

IGR-2500

Five-WAN Internet Gateway

User's Manual

www.airlive.com

Declaration of Conformity

We, Manufacturer/Importer **OvisLink Corp.** 5F., NO.6, Lane 130, Min-Chuan Rd., Hsin-Tien City, Taipei County, Taiwan

Declare that the product **Five-WAN Internet Gateway IGR-2500** is in conformity with

In accordance with 89/336 EEC-EMC Directive and 1999/5 EC-R & TTE Directive

<u>Clause</u>	Description
■ EN 55022:1998/A1	Limits and methods of measurement of radio disturbance
:2000/A2:2003	characteristics of information technology equipment
■ EN 61000-3-2:2000	Disturbances in supply systems caused by household appliances and similar electrical equipment "Harmonics"
■ EN 61000-3-3:1995/	Disturbances in supply systems caused by household appliances
A1:2001	and similar electrical equipment "Voltage fluctuations"
■ EN 55024:1998/A1	Information Technology equipment-Immunity characteristics-Limits
:2001/A2:2003	And methods of measurement
■ CE marking	CE

Manufacturer/Importer

Signature : Name : Position/ Title :

■ CE marking

Albert Yeh Vice President

Date : 2007/8/23

(Stamp)

AirLive IGR-2500 CE Declaration Statement

cs OvisLink Corp. tímto prohlašuje, že tento AirLive It Siuo OvisLink Corp. deklaruoja, kad šis AirLive IGR- 2500 ditulka esminius reikalavimus ir kitas da Undertegnede OvisLink Corp. erklærer herved, da dalšími přslušnými ustanoveními směrnice Ilitunuianaj 1999/5/EB 1999/5/EB da Undertegnede dustyr AirLive IGR-2500 overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF. n Hierbit erklärt OvisLink Corp., jadikjära li dan AirLive de Hiermit erklärt OvisLink Corp., dass sich das mt Hawnhekk, OvisLink Corp., jiddikjära li dan AirLive Deutsch Gerät AirLive IGR-2500 in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet. mt Hauti [Maltese] et Kaesolevaga kinnitab OvisLink Corp. seadme teistele asjakohastele sätetele. hu Az OvisLink Corporation kijelenti, hogy az AirLive (ICR-2500 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/CE Ninlejezym OvisLink Corp oswiadcza, ze AirLive IGR- 2500 jest zgodny z zasadniczymi wymogami oraz pozostalawi stosownymi postanowieniami Dyrektywy 1999/5/EC. est Por medio de la presente OvisLink Corp. declara ta tri Polystink Corp. declara que este AirLive IGR-2500 Portugués esta conforme cor or sequisitos essencials e outras disposiciones aplicables o exigibles de la Directiva 1999/5/CE. OvisLink Corp declara que este AirLi	Country	Declaration	Country	Declaration
Česky [Czech] IGR-2500 je ve shodě se základními požadavky a dalšími příslusnými ustanoveními směrnice 1999/5/ES. Lietuvių [Lithuanian] 2500 attinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas. da Undertegnede OvisLink Corp. erklærer herved, de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF. nl Hierbij verklaart OvisLink Corp. dat het toestel AirLive IGR-2500 in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG. de Hiermit erklärt OvisLink Corp., dass sich das den grundlegenden Anforderungen und den ubrigen einschlägigen Bestimmungen der Richtline 1999/5/EG befindet. mt Hawnhekk, OvisLink Corp. jiddikjara li dan AirLive IGR-2500 ijkkonforma mal-htigijiet essenzjali u ma provvedimenti ohrajn relevanti li hemm fid-Dirrettiva 1999/5/EC. et Kaesolevaga kinnitab OvišLink Corp. seadme Eesti [Estonian] hu Az OvisLink Corporation kijelenti, hogy az AirLive IGR-2500 orgeflela z 1999/05/CE irányelv alapvető követelményeinek és egyéb vonatkoző rendelkezőseinek. en Hereby, OvišLink Corp., declares that this AirLive Polski [Polish] pl Niniejszym OvisLink Corp oświadcza, że AirLive IGR- 2500 jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC. es Por medio de la presente OvisLink Corp. declara Requistive seenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE. pt OvisLink Corp declara que este AirLive IGR- 2500 est á donforme com os requisitos essenciais e outras disposições da Directiva 1999/5	cs	OvisLink Corp. tímto prohlašuje, že tento AirLive	lt	Šiuo OvisLink Corp. deklaruoja, kad šis AirLive IGR-
a dalšími příslušnými ustanoveními směrnice (1999/5/ES) [Lithuanian] 1999/5/EB Direktyvos nuostatas. da Undertegnede Ovislink Corp. erklærer herved, de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF. nl Hierbij verklært OvisLink Corp. dat het toestel AirLive IGR-2500 in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG. de Hiermit erklärt OvisLink Corp., dass sich das Deutsch Gerat AirLive IGR-2500 in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet. Matti [Maltese] Hawnhekk, OvisLink Corp, jiddikjara li dan AirLive IGR-2500 jikkonforma mal-htigijiet essenzjali u ma provedimenti ohrajn relevanti li hemm fid-Dirrettiva 1999/5/EC. et Kaesolevaga kinnitab OvisLink Corp. seadme Eesti [Estonian] hu Az OvisLink Corporation kijelenti, hogy az AirLive IGR-2500 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. hu Az OvisLink Corp oświadcza, że AirLive IGR- 2500 jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC. es Por medio de la presente OvisLink Corp. declaras disposiciones aplicables o exigibles de la Directiva 1999/5/CE. Pot OvisLink Corp declara que este AirLive IGR- 2500 est aconforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE. el ME THN TIAPOYZA OvisLink Corp. AH/QNEI EAAnytkri [Greek] Gri AirLive IGR-2500 est conforme aux exigences essent	Česky [Czech]	IGR-2500 je ve shodě se základními požadavky	Lietuvių	2500 atitinka esminius reikalavimus ir kitas
1999/5/ES. Image: Construction of the second of the s		a dalšími příslušnými ustanoveními směrnice	[Lithuanian]	1999/5/EB Direktyvos nuostatas.
da Undertegnede OvisLink Corp. erklærer herved, de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF. nl Hierbij verklaart OvisLink Corp. dat het toestel AirLive (R-2500 in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG. de Hiermit erklart OvisLink Corp., dass sich das den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet. Matti [Maltes] Hawnhekk, OvisLink Corp. jiddikjara li dan AirLive (Re-2500 ikknoffrma mal-htigijiet essenzjali u ma provvedimenti ohrajn relevanti li hemm fid-Dirrettiva 1999/5/EC. et Käsesolevaga kinnitab OvisLink Corp. seadme testi [Estonian] hu Az OvisLink Corporation kijelenti, hogy az AirLive [Hungarian] IGR-2500 ikknoffrma mal-htigijiet essenzjali u ma provvedimenti ohrajn relevanti li hemm fid-Dirrettiva 1999/5/EC. en Hereby, ovisLink Korp, declares that this AirLive põhinõuetele ja nimetatud direktiivi 1999/5/EU es hu Az OvisLink Corp osiviadeca, ze AirLive IGR- 2500 jest zgodny z zasadniczymi wymogami oraz pozostalymi stosownymi postanowieniami Dyrektywy Directive 1999/5/EC. es Por media lea presente OvisLink Corp. ΔHADNEI disposiciones aplicables o e xigibles de la Directiva 1999/5/CE. pot Slovensko [Sovensko OvisLink Corp izjavija, da je ta AirLive IGR-2500 v skladu z bistvenimi zahtevami in ostalimi relevantimi določili direktive 1999/5/ES. et ME THN FIAPOVSA OvisLink Corp. ΔHADNEI Eλληνική [Greek] Slovensky [Slovenian] Sk Slovensky [Slovak] <td></td> <td>1999/5/ES.</td> <td></td> <td></td>		1999/5/ES.		
Dansk [Danish] at følgende udstyr AirLive IGR-2500 overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF. Nederlands [Dutch langende parker in the sentliele eisen en de andere relevante bepalingen van richtlijn 1999/5/EG. de Hiermit erklärt OvisLink Corp., dass sich das Deutsch mt Hawnhekk, OvisLink Corp., jiddikjara i dan AirLive [German] den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet. mt Hawnhekk, OvisLink Corp. jiddikjara i dan AirLive et Kåesolevaga kinnitab OvisLink Corp. seadme brigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet. hu Az OvisLink Corporation kijelenti, hogy az AirLive (BR-2500 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. hu Az OvisLink Corp orbitink Corp. declares that this AirLive Pols infotuetel ja nimetatud direktivist tulenevatele (Portuguès Niniejszym OvisLink Corp oswiadcza, że AirLive IGR-2500 rendelkezéseinek. en Hereby, OvisLink Corp. declare that this AirLive polstink Corp. declare the tessential requirements and other relevant provisions of Directive 1999/5/CE. pt Niniejszym OvisLink Corp oswiadcza, że AirLive IGR-2500 voisLink Corp declara que este AirLive IGR-2500 voisLink Corp declara que este AirLive IGR-2500 voisLink Corp declara que este AirLive IGR-2500 v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/CE. es Por medio de la presente OvisLink Corp. ΔH/ΔNEI EXAŋvikr [Greek] st OvisLink Corp tým	da	Undertegnede OvisLink Corp. erklærer herved,	nl	Hierbij verklaart OvisLink Corp. dat het toestel AirLive
de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF. eisen en de andere relevante bepalingen van richtlijn 1999/5/EG. de Hiermit erklårt OvisLink Corp., dass sich das Deutsch mt Hawnkek, OvisLink Corp., jiddikjara li dan AirLive IB98/5/EG. de Hiermit erklårt OvisLink Corp., dass sich das Deutsch mt Hawnkek, OvisLink Corp., jiddikjara li dan AirLive IB98/5/EG. de Gerät AirLive IGR-2500 in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlini 1999/5/EG befindet. Malti [Maltese] Malti [Maltese] Hawnkekk, OvisLink Corporation kijelenti, hogy az AirLive IGR-2500 megfelel az 1999/05/CE irånyelv alapvető követelményeinek és egyéb vonatkozó rendelkæźseinek. en Hereby, OvisLink Corp., declares that this AirLive English IGR-2500 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. Pot Solo is no compliance with the essential requises essenciales y cualesquiera otras disposições da Directiva 1999/5/CE. Pot SolvisLink Corp izavlja, da je ta AirLive IGR-2500 está conforme com os requisitos essencials e outras disposições da Directiva 1999/5/CE. el ME THN TAPOYZA OvisLink Corp. ΔHΔΩNEI Eλληvikň [Greek] SI OvisLink Corp izjavlja, da je ta AirLive IGR-2500 v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES. ef Parla présente OvisLink Corp. déclare que gruppy/5/EK. Sl OvisLink Corp itýmto vyh	Dansk [Danish]	at følgende udstyr AirLive IGR-2500 overholder	Nederlands [Dutch	IGR-2500 in overeenstemming is met de essentiële
direktiv 1999/5/EF. 1999/5/EG. de Hiermit erklärt OvisLink Corp., dass sich das Deutsch mt Hawnhekk, OvisLink Corp, jddikjara li dan AirLive IGR-2500 jikkonforma mal-ħtigijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva ibriggen einschlägigen Bestimmungen der Mutli [Maltese] IGR-2500 jikkonforma mal-ħtigijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva et Käesolevaga kinnitab OvisLink Corp. seadme hu Az OvisLink Corporation kijelenti, hogy az AirLive Eesti [Estonian] AirLive IGR-2500 vastavust direktiivis 1999/5/EÜ Magyar IGR-2500 megfelel az 1999/05/CE irányelv alapvető követelményeinek és egyéb vonatkozó en Hereby, OvisLink Corp. declares that this AirLive pöhinőuetele ja nimetatud direktiivist tulenevatele [Hungarian] PI Ninlejszym OvisLink Corp oświadcza, że AirLive IGR- 2500 jest zgodny z zasadniczymi wymogami oraz prozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC. es Por medio de la presente OvisLink Corp. declara disposiciones aplicables o exigibles de la Directiva 1999/5/CE. pt el ME THN ΠΑΡΟΥΣΑ OvisLink Corp. ΔΗΓΔΝΕΙ ΣXETIKEΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/CE. potsluk Corp týmto vyhlasuje, že AirLive IGR-2500 v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES. fr Par la présente OvisLink Corp. déclare que Français [French] Par la présente OvisLink Corp.		de væsentlige krav og øvrige relevante krav i		eisen en de andere relevante bepalingen van richtlijn
de Hiermit erklärt OvisLink Corp., dass sich das Deutsch mt Gerät AirLive IGR-2500 in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet. Haunhekk, OvisLink Corp, ijddikjara Ii dan AirLive IGR-2500 jikkonforma mal-ħtigijiet essenzjali u ma provedimenti oħrajn relevanti Ii hemm fid-Dirrettiva 1999/5/EC. et Käesolevaga kinnitab OvisLink Corp. seadme AirLive IGR-2500 vastavust direktiivi 1999/5/EÜ Magyar hu Az OvisLink Corporation kijelenti, hogy az AirLive IGR-2500 megfelel az 1999/05/CE irányelv alapvető követelményeinek és egyéb vonatkozó rendelkezéseinek. en Hereby, OvisLink Corp. declares that this AirLive English IGR-2500 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. Ninlejszym OvisLink Corp oświadcza, że AirLive IGR- 2500 jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC. es Por medio de la presente OvisLink Corp. declara requisements and other relevant provisions of Directive 1999/5/EC. pt OvisLink Corp declara que este AirLive IGR- 2500 jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC. el ME THN ΠΑΡΟΥΣΑ OvisLink Corp. ΔΗΓΛΩΝΕΙ Δiperscitze Δ1ΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/CE. pt el ME THN ΠΑΡΟΥΣΑ OvisLink Corp. ΔΗΓΛΩΝΕΙ ΣXETIKEΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/FE. Slovensko Slovensky [Slovak] spina základné požiadavky a všetky príslušné ustanovenia Smemice 1999/5/ES.		direktiv 1999/5/EF.		1999/5/EG.
Deutsch [German]Gerät AirLive IGR-2500 in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.Malti [Maltese]IGR-2500 jikkonforma mal-htigijiet essenzjali u ma provvedimenti ohrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.etKäesolevaga kinnitab OvisLink Corp. seadme Eesti [Estonian] AirLive IGR-2500 vastavust direktiivist tulenevatele [Hungarian]huAz OvisLink Corporation kijelenti, hogy az AirLive IGR-2500 megfelel az 1999/05/CE irányelv alapvető követelményeinek és egyéb vonatkozó rendelkezéseinek.enHereby. OvisLink Corp., declares that this AirLive teistele asjachastele sätetele.plNiniejszym OvisLink Corp oświadcza, że AirLive IGR- 2500 jest zgodny z zasadniczymi wymogami oraz pozostalymi stosownymi postanowieniami Dyrektywy 1999/5/EC.esPor medio de la presente OvisLink Corp. declara due el AirLive IGR-2500 cumple con los (Spanish)portugués requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.slOvisLink Corp izjavlja, da je ta AirLive IGR-2500 v składu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.elME THN ΠΑΡΟΥΣΑ OvisLink Corp. ΔΗ/ΩΝΕΙ TIΣ ΟΥΣΙΩΔΕΙΣ ΔΗΓΙΣΕΙΣ ΤΗΣ ΔΗΓΙΑΣ 1999/5/EK.slOvisLink Corp týmto vyhlasuje, že AirLive IGR-2500 v składu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.frPara présente OvisLink Corp. déclare que ster TIX OUFLAS NAŋviκή [Greek]skOvisLink Corp týmto vyhlasuje, že AirLive IGR-2500 v składu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.frP	de	Hiermit erklärt OvisLink Corp., dass sich das	mt	Hawnhekk, OvisLink Corp, jiddikjara li dan AirLive
[German]den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.etKäesolevaga kinnitab OvisLink Corp. seadme põhinõuetele ja nimetatud direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.huAz OvisLink Corporation kijelenti, hogy az AirLive IGR-2500 megfelel az 1999/05/CE irányelv alapvető követelményeinek és egyéb vonatkozó rendelkezéseinek.enHereby, OvisLink Corp, declares that this AirLive teistele asjakohastele sätetele.plNiniejszym OvisLink Corp oświadcza, że AirLive IGR- 2500 jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.esPor medio de la presente OvisLink Corp. declaras requisitos essenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.ptOvisLink Corp declara que este AirLive IGR-2500 está conforme com os requisitos essenciais e outras (Branish)elME THN ΠΑΡΟΥΣΑ OvisLink Corp. ΔΗΛΩΝΕΙ TIΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/EK.slOvisLink Corp tizavija, da je ta AirLive IGR-2500 v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.frPar la présente OvisLink Corp. déclare que TIS OYΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΥΕΤΙΚΕΣ ΔΙΑΛΥΙΚή [Greek]SkOvisLink Corp týmto vyhlasuje, že AirLive IGR-2500 v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.frPar la présente OvisLink Corp. déclare que Français [French]skOvisLink Corp týmto vyhlasuje	Deutsch	Gerät AirLive IGR-2500 in Übereinstimmung mit	Malti [Maltese]	IGR-2500 jikkonforma mal-ħtiģijiet essenzjali u ma
ubrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.1999/5/EG.etKäesolevaga kinnitab OvisLink Corp. seadme pöhinöuetele ja nimetatud direktiivi 1999/5/EÜ pöhinöuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.huAz OvisLink Corporation kijelenti, hogy az AirLive IGR-2500 megfelel az 1999/05/CE irånyelv alapvetö követelményeinek és egyéb vonatkozó rendelkezéseinek.enHereby, OvisLink Corp., declares that this AirLive IGR-2500 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.plNiniejszym OvisLink Corp oświadcza, że AirLive IGR- 2500 jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.esPor medio de la presente OvisLink Corp. declara Directive 1999/5/EC.ptOvisLink Corp declara que este AirLive IGR-2500 está conforme com os requisitos essenciais e outras (Isponish)for the compliance with the essential polytic IGR-2500 cumple con los Ipretuiva 1999/5/CE.ptelMiniejszym OvisLink Corp. ΔHΛΩNEI Directiva 1999/5/CE.ptOvisLink Corp declara que este AirLive IGR-2500 está conforme com os requisitos essenciais e outras (Isponish)Ipsonijo disposições da Directiva 1999/5/CE.elME THN ΠAPOYΣA OvisLink Corp. ΔΗΛΩΝΕΙ Directiva 1999/5/CE.siOvisLink Corp izjavlja, da je ta AirLive IGR-2500 v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.frPar la présente OvisLink Corp. déclare que Français [French]skOvisLink Corp týmto vyhlasuje, že AirLive IGR-2500 slowenky Slovensky Slovensky Slovensky Slovensky [Slovak]Ovis	[German]	den grundlegenden Anforderungen und den		provvedimenti oħrajn relevanti li hemm fid-Dirrettiva
Richtlinie 1999/5/EG befindet.etKäesolevaga kinnitab OvisLink Corp. seadme AirLive IGR-2500 vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.huAz OvisLink Corporation kijelenti, hogy az AirLive IGR-2500 megfelel az 1999/05/CE irányelv alapvető követelményeinek és egyéb vonatkozó rendelkezéseinek.enHereby, OvisLink Corp., declares that this AirLive teistele asjakohastele sätetele.plNiniejszym OvisLink Corp oświadcza, że AirLive IGR- 2500 jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.esPor medio de la presente OvisLink Corp. declara requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.ptOvisLink Corp declara que este AirLive IGR-2500 está conforme com os requisitos essenciais e outras (Isposiciones aplicables o exigibles de la Directiva 1999/5/CE.ovisLink Corp izjavlja, da je ta AirLive IGR-2500 v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.elME THN ΠΑΡΟΥΣΑ OvisLink Corp. ΔΗΛΩΝΕΙ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/EK.skOvisLink Corp izjavlja, da je ta AirLive IGR-2500 v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.frPar la présente OvisLink Corp. déclare que Français [French] l'appareil AirLive IGR-2500 est conforme aux exigences essentielles et aux autres dispositionsSlovensko SlovenskoOvisLink Corp týmto vyhlasuje, že AirLive IGR-2500 splán základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.		übrigen einschlägigen Bestimmungen der		1999/5/EC.
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[Swedish] väsentlina enenskanskrav och övrina relevanta	[Swedish]	väsentliga egenskanskrav och övriga relevanta		og øvrige relevante krav i direktiv 1000/5/FF
leetämmelser som framgår av direktiv		hestämmelser som framgår av direktiv		og svinge relevante klav i direktiv 1999/0/EL.
		1000/5/FG		

