀 🎧 IPSEC			
	🖲 🔜 Certificates			
	⊕-%Ø Wireless	Restore Default Settings		
	🖲 🔀 Gateway Diagnostics	Restore Broadband Router settings to the factory defaults.		
	🗈 📢 Gateway Statistics			
	🖃 💊 Management	Restore Default Settings		
	> Settings			
	Access Control			
	> SNMP Agent			
	+ ACS Client			
	→ NTP Client			
	Firmware Upgrade			
	Werm Reboot			

1.B Select <u>"Browse"</u> button and choose your file location via your browser's upload tool.



Section 9.4 - Restore the Default Settings

When to Restore the Default Settings

When undocumented changes have been made that limit Internet Access, or the customer has made changes that affect performance.

Restoring the Default Settings via the GUI

1.A Select the <u>"Management"</u> tab located within the left-hand frameset.



1.B Select the <u>"Restore Default Settings"</u>.



Restoring the Default Settings via the Reset Button



2.B Wait for the modem to reboot

Section 9.5 - Update Firmware

There may be times that you are requested, by a support manager, to update the product software.

Step 1: Access the GUI to find the Update Firmware Tool

1.A Select the <u>"Management "</u>tab located within the left-hand frameset.



1.B Select the <u>"Browse"</u> button and select the firmware file on your PC



1.C Once you have specified the firmware, select the "Update Software" button. The modem will reset itself.

Section 9.6 - Rebooting the Modem

Sometimes, the modem may need to be reset in order for changes to take effect, or to re-initialize network settings.

Rebooting the modem will reboot the modem to the running configuration, not the default configuration.

Step 1: Access the GUI to find the Reboot Tool

1.A Select the <u>"Management"</u> tab located within the left-hand frameset.



1.B Select the <u>"Reboot"</u> button. The modem will reset itself with the running configuration



Section 9.7 – SNMP Configuration

SNMP Traps will allow for you to monitor modem performance

Step 1: Access the GUI and find the SNMP Configuration Page

1.A Select the <u>"Management"</u> tab located within the left-hand frameset.

		.D + ≅ C X ≤ 05. Router ×	n+≈
	VisionNet	Login: admin	English 💌
Then, In the left-hand frameset, select <u>"SNMP"</u>	B)	SHUP - Ondpuration Single leavoirt Management Protocol (SHMP) allows a management application to retrieve statistics and status from the SMMP agent in this device. SHMP - Agent @ Onable Set Community: pinkin Set Community: pinkin Set Community: pinkin System Names: instancion System Contract: instancion System Contract: instancion System Contract: instancion	

Section 9.8 – ACS Configuration

ACS / TR-069 Servers may be used to access the Gateway.

Step 1: Access the GUI and find the ACS Configuration Page

1.A Select the <u>"Management"</u> tab located within the left-hand frameset.

	G http://192168.1.254/		D → B C × 🍊 DSL Router	x	ň*	×
	VisionNet			l	Login: admin English 💌	
Then, In the left-hand frameset, select <u>"ACS Client"</u>		TR-069 client - Configuration WAM Management Protocol (TR-069) all Select the desired volues and click 'Apply Jnform Enform Interval: ACS URL: ACS UBER Hames: ACS UBER Hames: ACS Pressover): WAM Interface used by TR-069 client: Display SOAP messages on serial consol IC connection Request Authentication Connection Request Passwort: Connection Request Port: Connection Request URL:	ws a Auto-Configuration Server (ACS) to perfor //Sow' to configure the TR-069 client options. © Deable © Enable 300 admin Any_VKAN • © Deable © Enable admin 	n auto-configuration, provision, collection, and diagon	ostics to this device.	

Section 9.9 – NTP Configuration

Network Time Protocol is necessary for accurate SysLog TimeStamps

Step 1: Access the GUI and find the SNMP Configuration Page

1.A Select the <u>"Management"</u> tab located within the left-hand frameset.

	() http://192168.1.254/	D + B C × j OS. Router	× * *
Then, In the left-hand frameset, select <u>"NTP"</u>	Alterna Access Storage Access Access Storage Access Access Storage Access Access Storage Access Access Access Access Access Access Access Access A	P + B C X CQL Roter Time settings The page allows you to the modern's time configuration. If Anomatically synchronizes with Internet time servers First NTP time server: implanmy com • Second INTP time server: implanmy com • Third NTP time server: implanmy com • First NTP time server: implanmy com • Third NTP time server: None • First NTP time server: None • First NTP time server: None •	× A ★ Q Login: admin English •
	B → PHAC B → Centralize B → Centralize B → Centralize B → Centralize B → Centralize B → Centralize B → Centralize - Statispi - S	Time zone offset: (GMT-68.00) Pacific Time, Tijuana	•

Section 9.10 - IP Restriction

This will create Access Control Lists for remote and local Access

Step 1: Access the GUI and find the SNMP Configuration Page

1.A Select the <u>"Management"</u> tab located within the left-hand frameset.

Then, In the left-hand frameset,			ව - ඕ Ĉ X 🍊 DSL Rou	ter	×			nt ★ ¤
select <u>"IP Restriction"</u>	VisionNet						Login: admin	English •
NOTE: YOU MUST ENTER THE LAN IPs, AND THE APPROPRIATE WAN IPs BEFORE YOU ENABLE THE ACL.	 B and LAN B and Service B Quality of Service B Quality of Service B Quality of Service 	IP Address The IP Address Access Control mode, if enabled, p Control mode is disabled, the system will not valid Control mode Scass Control Mode	ermits access to local man ate IP adresses for incomin	agement services fr g packets. The serv	om IP addr ices are the	esses contained in the Ac	ccess Control List. If the , ad in the Service Control	Access List.
IF YOU ENABLE THE ACL WITHOUT THIS TABLE BUILT, YOU WILL NEED TO DEFAULT THE UNIT	Image: Service Strange Image: Service Strange <t< th=""><th></th><th>Start IP Address 132.168.1.1 67.126.108.150</th><th>End IP Address 192.168.1.254 67.126.108.150 id Delete</th><th>Remove</th><th></th><th></th><th></th></t<>		Start IP Address 132.168.1.1 67.126.108.150	End IP Address 192.168.1.254 67.126.108.150 id Delete	Remove			

Section 9.11 - Remote Access

The VisionNet modems come pre-configured to allow remote management access.

Step 1: Access the GUI to find the Remote Access Tool

1.A Select the <u>"Management"</u> tab located within the left-hand frameset.

	VisionNet						Login: admin	Eng
	Sateway QuickView	Access Co	ontrol Se	rvices				
Then, In the left-hand frameset,	🗄 🍚 WAN	Services a	cess contro	list (SCL) e	enable or dis	able the running services.		
coloct "Accoss Control"	🗄 🍠 LAN	WAN TOP	aufacas a			1		
Select Access control	🗄 👻 Security	Services	I AN	WAN	Port			
	E - Ouality of Service	UTTO	ET enable	Easable	20			
	🗉 🥎 Routing	nite	enable	E enable	00	-		
	🗉 🔍 DNS	TELNET	🛛 enable	🖾 enable	23	-		
Then. In the drop-down box, select	🗄 💼 Print Server	SSH	🔳 enable	📰 enable	22	_		
	🗄 🗞 Network Access Storage	FTP	🗷 enable	🗐 enable	21			
"WAN Interface: AIM 0 or AIM 1"	🗄 🔧 Service Groups	TFTP	🗹 enable	🗐 enable	69			
(Depending upon which network	II- 🗍 IPSEC	ICMP	enable	🗐 enable	0	-		
	🗄 🌄 Certificates	CHMD	191 analyte	100 analyle	161	-		
the device is operating)	🗄 🕪 Wireless	Shine	(*) enable	endule	101	-		
	🗄 🔀 Gateway Diagnostics	SAMBA	enable 🛛	enable []	445			
	🗄 📢 Gateway Statistics					Apply/Save		
	🖃 💊 Management							
	Settings Access Control							
	> System Log							
	IP Restriction IVTP Client							
	> Management Accounts							
	Firmware Upgrade							