A copy of the full CE report can be obtained from the following address:

OvisLink Corp. 5F, No.6 Lane 130, Min-Chuan Rd, Hsin-Tien City, Taipei, Taiwan, R.O.C.

This equipment may be used in AT, BE, CY, CZ, DK, EE, FI, FR, DE, GR, HU, IE, IT, LV, LT, LU, MT, NL, PL, PT, SK, SI, ES, SE, GB, IS, LI, NO, CH, BG, RO, TR

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FCC Interference Statement

The **IGR-2500** has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against radio interference in a commercial environment. This equipment can generate, use and radiate radio frequency energy and, if not installed and used in accordance with the instructions in this manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures are necessary to correct the interference.

CE Declaration of Conformity

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022/A1/A2, EN 61000-3-2, EN 61000-3-3/A1, EN 55024/A1/A2, Class B.

The specification is subject to change without notice.

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Chapter 1 Introduction

Congratulations on your purchase of this outstanding IGR-2500 Five-WAN Internet Gateway, this product is specifically designed for the office that has the need to enlarge the usage bandwidth with several narrow bandwidth connections in company.

IGR-2500 features with four 10/100 Mbps Ethernet ports (WAN port), eight 10/100 Mbps Ethernet ports (LAN port), and one 10/100 Mbps Ethernet port for DMZ. WAN port is using to connect to broadband transmission equipments such as ADSL modem or CABLE modem for user and far end to download or upload data in high speed; the LAN port works to connect to computer via cable. You can also connect LAN port with HUB/SWITCH device to extend the amount of connection device/user if necessary. Families with multiple PCs could share one ISP account and play exciting games against each other through IGR-2500. The switch function could also reduce the traffic in internal LAN. DMZ is provided to specific service device to allow the access. User can also change DMZ port as 5th WAN interface from WebUI setting.

1.1 Functions and Features

- Web configuration tool
- Multiple DMZ Host (PPPoE, Static IP)
- Multiple Virtual Server
- Multiple NAT function
- Inbound Load Balance and Outbound Load Balance
- Ultra Smart Sharing
- Protocol Route Control (IP Binding Function, by IP & port number)
- Protocol Bandwidth Control (by application protocol port number)
- IP/URL Blocking, DoS, and Intrusion Security
- IM Blocking
- ARP Protection
- User Bandwidth Control Function (by user IP address)
- H.323 VoIP ALG included
- Remote Configuration Through Internet
- System Log
- Mail Alert
- SPI Firewall
- Backup / Restore Router configuration file from PC
- Display real time router configuration parameter

1.2 Front Panel and Rear Panel

Air Live	IGR-2500	Five-WAN Internet Gateway
LAN	•	WAN DMZ POWER D D D D D D D D D D D D D D D D D D D

Figure 1-1 Front Panel

L	ED		Status
Indicator	Color	ON	Flashing
Power	Green	Initialize	Active Stage
WAN 1~4	• Red	Linked	Data Transmission
LAN 1~8	Green	Linked	Data Transmission
DMZ	• Red	Linked	-



Figure 1-2 Rear Panel

Ports:

DC 5V: Connecting to AC adapter

WAN1~4 Port: Four RJ-45 type WAN ports connecting to broadband transmission equipment such as ADSL or Cable modem via RJ-45 cable.

LAN 1~8 Port: Eight RJ-45 type LAN port connecting to your network devices such as Hub/Switch via RJ-45 cable.

DMZ Port: One RJ-45 type DMZ port connecting to your network devices. It can also be configured as the 5th WAN port via software.

Factory Reset: Press **Factory Reset** button can be defined as to reload factory default value or reset back to latest configuration by software. When you finish defining the Default Button Option, just pressing Factory Reset button 2 seconds and releasing it, the router will load the default settings or back to latest configuration.

1.3 Packing List

- IGR-2500 Five-WAN Internet Gateway
- Installation CD-ROM
- Quick Installation Guide
- CAT-5 UTP Fast Ethernet cable
- AC Adapter

When you open your package, make sure all of the above items are included and not damaged. If you see that any components are damaged, please notify your dealer immediately.

Chapter 2 Deployment

IGR-2500 provides one LAN port connecting to your network devices such as PC, HUB and SWITCH via RJ45 cable. Using a HUB/SWITCH will allow more PC connecting to IGR-2500. WAN ports are using to connect your ADSL or CABLE Modem to the broadband ISP.

For RJ45 cable type, both WAN/LAN port support auto MDI/MDIX Function, you can choose cross over type or straight type RJ-45 cable



Connection Procedure:

- 1. Plug in DC power adapter to Router.
- 2. Connect the Router WAN port RJ45 modular jack to ADSL/CABLE Modem Ethernet port with the RJ45 cable.
- 3. Connect the Router LAN port RJ45 modular jack to HUB/SWITCH LAN port by RJ45 cable.
- 4. Connect PC LAN card port to HUB/SWITCH LAN port.
- 5. Plug in AC power cord to power source

Chapter 3 Configure Router

3.1 How to start out to configure router

- **Step1.** Connect the MIS engineer's PC and IGR-2500's LAN port to the same Hub / Switch, and launch the browser (IE or Netscape) to link the IGR-2500 appliance. The default IP address is http: //192.168.1.1
- **Step2.** Administrator will be requested for **User Name** and **Password** when entering IGR-2500 system. (Figure 3-1)
 - User Name : airlive
 - Password : airlive
 - Click OK.

Connect to 192	.168.1.1 🛛 🖓 🔀
	GR
Four-WAN Interne	rt Gateway
Password:	Remember my password
	OK Cancel

Figure 3-1 Login page

Step3. Configure each WAN port separately, and the other function you would like to use, such as Load Balance, Bandwidth Management, or else. (Figure 3-2)

Air Li	Powerel by Ovisibilit Corp	4
Welcome		
	Configure WAN1 Port	
WAN Configure	Connect to © Internet © Intranet	
WAN1	Healthy Check : C Enable @ Disable	
WAN2 WAN3	WAN Type	
WAN4	© Dynamic IP	
WAN5/DMZ	C PPPoE C Static IP	
Bandwidth Usage		
Configure LAN&DHCP	Schedule	
	Schedule : C Enable © Disable	
	WAN Link Mode	
Access Control	Auto Sonno	
QoS	Auto Sense	
Load Balance	Ok Cancel	
Advance		
Administration		
Firmware Update		
Save & Reset		

Figure 3-2 Configure WAN port setting

You can refer to the manual for more understanding of else router's feature.