1.B Select / Unselect each option. The Default Settings are specified below

Protocol	LAN	WAN	Port		
FTP	?	?	21	VisionNet Access Control Services	Login admin English •
нттр	?	?	80		
ICMP	?	?	N/A	Image: Second	
SNMP	?	?	161	Image: Constraints State State <td></td>	
SSH	?	?	22	Concept Rations Apply/Save Apply/Save	
Telnet	?	?	23	- x-62 Grann - x-87 Research - MARP Classif - Management Actions - Finness Liggerse - Finness Liggerse	
TFTP	?	?	69		

1.C Select the <u>"Save / Apply"</u> button

SECTION 10: WiFi Configuration

Section 10.1 - WIRELESS CHANNEL CONFIGURATION

When to change the Wireless Channel.

Many items in your home, and your immediate neighbors' homes, likely use the 2.4 Ghz range. There are 11 possible channels that may be used within this spectrum. If your wireless connection becomes very slow, or drops, there may be other devices that are impeding upon your network. This is when you should consider changing your wireless channel.

Step 1: Direct Your Browser to the Global Wireless Configuration Page

Then, In the left-hand frameset,

select <u>"Global Settings"</u>

1.A Select the <u>"Wireless"</u> tab located within the left-hand frameset.



1.B Enter the desired Channel.

1, 6, and 11 tend to operate the best.

Other Channels to consider are 3 and 9.

Once you have selected the new channel, select "Save/Apply" at the bottom of the screen.

VisionNet		Login: enduser English
 O Gateway QuiokView O WAN I IAN 	Wireless Advanced This page allows you to configurate to a particular speed, set t the access point, set XPress m Click 'Apply/Save' to configure	re advanced features of the wireless LAN interface. You can select a particular channel on which to operate, force the transmission is fragmentation threadoid, set the RTS threadoid, set the wakeup interval for clients in power-save mode, set the beacon interval for de and set which are short or long preambles are used.
🗄 😼 Security 🕀 🌊 DNS	Band: Channel:	24GHz 1 Current: 1 (Interference: acceptable)
🗈 💼 Print Server	Auto Channel Timer(min) 802.11n/EWC: Bandwidth:	0 Auto • Will be 12 4G Band and 40MHz in 5G Band • Current: 20MHz
Of PSEC Of Wretess Sto Sto Sto Sto Security Settings NAC Filtering WiFi Bridging WiFi Bridging Stobal Settings	Control Sideband: 802.11n Rate: 802.11n Protection: Support 802.11n Client Only: RIFS Advertisement: OBSS Co-Existance:	Lower * Auto * Auto * Off * Off * Off *
E 🔀 Gateway Diagnostics	RX Chain Power Save: RX Chain Power Save Quiet Time:	Enable *
🗄 💊 Management	RX Chain Power Save PPS: Radio Power Save: Radio Power Save Quiet Time:	10 Dinable * 19 10
	Radio Power Save On Time: 54g Rate: Multicast Rate:	100 110 100 100 100 100 100 100

1.C Select the <u>"Save/Apply"</u> Button.

Section 10.2 - SSID CONFIGURATION

When to change the Wireless SSID

You may wish to broadcast a different network name than the one provided; change the broadcasting conventions; or alter the services advertised by the BSSID.

Step 1: Direct Your Browser to the SSID Configuration Page

1.A Select the <u>"Wireless"</u> tab located within the left-hand frameset.

	G 🔗 🧭 http://192.168.1.254/	戶 ~ 물 순 X 🙋 DSL Router × · · · · · · · · · · · · · · · · · ·
	VisionNet	Login enduser English •
Then, In the left-hand frameset, select <u>"SSID"</u>	 Quadrumy Quickliner Quadrumy Quadrumy Quickliner Quadrumy Quadrumy Quadrumy	Wirekes laad: This page allows you to configure basic features of the wireless LAN interface. You can enable or disable the wireless LAN interface, hide the network from active cock dypelycele to configure basic basic wireless options. Image: Enable Wireless Image: Enable Wireless Image: Enable Wireless Multicast Ferwarding (WMF) Image: Enable Wireless Multicast Ferwarding (WMF) <t< th=""></t<>

1.B Enter the new SSID Name

Enable Wireless	Wireless should be enabled											
Hide Access Point	The SSID Name will not be broadcas			₽-≣¢×	🦰 DSL Router		×				ń★¤	
Clients Isolation	No direct WiFi to WiFi connections	VisionNet Gateway GuickView	Wireless Basic	sturae of the wirelase I	M interface. Y	iou can enable	a or disable t	he wireless I AN int	arfara hida tha	Login: admin	English •	
Disable WMM Advertise	This should be enabled. Older devices may not support this feature	 What An An	Initia page alone you do contigue e pass rea scans, set wireless network norme (alon Click 'Apply/Save' to configure the basic wir Enable Wireless Hide Access Point Clients Isolation	kales of the wress D known as SSID) and r reless options.	estrict the cha	nnel set base	d on country	requirements.	errace, nice cre	network normal	LIVE	
Enable WMF	This should be enabled; some wirel- devices will make Multicast request	Print Server Network Access Storage Service Groups Print JSEC Service Groups Cetificates	Disable WMM Advertise Enable Wireless Multicast Forwardin SSID: VisionNet BSSID: F4:5F:F7:0C:5E:87 Country: UNITED STATES	ng (WME)	•						E	
SSID	THIS IS WHERE YOU DEFINE THE SSI NAME	•• VIFI Bridging •• VIFI Bridging	Max Clients: 16 Wireless - Guest/Virtual Access Points	s:	Disable	Enable Max	ncom					
BSSID	No modification – this is the MAC Address that is advertised	Gateway Diagnostics Gateway Statistics Gateway Statistics Gateway Statistics	Cuest1 Cuest2 Cuest3 Cuest3	Clents	Advertise	WMF Clier 16 16 16 16	N/A N/A N/A					
Country	United States is the support module	2										

Max Clients Limits the amount of devices that can connect

1.C Guest / Virtual SSIDs

1.C Select the <u>"Save/Apply"</u> Button.

Section 10.3 - WIRELESS ENCRYPTION

You may wish to use a special login password for your wireless network.

NEVER LEAVE YOUR NETWORK UNENCRYPTED!!! THIS IS VERY INSECURE AND COULD RESULT IN LEGAL TROUBLE SHOULD AN UNAUTHORIZED USER USES YOUR NETWORK FOR ILLEGAL ACTIVITY!

Step 1: Direct Your Browser to the Security Settings Page

1.A Select the <u>"Wireless"</u> tab located within the left-hand frameset.

	C A ttp://192.168.1.254/	254/ 요 중 중 사 (중 DSL Router ×	↑ ★≎
	VisionNet		ogin: enduser English 💌
Then, In the left-hand frameset, select <u>"Security Settings"</u>	VISIONNEY VISIONNEY Catalogue Catal	Wireless - Security This page allows you to configure security features of the wireless LAN interface. You may setup configures meansity OK through VHF Protected Setup(VHFS) WPS Secup Enable WPS Disabled • Manual Setup AP You can set the network submittation methods, seled data encryption, goed/where a retwork submittation method, seled data encryption, service and security the encryption strength.	gore engager Linguan .
	- vivi Badger - Otoci Senga 9 💥 Osci Senga 9 📢 Galaxy Randon 8 🖓 Kaugement	Click Applyser within done. Select SSID: NexdSSIDName100 VPVAVALTShopsphrase: VPVAVALTShopsphrase: VPVAVALTShopsphrase: VPVAVALTShopsphrase: VPVAVALTShopsphrase: VPVAVALTShopsphrase: VPVAVALTShopsphrase: VPVAVATShopsphrase:	

1.B Under "Manual Setup AP"