3.2 System Status

3.2.1 Link Status

You can get the following information in Link Status window: (Figure 3-3)

- LAN Status
- WAN Status
- DMZ Status
- Firmware Version
- DHCP Table

Air Li	ve	Corp.
Welcome		
System Status	LINK STATUS	
Link Status	LAN Status	
Uata Monitor WAN Configure	IP Address 192.168.1.1	
	MAC Address 00:D0:DA:00:39:30	
Bandwidth Usage	Subnet Mask 255.255.255.0	
Configure LAN&DHCP	DHCP Enable	
Routing Table	WAN Status	
AP management	WAN Status	
Access Control	WAN1	
<u>QoS</u>	MAC Address 00:D0:D4:00:39:31	
⊥ Load Balance	IP Address 192.168.0.62	
+ Advance	Subnet Mask 255.255.255.0	
	WAN Status Connected	
Firmware Update	WAN1 Disconnect	
Save & Reset	DMZ Status	
	MAC Address 00:D0:DA:00:39:35	
	IP Address 192.168.15.100	
	Subnet Mask 255.255.255.0	
	Firmware	
	Firmware Version IGR2500-V6127-BIV0.1-E	
	Release Day Aug 10 2007	
	DHCP Table	
	MAC Address IP Address	
	00:d0:59:59:79:2d 192.168.1.12	

Figure 3-3 Link Status

- LAN Status: Shows the information of MAC Address, IP Address, Subnet Mask and DHCP Status (Enable/Disable).
- WAN Status: Shows the information of MAC Address, IP Address, Subnet Mask and WAN Status on each or all WAN ports.
- DMZ Status: Shows the information of MAC Address, IP Address, and Subnet Mask.

Firmware version: version of software and its released date.

DHCP Table: Shows the information of MAC Address and IP Address.

3.2.2 Data Monitor

Differ with Link Status window, Data Monitor window provides detail packet transfer status. It includes 2 kinds of real time data per each WAN port. (Figure 3-4)

Air Liv	<i>re</i> °				1	Rowe	red by 0
Welcome							
System Status		Data 1	Mon	itoı	2		
Link Status		S	ssion				
Data Monitor			WAN1	WAN2	WAN3	WAN4	
<u>Data Wonton</u>		TCP Session	0	0	0	0	
WAN Configure		UDP Session	0	0	0	0	
Pandwidth Llange		ICMP Session	0	0	0	0	
balluwluti Usage		Current Session	0	0	0	0	
nfigure LAN&DHCP		Accumulative Session	2	0	0	0	
Pouting Table		Curren	t Bandw	idth			
Routing Table			WAN1	WAN2	WAN3	WAN4	
AP management		Download Speed (byte/sec)	1411	0	0	0	
Assass Control		Upload Speed (byte/sec)	259	0	0	0	
Access Control		Accumulati	ve Data	Counter			
QoS			WAN1	WAN2	WAN3	WAN4	
Load Palanas		Usage (%)	100	0	0	0	
Loau Dalafice		Byte Received (Kbytes)	22939	0	0	0	
Advance		Byte Transmitted (Kbytes)	4411	0	0	0	
Administration		Total Bytes (Kbytes)	27350	0	0	0	
Firmware Update		NAT Table Refr	esh	Cle	ar Coui	nter	
Save & Reset							

Figure 3-4 Data Monitor

- Current Session:
 - ♦ TCP Session:
 - UDP Session:
 - ICMP Session:
 - Total Session:
- Current Bandwidth:
 - Download Speed:
 - Upload Speed
- Accumulative Data Counter:
 - Usage (%): For example, WAN1 usage% = <u>WAN1 total packets</u>%

(WAN1+WAN2) total packets

- Byte Received
- Byte Transmitted
- Total Bytes: Total packets transfer by each WAN port
- NAT Table: list current user detail NAT data. (Figure 3-5)
- Refresh: update data monitor table to display newest data
- Clear Counter: reset Data Counter data to 0, and restart to accumulate the packets.

🙆 http://192.1	168.1.1 - NAT TA	BLE - Micros	soft Internet Ex	plorer		
		NZ	AT TABL	E		0
NAT Translat ====== NAT UDP Trar	ion Lists seeseeseeseeseeseeseeseeseeseeseeseese					
# Wan Lo 1 -1 19 Static UI	ocal Address 92.168.0.45)P Server Trar	Port G 65534 1 Islation E	;lobal Addre .92.168.0.45 Intries	ss Port 65534	Remote Address 192.168.0.254	Port 53
1.Global IF	9 Port: 65534	Server IP	' Port: 6553	4 Address	: 192.168.0.45	
			Exit			2
ど Done					🌍 Internet	

Figure 3-5 NAT Table



The packets start to accumulate from:

- Router powers on 1.
- 2. Clear counter
- Counter reaches upper the limitation (4294967K), and then the counter will reset to 0 3. automatically.

3.3 WAN Configure

There are several **WAN** function can be made in this display, you can configure functions to each WAN port separately.

- Connect to:
 - Internet: WAN port is connected to Internet through ADSL/Cable modem
 - Intranet: WAN port is connected to another router LAN port, work together with "Static Route" function, can restrict specific IP packet to a dedicate route path.
- Healthy Check:
 - Enable: Enable the feature to check whether the WAN link is alive or not. System provides 3 methods to check the WAN link, Ping IP, DNS, and Time Server; you can choose it with each method or both. It is suggested to select at least 2 methods to check the WAN link, in order to avoid router making wrong action due to Internet Server disable. (Figure 3-6)
 - **Disable:** If "Time Server" does not exist, this function will disable automatically.

Confi	gure WAN1 P	ort
Connect to	• Internet C	Intranet
Healthy Cheo	ck : © Enable	C Disable
☑ Ping IP :	60.250.158.64	Test
DNS :	168.95.1.1	Test
	90	Tect



- Dynamic IP: Connect to Cable Modem and obtain an IP address from ISP automatically.
- **PPPoE:** Connect to Dial Up DSL
- **Static IP:** Connect to Leased DSL
- **Schedule:** This function allows you to control each WAN port link up/down time by daily/weekly.
 - Start Time: (hh:mm)
 - End Time: (hh:mm)
 - Weekly: choose by day

When you enable Schedule function, the WAN connection will follow the Schedule to link up or down, no matter DOD (Dial-on-demand) function is enabled or disabled.

- WAN Link Mode: You can choose the WAN interface type in order to follow the connecting type of ISP.
 - Auto Sense
 - 10Mbps Half Duplex
 - 10Mbps Full Duplex
 - 100Mbps Half Duplex
 - 100Mbps Full Duplex

3.3.1 WAN Type – Dynamic IP

Usually it's used to connect CABLE modem. You won't need to assign IP address, and the IGR-2500 will get the IP address from ISP automatically. (Figure 3-7)

When you choose Dynamic IP, you only need to save this selection, and reboot router when you finish configuring all parameter.



Figure 3-7 Dynamic IP

3.3.2 WAN Type – PPPoE

Connect to ISP via dial-up connecting, ISP will assign a legal IP to you after the user Id and password had been passed. (The user Id and password here are provided by your ISP.) (Figure 3-8)

Air Liv	re' Powered by Ovis Bink	Corp.
Welcome		
	Configure WAN1 Port	
WAN Configure	Connect to © Internet C Intranet	
WAN1	Healthy Check : ^O Enable [©] Disable	
WAN2	LIAN Design	
WAN3	WAN Type	
WAN4	O Dynamic IP	
WAN5/DMZ	© PPPoE	
Bandwidth Usage	Account : 16182168@hinet.net	
	Password :	
	Service Name :	
Routing Table	Max Idle Time(/min): 0	
AP management	Connect mode : Manual O Dial-on-demand O Always-on	
Access Control	○ Static IP	
QoS	Schedule	
	Schedule · C Enable @ Disable	
Advance		
Administration	WAN Link Mode	
Firmware Update	Auto Sense 💌	
Save & Reset	Ok Cancel	



- Account: The user name provided by ISP, the character can be entered up to 60.
- **Password:** The password provided by ISP, the character can be entered up to 60.
- Service Name: This is optional. The Service name is needed if ISP requires for it.
- Max. Idle Time (min): The default value is 0, means not to check the idle time, so the connection will remain connecting unless user disconnects it by manually.
- Dial On Demand: Auto connect function
 - ◆ Manual: You need to initiate WAN connection manually, by clicking WAN1 connect or WAN2 connect button in System Status → Link Status menu. However, power up or reset also can initiate the WAN connection.
 - Dial-on-demand: Whenever a user is trying to access the Internet from his computer, this WAN port will start connection automatically if it is disconnected.
 - Always-on: The WAN port will try to establish the connection as long as it is disconnected, no matter this port is used or not.

About "Always-on" function, normally you need to combine "Healthy Check" function together, then "Always-on" can work more perfectly because there is an ADSL modem between router & ISP equipment. In physical layer, if ADSL line fails but ADSL modem is still alive, and router can not detect the line status unless ISP sends a disconnected packet to router. So if ADSL line is in abnormal up-down, sometimes router can not get disconnect packet from ISP. Maybe in ISP side, it treats line as disconnected status, but router seems like to be still in "connecting" status.

If you enable "Healthy Check" in each line, then router can automatically send packet out through WAN to detect whether line is active or not. (1 packet per 30 sec) This function will be helpful to judge the line status, and provide correct information to router for the Link Status.

It's better to enable at least 2 options in "Healthy Check", in order to avoid misjudgments when only 1 option is selected and the option server fails to respond the request.

3.3.3 WAN Type – Static IP

When user applied the leased line from ISP, the service provider will offer user the real IP, Subnet Mask, Gateway and DNS. You need to indicate the static IP manually. (Figure 3-9)

Air Li	Powered by Ovisi Links Corp.
Welcome	
	Configure WAN1 Port
WAN Configure	Connect to © Internet C Intranet
WAN1	Healthy Check : C Enable © Disable
WAN2	
WAN3	WAN Type
WAN4	O Dynamic IP
WAN5/DM7	C PPPoE
<u>nin nin ni</u>	• Static IP
Bandwidth Usage	IP Address : 60 . 250 . 158 . 64
Configure LAN&DHCP	Subnet Mask : 255 . 255 . 255 . 0
Routing Table	Primary DNS : 168 . 95 . 1 . 1
AP management	Secondary DNS : 168 . 95 . 192 . 1
Access Control	Gateway : 60 . 250 . 158 . 254
<u>QoS</u>	Schedule
Advance	Schedule : O Enable @ Disable
Administration	WAN Link Mode
Firmware Update	Auto Sense
Save & Reset	Ok Cancel

Figure 3-9 Static IP

3.3.4 WAN Type – WAN5/DMZ

The hardware DMZ can be defined as DMZ function or 5th WAN port. If you select to define the interface as 5th WAN port, its setting is the same as else WAN interface.

When you select to define the interface as DMZ port, the default IP address of DMZ interface is 192.168.15.100. You can configure the DMZ setting with three different types, **Dynamic IP DMZ**, **Multi-DMZ**, and **Public DMZ**. For more detail information for the DMZ configuration please refers to the section 3.10.4 **DMZ Host**. (Figure 3-10)

Air Li	Powered by Ovisi Link co	
Welcome		
	Configure DMZ Port	
r WAN Configure		
WAN1	Work Mode : © DMZ C WAN5	
WAN2	DMZ IP : 192.168.15.100	
WAN3	DMZ MASK : 255.255.0	
WAN4	Ok Cancel	
WAN5/DMZ		
Bandwidth Usage		
Configure LAN&DHCP		
Routing Table		
Access Control		
QoS		
Advance		
Administration		
Firmware Update		
Save & Reset		



3.4 Bandwidth Usage

This is a very useful function, it can let you to control WAN port bandwidth usage by each protocol. Like FTP, when someone uses FTP to transfer file, it will occupy heavy loading by using this function, so you can limit the dedicated application bandwidth as you want to.

For example:

In following display, FTP, HTTP & Mail bandwidth will be limited in certain percentage. This router provides 3 most often use protocol in the table, and you just need to fill in port number and % usage for each application:

- Select WAN Port: Select the WAN interface for the bandwidth definition
- WAN Speed: Enter the upload and download speed provided by ISP
 - Upload (kbits/s)
 - Download (kbits/s)
- Usage Set:
 - **Protocol:** name of protocol data packet will be limited.
 - **Port:** protocol port number
 - Usage %: The usage percentage of WAN speed (Figure 3-11)

Âir Lix	re'	Corp.
Welcome		
System Status		
WAN Configure	WAN Control	
Bandwidth Usage		
Configure LAN&DHCP	Select WAN Port WAN1	
Routing Table	WAN Speed WAN1	
AP management	Upload(kbits/s): 2048	
Access Control	Download(kbits/s) : 8192	
<u>QoS</u>	Usage Set WAN1	
■ Load Balance	Procotol Port Usage	
Advance	F HTTP 80 15 %	
Administration	POP3 110 15 %	
Firmware Update	☑ SMTP 25 10 %	
Save & Reset	FTP 21 5 %	
	Ok Cancel	

Figure 3-11 Bandwidth Usage

The totally amount of protocol usage percentage can not exceed 100% for each WAN port.

Router provides another 4 self-defined port number, user just needs to fill in port number for each protocol.

3.5 Configure LAN & DHCP

This function configures the LAN ports IP address, Subnet Mask, and DHCP server.