Select SSID	Choose your network name	2		
	WPA2-PSK is preferable.	O O Inter/ 192158.1254 VisionNet	♪ - Ξ C X 🦨 DS, Router x Login. e	nduser English ▼
Network Authentication	Some devices may require ' PSK WEP should not be used ur	O Gateway GuickView Image: Second	Wrekes - Back This page allow you to configure back features of the wireless LAN interface. You can enable or disable the wireless LAN interface, hole the network const, set the wireless network constrained (also shown as SSD) and restrict the channel set based on country requirements. Click 'ApplySet' to configure the back wireless options. Image: Enable Wireless Image: Hole Access Point Image: Overs Solidon Image: Wireless	: from active
	the consumer device in question only support WEP	B C B PSEC PSess PSES PSES	Image: Enable Wireless Multicest Forwarding (WMF) SSID: VisionNet BSSD: Fr4:3F::P7:4CS8:87 Country: [UIRTED STATES **] Max Clents: 16	
WPA Passphrase	Enter the new password	Caleway Usgnostics	Apply/Save	
Group Rekey interval	0			
	AES is preferable			
WPA Encryption	Some devices may require TKIP+AES			

1.C Select the <u>"Click Here to Display"</u> Button; and verify your encryption key.

1.D Select the <u>"Save/Apply"</u>Button.

Section 10.4- GLOBAL SETTINGS

When to change the GLOBAL SETTINGS

Some devices offer very specific support for Wireless. Listed below are the items that may be changed; along with VisionNet suggested settings

Step 1: Direct Your Browser to the Global Settings Page

1.A Select the <u>"Wireless"</u> tab located within the left-hand frameset.

C 3 (112168.1.254)	Ω → B C × G DSL Router ×	÷.	* ¤
VisionNet		Login: enduser English	•
 Otherway Gutskiter Image: Annow Gutskiter<!--</th--><th>Wreless Security The page allows you to configure security features of the writeless LAN interface. Toge Toge</th><th></th><th>E</th>	Wreless Security The page allows you to configure security features of the writeless LAN interface. Toge		E
	Construction C	Image: Statustic statustic Image: Statustic statustic	Image: State of the

1.B Under "Wireless - Advanced"

BAND	2.4Ghz is the only band supported			
Channel	This is selected based upon network environment	the		
Auto Channel	If the wireless channel is se Auto, you must specify the timeout-	Band: Channel: Auto Channel Timer(min)	2.4GHz ▼ 1 ▼ 0	Current: 1 (interference: acceptable)
Timer	Devices will be disconnecte during a channel change	802.11n/EWC: Bandwidth: Control Sideband: 802.11n Rate:	Auto 20MHz in 2.4G Band and 40 Lower Auto	MHz in 5G Band Current: 20MHz Current: None
	All devices support 20Mhz	802.11n Protection: Support 802.11n Client Only:	Auto	
Bandwidth	Only some devices support Mhz	RIFS Advertisement: OBSS Co-Existance:	Off ▼ Disable ▼	
	20 Mhz is therefore preferr	RX Chain Power Save: RX Chain Power Save Quiet Time: RX Chain Power Save PPS:	10	
Control Sidebar	40Mhz operation uses two channels – the second chan is related to the primary channel	nel		

1.C Under "Wireless - Advanced"

802.11N Only	Off				
RIFS Advertisment	Off				
Kill & Advertishient	This is a legacy protocol				
	Off				
	This is used in environment	S			
ODCC Consistence	where multiple APs use the				
OBSS COexistence	same BSSID Name - but thi	Support 802.11n Client Only:	Off 🝷		
	open up the possibility of	RIFS Advertisement:	Off 🝷		
	hacking if not in a controlle	OBSS Co-Existance:	Disable 💌		
	environment	RX Chain Power Save:	Enable 🔻		
	Off	RX Chain Power Save Quiet	10]	
RX Chain Power		RX Chain Power Save PPS	10	1	
Save	WMM is preferrable	Radio Power Save:	Disable 🔻		
		Radio Power Save Ouiet Time:	10]	
	Auto	Radio Power Save PPS:	10	1	
MultiCast Rate		Radio Power Save On Time	50]	
	Defeat	54g Rate:	1 Mbps 🔻	1	
Basic Rate	Default	Multicast Rate:	Auto 🔻		
		Basic Rate:	Default	•	
	Disabled	Fragmentation Threshold:	2346	1	
		RTS Threshold:	2347	1	
Xpress Technology	This is only for Broadcom	DTIM Interval:	1	1	
	Wireless clients - We do no	Beacon Interval:	100	ĺ	
	suggest Proprietary Setting	Global Max Clients:	16	ĺ	
	100%	XPress Technology:	Disabled 🔻		
	100%	Transmit Power:	100% -		
	You may wish diminish out	WMM(Wi-Fi Multimedia):	Enabled 💌		
Transmit Power	in MTUs where there are m	WMM No Acknowledgement:	Disabled 🔻		
indistine i owei	APs in the area – You canno	WMM APSD:	Enabled -		
	however, control other				
	Consumer Electronics				Apply/Save
	Enabled – This is required for	or			
WMM	higher speeds – only WMM				
	Advertise should be disable	d			
WMM No	Disabled - some devices ma	٩V			
Acknowledgement	not support this	~1			
		that			
	replaces the PX Chain now	ulat or			
	save ontions	.1			

1.D Select the <u>"Save/Apply"</u> Button.

Section 10.5- MAC FILTERING

When to MAC Filtering

MAC Filtering is not a security measure, and does not replace encryption. Even with MAC Filtering you can sniff packets for review; and MAC Addresses can be spoofed.

MAC Address filtering, however, can help to minimize the effects of unwanted requests, and the connection of average users.

Step 1: Direct Your Browser to the MAC Filter Page

1.A Select the <u>"Wireless"</u> tab located within the left-hand frameset.



1.B Select the appropriate SSID, and then select Add

VisionNet		Login: admin	English
Gateway QuickView	Wireless MAC Filter		
S WAN	Enter the MAC address and click 'Apply/Save' to add the MAC address to the wireless MAC address filters.		
JAN LAN	MAC Address:		
Security			
Quality of Service	Apply/Save		
Routing			
CN S			
Print Server			
Network Access Storage			
😤 Service Groups			
A IPSEC			
Gertificates			
00 Wireless			
SSID			
- MAC Filtering			
> WiFi Bridging			
Studial bettings			
A Gateway Diagnostics			
Gateway Statistics			

You may now add a MAC Address to be filtered

Section 10.6 - Wireless Bridge

What is Wireless Bridge

Wireless Bridge allows an AP to connect to another AP to rebroadcast the network

Step 1: Direct Your Browser to the Wireless Bridge Page

1.A Select the <u>"Wireless"</u> tab located within the left-hand frameset.; then select "Wireless Bridging"

Then, In the left-ha <u>Filtering"</u>	and frameset, select <u>"MAC</u>	 MisionNet 		୦ ଅ କ ପ୍	X 🙆 DSL Router	×	Login: admin	↑★☆ English ▼
AP Mode Bridge Restrict Remote Bridges	Select Wireless Bridge or Access Point Disabled if you are using Bridging; If enabled other APs will not be allow connect The MAC Addresses of the allowed Bridges	Staturey Guideline Staturey Guideline Statur	Wireless infage The page allows you to configure a system of the obsele access point fur indecting Enabled analysis of the Enabled analysis of the obselet Citic Warder Vir update the reader Citic Vir Angel Sowe to configure the AP Mote: Index Restrict: Remote Bridges MAC Address:	wireless bridge features of citizenality. Selecting Access bridge restriction. Bridge restriction. Bridge restriction. Bridge options. Access bridge options. Access bridge options.	the wireless LAN interface. You Point enables access paint fur Point anables access paint fur point for the second second second second second seconds to update.	can select Wireless Bridge (also know ctanselby, Wireless bridge functionality functionality). Bridges will be granted access.	n as Wireless Distribution will still be evaluable and v bridge will be granted ac	treless Ass.