You can choose using DHCP server or disable it, the Dynamic Host Configuration Protocol (DHCP) allows the Broadband Router to dynamically assign IP addresses to network devices. Dynamic IP assignment alleviates the need for the network administrator to maintain and monitor IP address assignments and simplifies IP use because the IP addresses are automatically and dynamically assigned when a station powers-on. You will need to indicate the range of DHCP server and DNS address if you enable DHCP server function. (Figure 3-12)

You can also reserve some IP's to specific computers. You need to enter the name (MAC address) of the network card installed in your computer to assign a particular IP to it. Enter the relative values and then click **Add**. (Figure 3-13)

Air Live	Powered by OvisLink Cor
Welcome System Status WAN Configure Bandwidth Usage Configure LAN&DHCP Routing Table AP management Access Control QoS Load Balance Advance Administration Firmware Update Save & Reset	Configure LAN IP Address : 192.168.1.1 Subnet Mask : 255.255.255.0 Configure DHCP DHCP Server : @ Enable C Disable DHCP Server Range : From : 192.168.1.12 To : 192.168.1.20 Primary DNS : 205.166.226.38 Secondary DNS : 209.248.98.222 Reservations IP MAC Address IP Address Delete Modify
	Apply Cancel

Figure 3-12 Configure LAN & DHCP

Air Live	Powered by Ovis Link Corp.
Welcome System Status WAN Configure Bandwidth Usage Configure LAN&DHCP Routing Table AP management Access Control QoS Load Balance Advance Advance Administration Firmware Update	Add Reserved IP Address MAC Address IP Address 00 .18 .F3 .D3 .54 .192.168.1.254 Ok Cancel
Save & Reset	

Figure 3-13 Add Reserved IP Address

When enable DHCP Server in "From", "TO" field, you can reserve up to 253 IP address to DHCP

server.

Fill in local DNS Server IP address in "**DNS Address**" field, the DNS IP information will also assign to DHCP client.

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3.6 Routing Table

3.6.1 Configure

This function allows manually defined by users as the only path to the destination. Users can configure the static routing path to IGR-2500.

■ Static Routing

There have one pc with two interfaces in this area, one interface is connected to IGR-2500 (domain A), and the other connected to another Server (domain B). Users need to set the static routing path in IGR-2500 in order to recognize another domain in this area. These settings enable the packets from domain A to the destination in domain B via the gateway configured in IGR-2500. (Figure 3-14, 3-15)



Figure 3-14 Static Routing

Air Lin	/e°			Rower	ed by OvisL	
Welcome						
			Static Rou	ting		
WAN Configure	Item	Network	Netmask	Gateway	Enable	
Bandwidth Usage	1	192.168.1.0	255.255.255.0	192.168.1.100		
Configure LAN&DHCP	2 [
Routing Table	3					
Configure	4					
Current Table	5					
AP management	Dynamic Routing					
Access Control		Puphla:				
QoS				Version:	RIP 2 -	
	Multicast/Broadcast: Broadcast -					
Advance	Peri	Periodic announcement interval (seconds): 30				
Administration	Time before routes expire (seconds): 180					
Firmware Update	Ti	ime before r	oute is remove	d (seconds): 120		
Save & Reset	Ok Cancel					

Figure 3-15 Static Routing

Dynamic Routing

Dynamic Routing allows router learning the path to destination by receiving periodic updates from others. The protocol used in communication between routers is RIP v1 and v2. (Routing Information Protocol). RIP1 supports only to broadcast mode while RIP2 supports broadcast and multicast mode. (Figure 3-16)

Air Li	ve
Welcome	
	Static Routing
WAN Configure	Item Network Netmask Gateway Enable
Bandwidth Usage	
Configure LAN&DHCP	
Routing Table	
Configure	
Current Table	
AP management	Dynamic Routing
Access Control	Frable: 4
QoS	Version: RIP 2
E Load Balance	Multicast/Broadcast Broadcast
∃ Advance	Periodic announcement interval (seconds): 30
Administration	Time before routes expire (seconds): 180
Firmware Undate	Time before route is removed (seconds): 120
Save & Reset	Ok Cancel
Jave & Resel	our

Figure 3-16 Dynamic Routing

3.6.2 Current Table

This display shows the valid routing paths in IGR-2500. Users can view the information about current routing paths. (Figure 3-17)

Air Li	ve			P
Welcome				
▪ WAN Configure		Curren	t Routin	ng Table
Bandwidth Usage				
Configure LAN&DHCP		Network	Netmask	Gateway
		0.0.0.0	0.0.0.0	192.168.0.254
Routing Table		192.168.0.0	255.255.255.0	192.168.0.62
Configure		192.168.1.0	255.255.255.0	192.168.1.1
Current Table		192.168.15.0	255.255.255.0	192.168.15.100
AD management				
Access Control				
Qo S				
Load Balance				
Advance				
Administration				
Firmware Update				
Save & Reset				



3.7 AP Management

AirLive IGR-2500 supports to block several Instant Message programs, such as QQ, MSN, and Yahoo Messenger. User can also define the supervisor IP address to be the privilege user who will not be restricted the access of IM program. (Figure 3-18)

- **Type:** Select to enable QQ, MSN, and Yahoo Messenger IM program inhibiting.
- **Supervisor:** Define the specific IP address or IP range that is able to access IM program.

Air Live			Powered by O
Welcome System Status	Instant M	lessage	
Bandwidth Usage	Ty	pe	
Configure LAN&DHCP	IM Name	Rule	Enable
Routing Table AP management	QQ	inhibit	
Instant Message	MSN	inhibit	
Access Control			
QoS	Yahoo Messenger	inhibit	
Load Balance Advance	Super	visor	
Administration	User IP		Enable
Firmware Update	192	020	
Save & Reset		-	
		-	
		-	
	Ok	Cancel	

Figure 3-18 AP Management for IM

3.8 Access Control

3.8.1 Local IP Filtering

AirLive IGR-2500 allows you to define the accessed restriction about to block or allow outgoing IP packets per protocol (port number).

You may restrict specific IP to perform limited protocols or allow them to execute partial protocols. And the first thing you have to know is the port numbers and their usages.

Local IP Filtering can be defined 10 items and item 1 has the highest priority. In principle, the same IP should not list in different items. If IP settings are conflicted, the higher priority item will be the obeyed rules.

You can reserve dedicate IP address to dedicated user from **Configure LAN & DHCP** \rightarrow **Reservations IP** function, by using this function, user can have dedicated IP address match to their computer NIC MAC address.

There are ten items in this function. You can allow or restrict specific IP(s) to access some port numbers.

Example 1:

If you restrict the PC of IP 192.168.1.13-192.168.1.15 to access HTTP, the settings are: Item 1: Enable Filter entry: Block Port Number: 80 IP address: 192.168.1.13-192.168.1.15

Example 2:

If you allow the PC of IP 192.168.1.16-192.168.1.18 to access FTP only, the settings are: Item 2: Enable Filter entry: Allow Port Number: 21 IP address: 192.168.1.16-192.168.1.18

Example 3:

If you allow the PC of IP 192.168.1.40, 192.168.1.56, 192.168.1.100-192.168.1.120 to access port 50, port 53, port 100-120 only, the settings are: Item 3: Enable Filter entry: Allow Port Number: 50, 53, 100-120 IP address: 192.168.1.40, 192.168.1.56, 192.168.1.100-120 (Figure 3-19)

Air Lin	Powered by Ovisiente Co
Welcome	
■ System Status	Local IP Filtering
WAN Configure	Item IP address Port Block/Allow Enable Delete Edit
Bandwidth Usage	1 192. 168. 1. <u>13-15</u> 80 Block 🗌 🖸 C
Configure LAN&DHCP	2 192.168.1. <u>16-18</u> 21 Allow C
Routing Table	3 192. 168. 1. <u>40,56,100-120</u> 50,53,100-120 Allow
AP management	Add
Access Control	Apply Cancel
Local IP Filtering	тиру
Intrusion Security	
DoS Defense	
URL Filtering	
Session Limit	
QoS	
Load Balance	
Advance	
Administration	
Firmware Update	
Save & Reset	

Figure 3-19 Local IP Filtering Example Setting

Protocol Port Number List

Protocol	Service	Port no.	Protocol	Service	Port no.
ТСР	FTP	21	ТСР	LADP	389
ТСР	SSH	22	ТСР	HTTPS	443
ТСР	TELNET	23	UDP	IKE	500
ТСР	SMTP	25	ТСР	RLOGIN	513
UDP	DNS	53	UDP	SYSLOG	514
UDP	TFTP	<mark>69</mark>	UDP	TALK	517,518
ТСР	GOTHER	70	UDP	RIP	520
ТСР	FINGER	79	ТСР	AFPOWERTCP	548
ТСР	HTTP	80	ТСР	Net-Meeting	1503,1702
ТСР	POP3	110	ТСР	L2TP	1701
UDP	NFS	111	ТСР	РРТР	1723
ТСР	NNTP	119	ТСР	AOL	5190~5194
UDP	NTP	123	UDP	PC Anywhere	5631~5632
ТСР	IMAP	143	ТСР	XWINDOW	6000-6063
UDP	SNMP	161	ТСР	IRC	6660~6669
ТСР	BGP	179	ТСР	Real-Media	7070
ТСР	WAIS	210	ТСР		6000-6063

3.8.2 Intrusion Security

AirLive IGR-2500 features Intrusion Security, to allow user setting as "BLOCK" or "PASS" function following by the table content. The restricted user can be defined with its IP and MAC address. (Figure 3-20)



Figure 3-20 Intrusion Security

Intrusion Security: select Enable to enable Intrusion Security function.

Block or Pass User's IP&MAC not in follow list: user can define an IP list, and decide the operating rule for the list to block or pass the connection. (Figure 3-21)

Intrusion Securi	ity : O Enabl	e 💽 I	Disable
	nana n a na vos debenandos		
Block C Pass) User'	s IP&MAC not	in fol	low li
MAC Address	IP Address	Delete N	Addify Ad
00.40.68.09.11.21	1 192.168.0.78		С

Figure 3-21 Intrusion Security IP list

3.8.3 DoS Defense

AirLive IGR-2500 also provides DoS (Denial of Service Defense) function to protect your network servers, hosts, routers and other devices from the attacking of villain using mass data transmission. (Figure 3-22)

The default value in the display is the optimize parameter for Router. (Figure 3-23)



Welcome				
System Status	DoS Defense			
WAN Configure	Function	Parameter	Lock Time	Fnable
Bandwidth Usage	IP Fragments Checking	FAIAMELEI	DOCK TIME	
nfigure LAN&DHCP	IP Address spoofing	·		
Routing Table		LAN WAN1		
AP management	Disable Ping(ICMP) respond	WAN2 WAN3		
Access Control	Oversized Ping	32 bytes		T
ocal IP Filtering	Drop IP Packet with Source Route Option			
trusion Security	Port Scan	1000 ports/sec	5 min	
DoS Defense	TCP SYN Flooding (WAN)	1000 times/sec	5 min	
JRL Filtering	TCP SYN Flooding (LAN)	1000 times/sec	5 min	
Session Limit	ICMP Flooding (WAN)	1000 times/sec	5 min	
<u>QoS</u>	ICMP Flooding (LAN)	1000 times/sec	5 min	
oad Balance	UDP Flooding (WAN)	1000 times/sec	5 min	
dvance	UDP Flooding (LAN)	1000 times/sec	5 min	
dministration				
nware Update	L L	Ok Cancel		
Save & Reset				

Figure 3-23 Default Setting of DoS Defense

Some virus are using "PING" command to attack network, AirLive IGR-2500 can be defined as accept or reject "PING" command from WAN or LAN. (Figure 3-24)

	IAN LAN	
Disable Ping(ICMP) respond	VAN1 VAN2	
	WAN3 WAN4	



Function	Description
IP Fragments Checking	Checking the IP fragments. When it finds someone from WAN side tries to attack your network using overlap IP fragments in a bad attention, this function will check over these packets and drop them.
IP Address spoofing	Finding out whether the source address(s) and destination address(s) are legal IP's or not. If they are illegal IP's or multicast addresses, this function will cast these packets away.
Oversized Ping	Dropping the packets of "ping" which exceed the size you set. The default value is 32 bytes.
Drop IP Packet with Source Route Option	Casing a packet away when it contains source route option(s) in its IP.
Port Scan	When an IP from Internet tries to scan the IP of IGR-2500 up to 10000ports/sec (default value), this function will drop all the packets from this IP within 5 minutes (default value).
TCP SYN Flooding (WAN)	When a destination address and destination port of IGR-2500 receives TCP SYN packet from WAN over 10000 times (default value) in one second, IGR-2500 will close this address and port for 5 minutes (default value) temporarily.
TCP SYN Flooding (LAN)	When an IP in LAN of IGR-2500 tries to send TCP SYN packet over 10000 times (default value) in one second, IGR-2500 will close this source address for 5 minutes (default value) temporarily.
ICMP Flooding (WAN)	When a destination address of IGR-2500 receives ICMP from WAN over 10000 times (default value) in one second, IGR-2500 will close this address for 5 minutes (default value) temporarily.
ICMP Flooding (LAN)	When an IP in LAN of IGR-2500 tries to send ICMP over 10000 times (default value) in one second, IGR-2500 will close this source address for 5 minutes (default value) temporarily.
UDP Flooding (WAN)	When a destination address of IGR-2500 receives UDP from WAN over 10000 times (default value) in one second, IGR-2500 will close this address for 5 minutes (default value) temporarily.
UDP Flooding (LAN)	When an IP in LAN of IGR-2500 tries to send UDP over 10000 times (default value) in one second, IGR-2500 will close this source address for 5 minutes (default value) temporarily.

3.8.4 URL Filtering

Besides restrict users by local/destination IP, AirLive IGR-2500 provides you to do accessed restriction for user by URL as well.

You may restrict some URL address that are not allowed to reach

- Enable URL Filter On Http Port: You can define the port number for URL Filtering, and select to enable the rule.
- PASS or BLOCK for all URL: Select a basic rule as the foundation, and then to define the Exclusive List.
- **Exclusive List:** Define specific keyword as the Exclusive List.
 - **Keyword:** destination URL that prohibit users to reach
- Supervisor IP List: Specify IP address that will not be filtered with URL filtering rule. (Figure 3-25)

Air Li	Poweret by Ovis Links Corp.
Welcome	
	URL Filtering
WAN Configure	Enable URL Filter On Http Port 80
Bandwidth Usage	© PASS C BLOCK for all URL
Configure LAN&DHCP	
■ Routing Table	Exclusive List
AP management	Item Keyword
Access Control	1 sex
Local IP Filtering	2 violence
Intrusion Security	3
DoS Defense	4
URL Filtering	5
Session Limit	6
Qo S	7
	8
	9
Administration	10
Firmware Update	Supervisor IP List
Save & Reset	
	Item IP Enable
	Apply Cancel

Figure 3-25 Disable Ping respond

3.8.5 Session Limit

AirLive IGR-2500 features Session Limit to restrict each IP connection's session. This feature can assure the network performance from being attacked by infected PC, which can create and spread out lots of session in a short time.

■ **Frequency:** The maximum session number of connection. The available range is 300 ~ 65500. (Figure 3-26)

Air Li	Ve Powerel by Ovis Unit	Сотр.
Welcome		
WAN Configure	IP Session Limit	
Bandwidth Usage		
Configure LAN&DHCP	India (300 65000)	
Routing Table		
	Ok Cancel	
Access Control		
Local IP Filtering		
Intrusion Security		
DoS Defense		
URL Filtering		
Session Limit		
QoS		
Advance		
Administration		
Firmware Update		
Save & Reset		

Figure 3-26 Session Limit

<u>3.9 QoS</u>

With QoS function, you can set up user bandwidth with Maximum & Minimum bandwidth value.

- Configure WAN Speed: The WAN speeds must be configured for the QoS configuration to take effect.
- IP MAX/MIN Limit: Allocate bandwidth to users:
 - IP: IP address of specified user
 - MAX: Bandwidth limitation to this user
 - MIN: Minimal Bandwidth keeps for this user before allocating any bandwidth from this user to others
 - Down Rate: Download speed
 - Up Rate: Upload speed
 - WAN Apply: Which WAN you want the allocation to take effect. (Do not use this option to specify which WAN to use for this user.) (Figure 3-27)

Air Liv	Ve	k Corp.
Welcome		
	Configure WAN Speed	
WAN Configure	Download(kbps) UpLoad(kbps)	
Bandwidth Usage	WAN 1 8192 2048	
Configure LAN&DHCP	WAN 2 1024 512	
Routing Table	WAN 3 2048 1024	
AP management	WAN 4 10240 10240	
Access Control	WAN 5 512 64	
QoS	TP MAX/MIN Limit	
	II MARTIN BIALO	
Advance	ID IP MAX Down Rate Up Rate MAN Apply En Del Modify	
Administration	1 192.168.1.15 MAX 128 64 12345 C C	
Firmware Update	2 192.168.1.101 MAX 128 64 1.2.3.4.5 [] [] O	
Save & Reset	Add	
	Ok Cancel	

Figure 3-27 QoS Setting
3.10 Load Balance

3.10.1 Outbound Load Balance

AirLive IGR-2500 provides three kinds of work mode for **Outbound Load Balance**, and **Ultra Smart Sharing** feature to offer intelligent connection solution for banking system and Internet on-line game server. The load balance types include **Session**, **Weight round robin**, and **Dynamic Traffic**.

Session: When user chooses this mode, the router will assign each coming session to each WAN port one by one, no matter how traffic loading is on each WAN port. All the enabled WAN ports have the same bandwidth rate (1:1). (Figure 3-28)

Air Liv	ve	Corp.
Welcome		
	Load Balance Mode	
WAN Configure		
Bandwidth Usage	Session Weight round robin	
Configure LAN&DHCP	C Dymamic Traffic	
	Ultra Smart Sharing	
Access Control	✓ Enable	
QoS	Time Out : 60 seconds	
Load Balance		
Outbound		
Inbound		
Special Application		
Special IP Assignment		
ToS		
Administration		
Firmware Update		
Save & Reset		

Figure 3-28 Outbound Load Balance – Session

Weight round robin: Configure the WAN ports bandwidth rate manually, means you can distribute each coming session from users to each WAN port, following the rate that you assign in each WAN port. The session number in each WAN can be numbered from 1 to 100, the suggest number is under 1 ~10. If rate is 1:1 for each WAN port, the router function will act like Session mode. (Figure 3-29)

Âir Li	ve Powerei by Ovisi hink Corp.
Welcome	
	Load Balance Mode
WAN Configure ■	C Sersion
Bandwidth Usage	© Weight round robin
Configure LAN&DHCP	WAN1 : 10
	WAN2 : 3
	WAN3 : 5
Access Control	WAN4 : 5
Qo S	WAN5 : [/
Load Balance	
Outbound	Ultra Smart Sharing
Inbound	☑ Enable
Special Application	
Special IP Assignment	Time Out : 60 seconds
ToS	Ok Cancel
Administration	
Firmware Update	
Save & Reset	

Figure 3-29 Outbound Load Balance – Weight round robin

Traffic: Router will find the lowest loading WAN port to transmit and receive data automatically. You need to enter correct ADSL/CABLE WAN speed in here. (Figure 3-30)

Air Li	ve	8					Powered b	y ovistink c	01
Welcome									
System Status			Load	l Ba	land	ce M	lode		
WAN Configure			C Session						
Bandwidth Usage			O Weight ro	ound robi	1				
Configure LAN&DHCP			• Traffic						
Routing Table				Downloa	d Speed	Upload :	Speed		
+ AP management			WAN1	8192	(kbits/s)	2048	(kbits/s)		
			WAN2	1024	(kbits/s)	512	(kbits/s)		
Access control			WAN3	2048	(kbits/s)	1024	(kbits/s)		
QoS			WAN4	10240	(kbits/s)	10240	(kbits/s)		
Load Balance			WAN5	512	(kbits/s)	64	(kbits/s)		
Outbound Inbound			Ul	tra S	mart S	Shari	ng		
Special Application Special IP Assignment					☑ Enable				
ToS				Time Ou	ıt : 60	seconds			
Advance				O	c Can	cel			
Administration					_	22			
Firmware Update									
Save & Reset									

Figure 3-30 Outbound Load Balance – Dynamic Traffic

- Ultra Smart Sharing: When user enables this function, IGR-2500 will lock user packet at dedicated WAN port, the dedicated WAN port will be selected base on 1st user packet (This feature is suitable for Game, VoIP, banking system ...etc). (Figure 3-31)
 - **Time out Timer:** Default is 60 second, range from 30 ~255. User will be removed from WAN user list if no user packet RX/TX passes through the dedicated WAN port after timer expired.

Ultra Smart Sharing
Enable
Time Out : 60 seconds
Ok Cancel

Figure 3-31 Outbound Load Balance – Ultra Smart Sharing

3.10.2 Inbound Load Balance

Inbound function can let you load sharing traffic that coming from Internet to access you intranet server via each WAN link, this function can increase WAN utilization. (Figure 3-32)

For more detail usage, please refer to Appendix A.

Âir Li	Ve	Corp.
<u>Welcome</u>		
	InBound Load Balance	
WAN Configure	Load Balance Mode	
Bandwidth Usage		
Configure LAN&DHCP	© Session	
	C Weight round robin	
	Inbound Option	
Access Control	Name Type Address Modify Delete	
Qo S		
Load Balance	Add new item	
Outbound	Apply Cancel	
<u>Inbound</u>		
Special Application		
Special IP Assignment		
ToS		
Administration		
Firmware Update		
Save & Reset		

Figure 3-32 Inbound Load Balance

3.10.3 Special Application

Some Internet WEB server do not allow access with multi WAN address, also these WEB server was using dynamic IP address, in this case, AirLive IGR-2500 can let you just define dedicated port number allocated with dedicated WAN port, and the dedicated port was used to access these special WEB Server. (Figure 3-33)

Air Li	ve					R	weredb
Welcome							
System Status		Load	Baland	ce App	licatio	n Co	ntrol
WAN Configure			Start Port	End Port	WAN	Enable	
Bandwidth Usage			5800	5900	AUTO 🔽	R	
nfigure LAN&DHCP			0	0	AUTO WAN1		
Routing Table			0	0	WAN2 WAN3		
AP management			0	0	WAN4 WAN5		
ccess Control			0	0	WAN1 First WAN2 First		
QoS			0	0	WAN3 First WAN4 First		
_oad Balance			0	0	WAN5 First		
Outbound			0	0	AUTO 🔻		
Inbound			0	0	AUTO -		
ecial Application			0	0			
ecial IP Assignment				Ok	Cancel		
ToS					52		
\dvance							
Administration							
irmware Update							
Save & Reset							

Figure 3-33 Special Application

3.10.4 Special IP Assignment

Same as above mentioned, AirLive IGR-2500 can let you defined dedicated IP address (destination IP address or Source IP address) allocated with dedicated WAN port. (Figure 3-34)

Start IP	End IP	Assign WAN Enab
192.168.1.2	192.168.1.5	WAN1 -
192.168.1.253	192.168.1.254	WAN3 🗸 🔽
		WAN1 🗸 🗖
		WAN1 -

Figure 3-34 Special IP Assignment

3.10.5 TOS

TOS function can let you setting the priority for dedicated packet. (Figure 3-35)

User can specify the **Source IP**, **Destination IP**, **Protocol type**, **Source port number**, **Destination port number** and **Priority** for TOS feature. (Figure 3-36)

Air Li	ve			1	Powe	et by	Covist Int
Welcome							
System Status		Co	nfigure	ToS			
			TOS List				
Bandwidth Usage			105 115				
Configure LAN&DHCP	Status	Source IP	Distination IP	Potocol	Priority	Delete	Modify
Routing Table		Port	Port	Туре	,		
AP management	Enable	192.168.1.2~192.168.1.2	25.25	TCP	HIGH		с
Access Control		25~25	23~23				
QoS			Add				
E Load Balance			Apply Cance	el			
Outbound							
Inbound							
Special Application							
Special IP Assignment							
ToS							
Advance							
Administration							
Firmware Update							
Save & Reset							

Figure 3-35 TOS

status : \odot Enable \bigcirc Disable	
Source address :	
From: 192.168.1.2	To :192.168.1.2
Distination address :	
From :0.0.0.0	To :0.0.0.0
Protocol Type : TCP -	
Source Port : From 25	To25
Distination Port : From 25	To 25
Priority HIGH	

Figure 3-36 TOS Configuration

3.11 Advance

3.11.1 ARP Protection

To prevent the ARP cheating from virus, AirLive IGR-2500 offers you a feature named ARP protection; it will spread out router's IP and MAC address to LAN user in every specific time.

Frequency times/sec: User can define the time for ARP protection service. For example, if you define the Frequency to 2, IGR-2500 will broadcast its MAC address twice to LAN users in every second.
 (Figure 3-37)

Air Liv	Powered by Ovistente	Corp.
Welcome		
WAN Configure	ARP Protection	
Bandwidth Usage	Framanay	
Configure LAN&DHCP		
AP management	Ok Cancel	
Access Control		
<u>QoS</u>		
Advance		
ARP Protection		
Remote Configure		
Virtual Server		
DMZ Host		
Multi-NAT		
IP Binding		
DDNS		
Proxy		
Mail Alert		
Time		
System Log		
MAC Address Clone		
Administration		
Firmware Update		
Save & Reset		

Figure 3-37 TOS Configuration

3.11.2 Remote Configure

The AirLive IGR-2500 can be managed from any PC from Internet. If enable "Remote Configure" function, remote user can access the Web-based from router's WAN interface via Internet; If "Remote Configure" does not enable, the access is only available to PCs from LAN. The accessed port number is changeable. (Figure 3-38)

Assigning Remote IP: Specific dedicated PC can access IGR-2500 remotely.

- Leaving these fields blank will allow access by all PCs
- If enter specific IP address, only this address PC can access device remotely.
- The address must be public IP addresses.

Example: If the local user:

Enable the remote configure function

Remote port is 80 (default is 80, can be different port number)

Remote IP is blank.

ROUTER WAN port IP is 110.111.112.1

When the user of remote side wants to access IGR-2500 web configure, the remote user only needs to enter *http:// 110.111.112.1*

Remote Configure	
⊙ Enable ⊂ Disable	
Accessing Remote IP : Service Port : 80	
Ok Cancel	

Figure 3-38 Remote Configure

3.11.3 Virtual Server

AirLive IGR-2500 ALG Options to allow IPSec, PPTP and VoIP pass-through, user can also define the port number for ALG Options.

You may have FTP, MAIL, VPN or other server on your LAN. If you would like to allow the global users access some servers providing special services on your LAN. This function can help you to do this. Provide with global port & local port mapping function, let you easily configure internal server with same port number mapping to WAN IP different port number.