1.B Select "Apply / Save"

SECTION 11: PRODUCT DEPICTIONS AND BEHAVIOR

Section 11.1 - Product Depictions

M505N LED VIEW



M505N REAR VIEW



Section 11.2 - LED Behavior

LED Label	Purpose	Location	Color/Behavior					
Power	Status Power/	Front	Solid Green - Power On					
	Router		Off - Power Off					
			Flashing Red – Flashing Power on self test					
			Solid Red - Failure (not bootable) or device malfunction					
			A malfunction is any error of internal sequence or state that will prevent the device					
			From connecting to the DSLAM or passing customer data. This may be identified at various times such after power on or during operation through the use of self testing or in operations which result in a					
			unit state that is not expected or should not occur.					
Ethernet 1	Status Ethernet	Front	Off - Power Off - or - No Powered device detected					
	Port		Solid Green – Powered device connected : including wake on LAN					
		- <u> </u>	Flashing Green - LAN activity present for that port					
Ethernet 2	Status Ethernet	Front	Off - Power Off - or - No Powered device detected					
	Port		Solid Green - Powered device connected ; including wake on LAN					
			Flashing Green - I AN activity present for that port					
Ethernet 3	Status Ethernet	Front	Off - Power Off - or - No Powered device detected					
Linemete	Port	Trone						
	ron		Solia Green – Powerea device connected ; including wake on LAN					
			Flashing Green - LAN activity present for that port					
Ethernet 4	Status Ethernet	Front	Off - Power Off - or - No Powered device detected					
	Port		Solid Green - Powered device connected - including wake on LAN					
			Sold Creek Foreited derice connected, including wate on Exit					
			Flashing Green – Activity present for that port					
DLNA	Status USB Port	Front	Off - Power Off - or - No Device detected					
			Solid Green - Device connected					
			Flacking Cross. Activity present on part					
Wireless	Status Wiroloss	Front	Off - Modem off or Wireless not activated					
WIICIESS	Status Wireless	FIOIL						
			Solid Green - Wireless activated					
			Flashing Green - Wireless activity is present					
DSL	Status DSL	Front	Green – DSL Good Sync					
			Off - Powered off					
			Flashing Green - DSL Attempting sync Signal Detection - Elashing 2hz with 50% duty cycle					
			Carrier Detected, Modem training – Flashing at 4hz with 50% duty cycle					
Internet	Status WAN	Front	Internet Light - Must indicate at least one type of connection					
			Solid Green - IP connected - no traffic passing					
			Device has a WAN IP via either static/ DHCP/ or IPCP					
			If PPP is used, device has authenticated and has a WAN IP Address					
			if it of PPPOE session is faile and dropped, light to remain green as long as AUSL is still present. Light to turn red if upon attempting new session it fails.					
			Off – Modem Power Off. LFD Should remain off if modem is in bridged mode or if DSL Connection is not present					
			Flashing Green - Device has WAN IP Address and IP Traffic is passing through device					
			Red - Device attempted initiate session, either authentication or to obtain an IP Address, and failed.					

Section 12.1 - Port Mirroring

Port Mirroring will allow for complete packet captures when using a capture application such as WinPCAP or tcpdump.

Mirroring a WAN port will duplicate WAN packets to the first Ethernet Port for technicians to view.

Step 1: Access the GUI to find Backup Configuration Tool

1.A In your browser, go to : http://192.168.x.x/engdebug.cmd

	÷	→ <i>i</i> http://192.	168.13.1/en	gdebu 🔎 🔻 🗟 🖒	i 🧭 19	§ 192.168.13.1 × ♠	*
		Port Mirroring Setup					
		Monitor Interface	Direction	Mirror Interface	Enable		
		atm0	IN	eth0 🗸			
Then, enable "In" and "Out"		atm0	OUT	eth0 🗸			
(Ingress and Egress nackets) for the		ptm0	IN	eth0 🗸			
(ingress and Egress packets) for the		ptm0	OUT	eth0 🗸			
appropriate wan interface						Apply/Save	

2.A Select the Ethernet Port for Mirroring

	÷	→ 🧉 http://192.	168.13.1/en	gdebu 🔎 🔻 🗟 🖒	i 🏉 1	22.168.13.1 × ♠★ ✿
		Port Mirroring Setup				
		Monitor Interface	Direction	Mirror Interface	Enable	
		atm0	IN	eth0 🗸		
		atm0	OUT	eth0 🗸		
Please note that number begins		ptm0	IN	eth0 🗸		
with "O". Hence		ptm0	OUT	eth0 🗸		
						Apply/Save
Eth0 = Port 1						
Eth1 = Port 2						
Fth2 = Port 3						

3.A Select "Apply / Save" .