ALG Options:

- VPN Pass Through: For IPSec and PPTP
- VoIP Pass Through: VoIP Gateway can be connected directly to IGR-2500 LAN port, and open the corresponded VoIP port number.

(Figure 3-39)

	AL	G Opt	ions
2	IpSec Pa	ass Throug	h (Port 500)
•	PPTP P	ass Through	h (Port 1723)
		-	
•	VOIP P	ass Throug	h
•	VOIP P	ass Throug From	h To
ব	VOIP P	ass Throug From 1719	h To 1719

Figure 3-39 ALG Options and Pass Through

Virtual Server: (Figure 3-40)

- Global port: WAN virtual protocol number
- Local port: used by internal server port number
- Local IP: local server IP address
- Specify A Global IP: You can select to define one IP address from IGR-2500 several WAN ports setting. If you specify Global IP address with 0.0.0.0, the Internet user will be able to access virtual server from all the WAN port IP addresses.
- Select Port: If you don't know the port number, you can use this feature to select the service you want to define.

Air Live	Poweret by Ovisi Link Corp.
Welcome -	
	Configure Virtual Service
WAN Configure ■	Enable : 🗹
Bandwidth Usage	Global Port : 8080
Configure LAN&DHCP	Local Port : 8080
	Local IP: 192 . 168 . 1 . 100
	* Specify A Global IP: 60 . 250 . 158 . 64
Access Control	* If you specify a global IP,
QoS	Then the Virtual Server function will be enable on this global IP only. Otherwise, Input IP of 0.0.0.0 for enable function at all global IP.
☐ Advance	Select Port Select One Copy
ARP Protection	If you don't know the port number , you can use this to get it.
Remote Configure	Ok Cancel
Virtual Server	
DMZ Host	

Figure 3-40 Virtual Server

Group Virtual Server: If you would like to define more than one service port number into a virtual server rule, you can use **Group Virtual Server**. (Figure 3-41)

Air Liv	Ce Powerel by Ovis Link Corp.
Welcome	
	ALG Options
WAN Configure ■	
Bandwidth Usage	□ IpSec Pass Through (Port 500)
Configure LAN&DHCP	PPTP Pass Through (Port 1723) VOID Pass Through
	From To
AP management	UDP Port 1719 1719
Access Control	TCP Port 1720 1721
QoS	
	<u>Virtual Server</u>
Advance	ID Global Port Local Port Global IP Local IP Status Delete Modify
ARP Protection	644
Remote Configure	700
Virtual Server	Group Apply Cancel
DMZ Host	

Figure 3-41 Group Virtual Server

- **Start port:** The start port number of the port range.
- **End port:** The end port number of the port range.
- Specify A Global IP: User can select to define one IP address from IGR-2500 several WAN ports setting. If you specify Global IP address with 0.0.0.0, the Internet user will be able to access virtual server from all the WAN port IP addresses.
- Local IP: local server IP address
- **TCP/UDP:** The item is selected to define the port number type with TCP, UDP, or both.

(Figure 3-42)

Air Liv	Powered by Ovisients Corp.
Welcome	
System Status	Configure Group Virtual Service
WAN Configure	Enable : 🗹
Bandwidth Usage	Start Port : 5700
Configure LAN&DHCP	End Port : 5800
	* Specify A Global IP: 60 . 250 . 158 . 66
Access Control	
QoS	* If you specify a global IP, Then the Group Virtual Server function will be enable on this global IP only.
	Otherwise, Input IP of 0.0.0.0 for enable function at all global IP.
Advance	Ok Cancel
ARP Protection	
Remote Configure	
Virtual Server	

Figure 3-42 Group Virtual Server Setting

For example: (Figure 3-43)

Suppose you want to install servers dedicated with specific WAN port as following:

- 1. Internet user can access FTP server from WAN1
- 2. Internet user can access VNC from WAN 2.
- 3. Internet user can ERP server from all the WAN port.

Environment:

WAN1 IP address: Static IP address 60.250.158.64 WAN2 IP address: Static IP address 230.74.69.15 WAN3 IP address: Dynamic IP WAN4 IP address: PPPoE

LAN server:

FTP server (TCP 21): 192.168.1.10 VNC client (TCP 5800, 5900): 192.168.1.50 ERP server (TCP 1394 ~ TCP 1400): 192.168.1.120



Example 1: Define Virtual server to allow FTP service (TCP 21) packets from Internet to LAN FTP server via WAN1. (Figure 3-44)

Configure Virtual Service
Enable : 🔽
Global Port : 21
Local Port : 21
Local IP: 192 . 168 . 1 . 10
* Specify A Global IP: 60 . 250 . 158 . 64
* If you specify a global IP, Then the Virtual Server function will be enable on this global IP only. Otherwise, Input IP of 0.0.0.0 for enable function at all global IP.
Select Port Select One Copy
If you don't know the port number , you can use this to get it.
Ok Cancel

Figure 3-44 Example1 setting

Example 2: Define Virtual server to allow VNC service (TCP 5800, TCP 5900) packets from Internet to LAN VNC client via WAN2. (Figure 3-45)

			AL	G OI	otions			
			IpSec P	ass Thro	ugh (Port 500)			
			PPTP P	ass Thro	ugh (Port 1723)			
			VOIP P	ass Thro	ugh			
		[From	ι Το			
		τ	UDP Port	1719	1719			
		-	TCP Port	1720	1721			
			Vir	tual S	Server			
ID	Global Port	Local Port	Glob	oal IP	Local IP	Status	Delete	Modify
1	5800	5800	230.74	4.69.15	192.168.1.50	Enable		0
2	5900	5900	230.74	4.69.15	192.168.1.50	Enable		0
		G	roup	Add	Cancel			

Figure 3-45 Example2 setting

Example 3: Define Virtual server to allow packets TCP 1394 ~ 1400 from Internet to ERP server via all the WAN interfaces. (Figure 3-46)

Configure Group Virtual Service
Enable : 🔽
Start Port : 1394
End Port : 1400
* Specify A Global IP: 0 0 0
Local IP: 192 . 168 . 1 . 120
TCP/UDP: TCP
* If you specify a global IP.
Otherwise, Input IP of 0.0.0.0 for enable function at all global IP.
Ok Cancel

Figure 3-46 Example3 setting

3.11.3 DMZ Host

The **Demilitarized Zone (DMZ)** function provides a way for public servers (Web, e-mail, FTP, etc.) to be visible to the outside world (while still being protected from DoS (Denial of Service) attacks such as SYN flooding and Ping of Death). These public servers can still be accessed from the secure LAN.

By default the firewall allows traffic between the WAN and the DMZ, and from the LAN to the DMZ, but traffic from the DMZ to the LAN is denied. Internet users can access to host servers configured in DMZ Host list, but can not access to the LAN, unless special filter rules were configured to permit the access by the administrator or the user who is an authorized remote user.

It is highly recommended that you keep all sensitive information off of the public servers, and store sensitive information in computers on LAN.

If you would like to grant remote users the right to access one of your computers on LAN to perform some actions such as Internet games, you must enable the function of DMZ. When remote users access your legal IP(s), IGR-2500 will transmit these packets to the corresponding virtual IP(s). (Figure 3-47)

Air Live	Powered by Ovis Link Corp.
Welcome -	
	Dynamic IP DMZ
WAN Configure	WAN1 : Host IP Address
Bandwidth Usage	WAN2 : Host IP Address
Configure LAN&DHCP	🗆 WAN3 :Host IP Address
Routing Table	WAN4 :Host IP Address
	Multi-DMZ/Public DMZ
Access Control	
QoS	Item DMZ Host IP Address IP address provided by ISP Enable Delete Modify
	Add
⊟ Advance	Ok Cancel
ARP Protection	
Remote Configure	
Virtual Server	
DMZ Host	

Figure 3-47 Dynamic IP DMZ

Dynamic IP DMZ:

When a WAN port IP is assigned by ISP and obtained by PPPoE or Dynamic IP, you can use this section to specify the DMZ host disregarding the exact WAN IP address. Tick the WAN port option and fill in the IP address of the DMZ host inside the network, the IGR-2500 will map the corresponding WAN IP to the internal DMZ host automatically. When a remote computer wants to access the internal LAN through this WAN, if the accessed port number is not specified by Virtual Server Host, it will be mapped into this internal DMZ host. For example, if your WAN1 uses PPPoE connection to obtain a public IP address, the IGR-2500 will let data packet with destination address point to WAN1, and pass through into DMZ Host when the port number of the packet does not exist in Virtual Server Host table.

(Figure 3-48)



Figure 3-48 Dynamic IP DMZ

■ Multi-DMZ:

If you use fixed WAN IP address assigned by your ISP, you can use this section to specifically assign the WAN IP address to corresponding DMZ host. If you own several legal WAN IPs, you can assign which WAN IP correspond to which IP on your LAN. This assignment will let most protocol to access the assigned IP on the LAN. The following figure is an example: (Figure 3-49)



Air Live				E	wered by Ovisl	ink Corp.
Welcome						
		Dy	namic IP DM	Z		
WAN Configure		🗆 WAN1 : Hos	t IP Address			
Bandwidth Usage		WAN2 : Hos	t IP Address			
Configure LAN&DHCP		🗆 WAN3 : Hos	t IP Address			
Routing Table		🗆 WAN4 : Hos	t IP Address			
AP management		Multi	-DMZ/Public	DMZ		
Access Control						
QoS	Item I	OMZ Host IP Address	IP address provided by I	SP Enable	Delete Modify	
	1	192.168.1.10	203.74.94.31	Enbale		
+ Load Balance	2	192.168.1.11	203.74.94.32	Enbale		
Advance	3	192.168.1.12	203.74.94.33	Enbale		
ARP Protection			Add			
Remote Configure			Add			
Virtual Server			Ok Cancel			
DMZ Host						



Public DMZ: Public IP Mapping

This AirLive IGR-2500 provides "Public IP Mapping" function. With this function you can map legal IP between ROUTER WAN & LAN interface. This application will be very useful to let you connect GAME Server or VOIP gateway inside the LAN, because most GAME SERVER or VOIP gateway needs legal IP address to operation.

For Example:

ISP provides following legal IP address to your office. (Static IP 203.74.94.31 \sim 34) By using DMZ function, you can configure DMZ host as follow.

DMZ Host IP Address	IP address provided by ISP	
192.168.1.10	203.74.94.32	(private DMZ host)
203.74.94.33	203.74.94.33	(for GAME SERVER)
203.74.94.34	203.74.94.34	(for VOIP gateway)

After configure IGR-2500 as above DMZ HOST table, the IGR-2500 will redirect the packets which destination address points to 203.74.94.33/34 into GAME SRVER and VOIP gateway .It also allows LAN user (ex. 192.168.1.xx) to access GAME SERVER or VOIP gateway. (Figure 3-50)

Air Li	ve				E	wered	by Ovisi Hi	nk Corp.
Welcome	-							
			Dy	namic IP DM	Z			
WAN Configure ■			🗆 WAN1 : Hos	t IP Address				
Bandwidth Usage			□ WAN2 : Hos	t IP Address				
Configure LAN&DHCP		□ WAN3 : Host IP Address						
		□ WAN4 :Host IP Address						
		Multi-DMZ/Public DMZ						
Access Control		-						
QoS	1	Item I	OMZ Host IP Address	IP address provided by I	SP Enable	Delete	Modify	
		1	192.168.1.10	203.74.94.32	Enbale		С	
		2	203.74.94.33	203.74.94.33	Enbale		C	
Advance		3	203.74.94.34	203.74.94.34	Enbale		С	
ARP Protection				Add				
Remote Configure				Per second				
Virtual Server				Ok Cancel				
DMZ Host								



If user configures "Public IP Mapping" function, the GAME SERVER & VOIP gateway will not have DoS function protected by IGR-2500.

When hardware DMZ is enabled, the entire DMZ rule will be re-directed to the device that is connected to hardware DMZ port.

3.11.4 Multi-NAT

Multi-NAT function allows you to configure multiple LAN IP domain to each WAN port (total 10 LAN IP can be defined), after configure multiple NAT function it will act like virtual router, all traffic between each LAN IP domain will be accessed through IGR-2500. It will provide following benefit:

- Restrict broadcast storm in single IP domain.
- Check each packet with DoS function enable.

Air Li	ve			(P	owered by Ov	C.
Welcome]_					
System Status			Multi-	NAT		
WAN Configure	Trans	LAND	Culture MACV	WANTD	TT A NT	
Bandwidth Usage		LANIP	Sublict MASK	WAINIP		
Configure LAN&DHCP						
Routing Table	3					
AP management	1 4					
Access Control	1 5 [[AUTO 💌	
005	6					
Load Balance					AUTO 💌	
Advance	8					
Auvance	9				AUTO 🔽	
ARP Protection	10			l		
Remote Configure	11					
Virtual Server	12			l		
DMZ Host	13					
Multi-NAT	14					
IP Binding	15					
in containing	16				AUTO 💌	



- LAN IP: separated LAN IP domain
- Subnet Mask: mask for IP domain
- WAN IP: specific WAN IP address matched to LAN IP domain.
 - You can leave it **blank** in this field for PPPoE connection.
 - Write down specific WAN IP address, if WAN port had defined multiple IP address on it (DMZ used).
 - Blank: router will send packet follow by WAN filed selected.
- WAN: AUTO, WAN1, WAN2, WAN3, WAN4, WAN5
 - ♦ WAN1/2/3/4: router will route packet to correspond LAN/WAN
 - AUTO: router will route packet follow by "load balance" function selected

(Figure 3-51)

3.11.5 IP Binding

In Internet world, there have some Game Server, SSL protocol user or Personal Server have special request for connection, these special request include:

- Use special port number to perform specific function
- Not allow user connect with multiple WAN IP address

For Example, if user uses load Balance function provided by router to connect Server, Server might respond with many login requests back to user, because each session comes different WAN port with different IP address, Server treats it like different request

When user enables IP Binding function, he can specify the IP packet with dedicated WAN port to reach dedicated destination server, so it will show only 1 IP address.

That means when user wants to reach destination server, the packet will only go through dedicated WAN port, so load balance function will not be available.

- Remote IP: Destination server IP address. It will be restrict the access via dedicated WAN port. If you do not specify destination Host IP address in this field, the specific port number in the port number field will be limited to transfer packet via dedicated WAN port.
- Start Port / End Port: The protocol port number starts from 0 to 65535, you can decide the port number range to be restricted.
 - Start Port / End Port: 0 all packet will be restricted to dedicated WAN port
 - Start Port / End Port: blank all packet will be restricted to dedicated WAN port
 - Start Port / End Port: 80 only packet type of port 80 will be restricted, the rest type packets will not be restricted, and can be spread out with Load Balance function.
 - Start Port / End Port: 1 ~ 21 only packet type from port 1 to port 21 will be restricted, the rest type packets will not be restricted, and can be spread out with load balance function.
- WAN: select WAN port for transferring the dedicated destination packet

Example:				
<u>IP Address</u>	<u>Start port</u>	<u>End Port</u>	WAN	
210.3.1.23	0	65535	WAN1	

All packets go to Internet Host with IP 210.3.1.23 will be restricted to dedicated WAN 1

<u>IP Address</u>	<u>Start port</u>	<u>End Port</u>	WAN
210.3.1.24	23	23	WAN2

Packet type belong to protocol 23 that goes to Internet Host with IP 210.3.1.24 will be restricted to dedicated WAN2

IP Address	<u>Start port</u>	End Port	WAN
Blank	21	21	WAN1

Blank

Packet type belong to protocol 21 (FTP) that goes to any of Internet Host will be restricted to dedicated WAN1. (Figure 3-52)

Air Live	8			Powered	by OvisLi
Welcome A	_				
Work Mode		IP Bi	nding		
	Remote TP	Start Port	End Port	WAN	Fnable
WAN Configure	210.3.1.23		65535	WAN1	
Bandwidth Usage	210.3.1.24	0	0	WAN2	
Configure LAN&DHCP		21	21	WAN1 -	
Routing Table				AUTO	
Access Control				AUTO	
QoS				AUTO	
Load Balance				AUTO -	
Advance				AUTO -	
Remote Configure				AUTO -	
Virtual Server					
DMZ Host		Home Page	Apply		
Multi NAT					
IP Binding					

Figure 3-52 IP Binding

3.11.6 DDNS

You need to apply for a free DNS domain name from <u>www.dyndns.org</u> or the other DDNS service provider, AirLive IGR-2500 will update the WAN IP address to DDNS database once the WAN port was connected to Internet if DDNS function is enabled. And the users in Internet can find out the IGR-2500 via this domain name. (Figure 3-53)

- DDNS: select to enable DDNS service
- WAN Port: select the dedicated WAN port for DDNS service
- Provider: select the DDNS service provider that you want to apply the DDNS service, IGR-2500 provides <u>www.oray.net</u>, <u>www.88ip.com</u>, <u>www.dyndns.org</u>, and <u>www.dtdns.com</u> DDNS service provider.
 - System: IGR-2500 supports to define Dyndns DDNS service as DDNS resolved Dynamic IP, DDNS resolved Static IP, or DDNS resolved Custom IP.
- User Name: Enter the user name applied from DDNS service provider
- **Password:** Enter the password applied from DDNS service provider
- User Hostname: Enter the host name applied from DDNS service provider

Air Live	Powered by OvisLink Corp.
Welcome ▲ System Status ■ WAN Configure ■ Bandwidth Usage ■ Configure LAN&DHCP ■ ■ Routing Table ■ ■ AP management ■ ■ Access Control ■ QoS ■ ■ Load Balance ■ ■ Advance ■	DDNS : C Enable C Disable Wan Port : AUTO System : O Dynamic C Static C Custom Provider : www.dyndns.org User Name : jacky Password : •••••• User Hostname : jairlive98 . dyndns.org OK Cancel
ARP Protection Remote Configure Uirtual Server DMZ Host Multi-NAT IP Binding DDNS	

Figure 3-53 DDNS

3.11.7 Proxy

This function works together with **Mail Alert** function, if there have Proxy Server in your local LAN, please fill in necessary Proxy information in this display. (Figure 3-54)

	Air Li	Powered by Ovisiente Corp.	1
	Welcome	A	
Đ	System Status	Configure Provy	
÷	WAN Configure	Configure floxy	
	<u>Bandwidth Usage</u>	Proxy : © Enable O Disable	
<u>C</u>	onfigure LAN&DHCP	Proxy IP : 192.168.1.5	
ŧ	Routing Table	Proxy Port : 834	
Ŧ	AP management	Ok Cancel	
ŧ	Access Control	United States	
	<u>QoS</u>		
÷	Load Balance		
٦	Advance		
	ARP Protection		
	Remote Configure		
	Virtual Server		
	DMZ Host		
	Multi-NAT		
	IP Binding		
	DDNS		
	Proxy		

Figure 3-54 Proxy

3.11.8 Mail Alert

Enter the **Receiver/ Sender** e-mail Address in the fields and check the items you want. System will send e-mails to **Receiver** address once the conditions meets the setting. (Figure 3-55)

- Receiver mail address: The mail address that will receive alert mail
- Sender mail address: The mail address that send out alert mail, you should fill in a legal format address
- Alert Condition: IGR-2500 provides four condition selections:

WAN Up	System will send the mail, once WAN port(s) is connected to Internet.		
WAN Down	System will send the mail, once WAN port(s) is disconnected from Internet.		
DoS Attack	System will send the mail, once the selected conditions in DoS occurred.		
	(need to enable DoS function)		
Swatam lag	System will send the mail of log information, once the log records conform to		
Systemiog	your setting.		

Air Live	Powered by Ovis Lints	Corp
Welcome A		
	Configure Mail Alert	
WAN Configure		
Bandwidth Usage	Mail Alert: O Enable ® Disable	
Configure LAN&DHCP	E_Mail Address	
	Receiver : jacky.ko@airlive.com	
	Sender : mis@airlive.com	
Access Control	Sending by	
QoS		
Load Balance	© Direct send	
⊟ Advance	O Mail server forward	
ARP Protection	Alert Condition	
Remote Configure	🖾 WAN Up	
Virtual Server	🔽 WAN Down	
DM7 Host	🗹 DoS Attack	
Multi NAT	✓ System log (per 100 records web send a mail)	
	Ok Cancel	
IP Binding	UN UNICEI	
DDNS		
Proxy		
Mail Alert		

Figure 3-55 Mail Alert

3.11.9 Time

AirLive IGR-2500 will obtain the GMT (Greenwich Mean Time) after connected to Internet. You need to indicate the local time so that the system could operate with the correct time. For example, Taiwan's local time is GMT + 8 hours.

Select "Automatic adjust clock for daylight saving changes" will display the time one hour earlier than local time. (Figure 3-56)

Air Live	Powerell by OvistBink Con
Welcome System Status WAN Configure Bandwidth Usage Configure LAN&DHCP Routing Table AP management Access Control QoS Load Balance Advance ARP Protection Remote Configure Virtual Server	Image: Constraint of the minutes of doing update system time from NTP server Image: Constraint of the minutes of doing update system time from NTP server Image: Constraint of the minutes of doing update system time from NTP server Image: Constraint of the minutes of doing update system time from NTP server Image: Constraint of the minutes of doing update system time from NTP server Image: Constraint of the minutes of doing update system time from NTP server Image: Constraint of the minutes of doing update system time from NTP server Image: Constraint of the minutes of doing update system time from NTP server Image: Constraint of the minutes of doing update system time from NTP server Image: Constraint of the minutes of doing update system time from NTP server Image: Constraint of the minutes of doing update system time from NTP server Image: Constraint of the minutes of the minu
DMZ Host <u>Multi-NAT</u> <u>IP Binding</u> <u>DDNS</u> <u>Proxy</u> <u>Mail Alert</u> <u>Time</u>	

Figure 3-56 Time

3.11.10 System Log

Show all the records after IGR-2500 Power on, such as WAN port up/down, WAN IP address, the obtained time, DDNS current corresponding WAN IP address and so forth. You can also save these data to files. (Figure 3-57)

Air Live	8		Powerettby	DvisLink Co
Welcome				
System Status		S	ystem Log	
WAN Configure	Test	T	C () (_
Bandwidth Usage	Item	1970 01 01 00:00	WANI Cable On 100M full	_
Configure LAN&DHCP	2	1970-01-01 00:00	WAN1 cable on DHCP client start	_
Deuting Table	3	1970-01-01 00:00	Gateway 1 exist (192 168 0 254)	-
	4	1970-01-01 00:00	WAN1 UP IP = $192.168.0.62$	
AP management	5	1970-01-01 00:00	LB HC WAN1 restarted	
Access Control	6	2007-09-17 14:31	SNTPS Updated system Time Ok	
QoS	7	2007-09-17 14:31	Schedule control is Updated !	
⊥ Load Balance	<u> </u>		Home Page	
Advance				
ARP Protection				
Remote Configure				
Virtual Server				
DMZ Host				
Multi-NAT				
IP Binding				
DDNS				
Proxy				
Mail Alert				
Time				
System Log				

Figure 3-57 System Log

3.11.11 MAC Address Clone

If your ISP blocked the MAC address of a network card, you may use MAC Address Clone to duplicate the MAC address to the Mac address in each WAN port.

Remove all Ethernet cable on IGR-2500 LAN port except for the PC you want to clone. Then press **Ok** when you ready. (Figure 3-58)

- User Self-Define WAN Port MAC Address: type in a MAC Address to define WAN MAC Address.
- Set WAN Port MAC Address Equal PC MAC Address: select to clone WAN MAC Address from LAN PC MAC Address.

You need to reboot IGR-2500 after finished cloning to make new MAC address takes effects.

Air Live	Powered by Ovistant	Corp.
Welcome -		
	MAC Address Clone	
WAN Configure ■	MAC address clone will load the Load-Balance	
Bandwidth Usage	Router's WAN port MAC address from your PC Ethernet card.	
Configure LAN&DHCP	Please select a WAN PORT	
	WAN PORT: WAN1	
Access Control	© User Self-Define WAN PORT MAC Address:	
QoS	00 . D0 . DA . 00 . 39 . 31	
	Default Value.(00.00.20.39.31)	
Advance		
ARP Protection	C Set WAN PORT MAC Address Equal PC MAC Address:	
Remote Configure	PC MAC:(00:18:F3:F5:D3:54)	
Virtual Server	Please remove all Ethernet cables on Load-	
DMZ Host	to clone. Then press OK button when you are	
Multi-NAT	ready.	
IP Binding	ОК	
DDNS		
Proxy		
Mail Alert		
Time		
System Log		
MAC Address Clone		

Figure 3-58 MAC Address Clone

3.12 Administrator

3.12.1 Password

Use this function to change the **Password** that is used for access the web configuration. Type in the **Old Password, New Password** and **Retype Password** in their respective fields and then click **Ok**, the password will be changed to new one after re-boot. (Figure 3-59)

Password length can be up to 30 alphanumeric characters with case sensitive.

WE SUGGESTED YOU TO CHANGE ROUTER PASSWORD AND KEEP IT IN SAFETY PLACE AFTER YOU RECEIVED ROUTER AND FINISH ALL ROUTER PARAMETER SETTING.

Air Li	re'
Welcome Bandwidth Usage Configure LAN&DHCP Routing Table AP management Access Control	Change System Password Old Password : •••••• New Password : •••••• Retype Password : •••••• Ok Cancel
Advance Administration Password	

Figure 3-59 Change Password

3.12.2 Backup & Restore

Use **Backup & Restore** function to save all the settings parameters to PC for safety issue, in order to avoid all parameter lose when system crushes. (Figure 3-60)

Air Li	ve	Powered by Ovis Bink Corp.
<u>Welcome</u>	<u>^</u>	
		Configuration Backup
WAN Configure ■		This feature can backup the system configuration from this device
Bandwidth Usage		to your PC or restore your stored system configuration to this device.
Configure LAN&DHCP		BackUp File
		Configuration Restore
Access Control		To restore your stored system configuration to this device.
QoS		Local PC File Path: Browse Apply
🛨 Load Balance		<u>I</u>
⊞ Advance		
Administration		
Password		
Backup & Restore		

Figure 3-60 Backup & Restore

3.12.3 Load Factory Default

User can use this function to define the feature of reset button, or load the latest configuration file back to device. Click OK after the selection, the IGR-2500 will restart automatically. (Figure 3-61)

- **Reset Button Option:** This option is used to define Default button on the back penal of the router.
 - Load Default: press Reset button, the factory default configuration will be loaded.
 - **Reset:** press Reset button, IGR-2500 will reboot and load the latest configuration.
- Load Factory Default: Tick "Yes" option then click "Ok", you can load the factory default value immediately. If you only want to submit new setting for Default Button Option without load the factory default, tick the "No" option before click Ok.

Air Lin	Powered by Ovisibility Corp.
Welcome	
	Default Button Option
WAN Configure	
Bandwidth Usage	Load Factory Default Now
Configure LAN&DHCP	
	C Yes © No
	Ok Cancel
Access Control	
QoS	
Administration	
Password	
Backup & Restore	
Load Factory Default	

Figure 3-61 Load Factory Default

3.12.4 Display

You can use this function to check all the parameter setting in this router, in order to save time to check every display. (Figure 3-62)

Âir Li	ve	Powered by OvisLink Corp.
Welcome		Config Show
System Status		
WAN Configure		System Configuration Setting
Bandwidth Usage	Firmware:	Version : IGR2500-V6127-BIV0.1-E
Configure LAN&DHCP		Release Date : Aug 10 2007 Printout Time : MON SEP 17 18:29:53 2007
		Time Zone : GM+08:00 Primary NTP IP: time.nist.gov
AP management		Secondary NTP : stdtime.gov.hk
Access Control	LAN status:	IP address : 192.168.1.1 MAC address : 00:D0:DA:00:39:30
QoS		Mask : 255.255.255.0 Dhcp status : Enable
		Dhcp IP Start : 192.168.1.12 - 192.168.1.20 DNS IP address: 205.166.226.38
	DHCP	
Administration	reserved IP:	MAC address IP address
Password	WAN status:	
Backup & Restore		Netmask : 255.255.255.0 MAC address : 00.d0.da.00.39.31
Load Factory Default		Connect To : InterNet Current status: Enable
Display		Healthy Check : NoDefault
Firmware Update		Schedule : Disable
Save & Reset		<pre>2.IP address : 169.254.12.100 Netmask : 255.255.0 MAC address : 00.d0.da.00.39.32 Connect To : InterNet Current status: Disable Healthy Check : NoDefault Type : Dynamic IP Schedule : Disable 3.IP address : 169.254.13.100 Netmask : 255.255.255.0 MAC address : 00.d0.da.00.39.33 Connect To : InterNet Current status: Disable</pre>

Figure 3-62 Display

3.13 Firmware Upgrade

AirLive IGR-2500 allows you to easily update the embedded firmware.

We will occasionally provide new firmware on the web site to help you updating the firmware of your IGR-2500.

Follow the procedure to update your firmware after downloaded the new code.

Method 1:

Double click the executable file (the file with exe extension file name) you downloaded. Here we take **v105.exe** as the example of new version file.

Step 1: Click Search to find the IP of router.

SOHO Geteway U	pdate Ver105		
Address:	.	· ·	
Search	Update	Exit	
<		>	

Step 2: The IP address of IGR-2500 is 192.168.1.1 (default value).

SOHO Geteway Up	date Ver105			
Address:	192 . 168	. 1	•	1
Search	Update		E×it	
				~
<				>

Step 3: Click **Update** to update the firmware.

Address :					
	192 . 168	. 1	•	1	
Search	Update		Exit		
Writing block: 8/ Writing block: 9/ Writing block: 11 Writing block: 12 Writing block: 12 Checking Writter ChkLength is 391 Checksum ok. Please Reboot to	/12 done. /12 done. 0/12 done. 1/12 done. 2/12 done. n Data ok 1683 o run new cod	de.			

Method 2:

Step 1: Run a TFTP server program such as TFTPD32. (TFTPD32 is a shareware and you may download it or other TFTP server programs from Internet.)

🏘 TFTPD32 by Ph	. Jounin	
Base Directory	C:\New Folder	
Server Address	192.168.1.13	
Current Action	Listening on port 69	
About	Settings	<u>H</u> elp

Step2: Make a base directory in this server

🏘 Tftpd32: Settings		X	
Security C None C Standard C High	Server configuration Timeout (seconds) Max Retransmit Tftp port	3 6 69	
Base Directory			
Advanced Options Hide Window at startup Size of anticipation window (Bytes) OK Help Cancel			

Step 3: Save the image file of firmware to the directory of TFTPD32



Step 4: Enter the Server Name and File Name in the new folder fields of Firmware Update window and then click Ok.

Air Liv	Ce Powered by Ovisi Link Corp.
Welcome System Status WAN Configure Bandwidth Usage Configure LAN&DHCP Routing Table AP management Access Control QoS	Firmware Update : TFTP Server Name : File Name : Ok
Advance Administration <u>Firmware Update Save & Reset</u>	

Step 5: You will see the updating processing. After finishing update procedure, you must **reboot** IGR-2500 to run new code.

3.14 Save & Reset

In order to save the configuration changes that have been made to the IGR-2500, you must save them to the IGR-2500's Flash memory. If you do not save the changes, the configuration settings will be lost in the event of a power loss or system reboot to the IGR-2500. (Figure 3-63)

Air Liv	Powerst by Cylst Hink Corp.
Welcome	
WAN Configure	Save & Reset
Bandwidth Usage	Are you sure to reset Load-Balance Router and
Configure LAN&DHCP	© Yes C No
Routing Table	
AP management	Ok Cancel
Access Control	
<u>Qo S</u>	
⊥ Load Balance	
Administration	
Firmware Update	
Save & Reset	

Figure 3-63 Load Factory Default

Appendix A In-Bound Load Balance Function

Authorities DNS is just a fancy term for the official IP address keeper/provider of particular Domain (or Internet) name, such as <u>www.example.com</u> is analogous to a telephone book where a person's name is associated with his telephone number. Wikipedia, the free encyclopedia has a good general discussion of DNS: <u>http://en.wikipedia.org/wiki/Domain_Name_System.</u>

This IN-BOUND ROUTER DNS server contains the names and Internet addresses of servers that you wish to host. In order for all DNS requests of your domain names to be ultimately routed to your IN-BOUND ROUTER, it has to be setup at the registrar of your Internet name. In general, logon to your registrar site, and manage your domain name. For example, <u>www.example.com</u> is located at a WEB hosting company, and the original Domain server was registered in listed order:

NS0.DNSMADEEASY.COM	NS1.DNSMADEEASY.COM	NS2.DNSMADEEASY.COM
NS3.DNSMADEEASY.COM	NS4.DNSMADEEASY.COM	

We need to change <u>www.example.com</u> to be hosted by IN-BOUND ROUTER; so we follow the registrar's instructions and delete: NS2, NS3, and NS4, and assign Domain server:

Name	IP address
NS0.EXAMPLE.COM	WAN1
NS1.EXAMPLE.COM	WAN2

The name is arbitrary; the most important are about the IP addresses. It is absolutely necessary for WAN1 to be a static address, and for redundant, fault-tolerant accesses, WAN2 should also be a static address. It would take approximately 24 - 48 hours for this change to take effect throughout the Internet. Below is the actual display of godaddy for Name Servers:

If you will be using other Name Servers please	All registrars have the same basic name server	
select Custom Name Servers and enter them in the	facility. For www.example.com, we use	
spaces provided.	godaddy.com, and the process is: Login Manage	
Changes to Name Servers may take up to 48	domain Set Name Servers. We enter WAN1 and	
	WAN2 for Custom Name Servers.	
O Default Hosting Name Servers		
C Default Parked Name Servers		
Custom Name Servers		
Name Server 1: 61.66.15.195		
Name Server 2: 219.91.110.55 *		
Name Server 3:		

A.1 Simple Load Balance (2 WAN lines; Session 1:1)

Let us assume that the upload speed of WAN1 and WAN2 are the same; so we will use inbound load-balancing setting: Session with a load-balancing ratio of 1:1.



In the IN-BOUND ROUTER configuration **Load Balance** → **Inbound**:

InBound Load Balance	Step 1: Click on Add new item					
Load Balance Mode						
SessionWeight round robin						
Inbound Option						
Name Type Address Modify Delete						
Add new item						
Apply Cancel						
Configure	Inhound (Addr)	Step 2:				
-------------------	-----------------------------	---------------------------------	--	--	--	--
oomrigure .	<u> </u>					
Select	t DNS Type	times, once for WAN1 and				
		once for WAN2 with Address				
© Ac	ddress	Type. This display show the				
C Ca	1st time for WAN1, after					
CM	lail eXchanger	clicking Ok . Repeat the				
Name : host1.e	example.com	previous configuration with the				
IP Address :		same name for WAN2 at this				
Address : WAN2		time.				
OF	Cancel					
	Gancer	You don't need to explicitly				
		enter any IP address.				
InDound I	and Palance	Step 3:				
Inbound L	Dad Balance	Now, we have 2 entries in the				
	DNS table. Click on Add new					
Load Ba	item again.					
© Sess	sion					
O Wei	ight round robin					
	ghtrouldroom					
Inbou	nd Option					
N.						
Name T	ype Address Modify Delete					
host1.example.com	A WAN1 C					
host1.example.com	A WAN2 O					
<u>[</u>						
Add						
(
Apply						

					Otan A	
Configure Inbound(CName)					Step 4:	
	This time we are adding the					
	Select DNS Type					
	C	Address			for web server.	
	G	Canonical Name			Select DNS Type with	
	C	Mail eXchanger			Canonical Name.	
Name :	www.	example.com				
Host :	host1	.example.com 💌			Name: www.example.com	
		0.020 0000 0000 0000 0000 0000 0000 000			Host: host1 example com	
		Ok Cancel				
	25	25 - 56 - 25				
InBound	1 :	Load Ba	lar	lce	Step 5:	
					The simplest case for the	
Load Balance Mode				configuration of IN-BOUND		
					ROUTER DNS server is done.	
	• Se	ession				
	C Weight round robin					
Inbound Option						
Name	Туре	Address	Modify	Delete		
host1.example.com	Α	WAN1	C			
host1.example.com	A	WAN2	C			
www.example.com	С	host1.example.com	C			
	A	dd new item				
Apply Cancel						

Now the Inbound Load-balancing DNS Server is configured to redirect the Internet requests of <u>www.example.com</u> to the IP address of either WAN1 or WAN2. But we'll still need to configure the virtual server.

In the IN-BOUND ROUTER configuration: Advance -> Virtual Server

ALC Options	Step 1:
ALGOPHOIIS	The port for www.example.com
□ IpSec Pass Through (Port 500)	is 80 and the IP address is:
□ PPTP Pass Through (Port 1723)	192.168.1.100.
VOIP Pass Through	Enter:
From To	Global Port: 80
UDP Port 1719 1719	Local Port: 80
TCP Port 1720 1721	Local IP: 192.168.1.100
Virtual Server	Select Enable, and then click
Viitual Server	APPLY.
ID Global Port Global IP Local Port Local IP Enable	
1 80 192.168.1.100 ☑	
	Step 2:
Save & Reset	In order for the Inbound Load
	Balancing to take effect, we will
Are you sure to reset Load-Balance Router and	need to do a system reboot.
• Yes O No	Select Yes and click on Ok.
Ok Cancel	

After the reset sequence is finished, the configured for Inbound Load Balancing is completed.

A.2 Advanced Load Balancing

We will describe Inbound Load Balancing using "Weighted round robin" algorithm for three Internet servers:

- 1. Web server, <u>www.example.com</u>, using WAN1 WAN2, with ratio of 1:2
- 2. FTP server, ftp.example.com, using WAN1 –WAN4, with ration of 1:2:3:4
- 3. Mail server, mail.example.com, using WAN3 & WAN4, with ratio of 3:4

The ratio of 1:2 means that every return of IP address from WAN1, there will be two returned IP addresses from WAN2 for the DNS request.

For the Load Balancing "Weighted round robin" algorithm, you should specify the data rate of each individual WAN ports.

WAN Control	 Define the WAN speed
Select WAN Port WAN1 WAN Speed WAN1 Upload(kbits/s) : 1024 Download(kbits/s) : 5120 Usage Set WAN1	In Bandwidth Usage page, select the WAN port and enter the specific Download and Upload bandwidth. The bandwidth must be the correct value provided by ISP, or the load balance function might
Procotol Port Usage	not work properly.
E HTTP 80 %	
E POP3 110 %	Do the same configuration for
□ SMTP 25 %	the other WAN ports.
E FTP 21 %	
Ok Cancel	*.)

InBound	d Load B	alance	Define <u>www.example.com</u> in Inbound Option
Ī	 Session Weight round robin WAN1 : 1 WAN2 : 2 WAN3 : 3 WAN4 : 4 mbound Optior 	1	In Load Balance → Inbound, select Weight round robin for the inbound load balance mode. Now you can enter the ratio for each WAN port into their respective fields.
Name	Type Address	Modify Delete	
host1.example.com	A WAN1	C E	
host1.example.com	A WAN2	C D	
www.example.com	C host1.example.c	om C 🗆	
	Add new item Apply Cancel		

Add the appropriate entries into the Inbound Option table. The entries are similar to the entries for <u>www.example.com</u> in previous section A.1. We will use host2 for <u>ftp.example.com</u>, and here are the results so far.

Inbound Option					Define <u>ftp.example.com</u> in Inbound Option
Name	Туре	Address	Modify	Delete	
host1.example.com	Α	WAN1	С		In Load Balance → Inbound
host1.example.com	Α	WAN2	0		for entering: www.example.co
www.example.com	С	host1.example.com	o		and ftp example com
host2.example.com	Α	WAN1	O		and <u>reprovemptoreonn</u> .
host2.example.com	Α	WAN2	С		
host2.example.com	Α	WAN3	C		
host2.example.com	A	WAN4	0		
ftp.example.com	С	host2.example.com	0		

The mail server requires some additional steps.

Configure Inbound (Addr) Select DNS Type	 ■ Define <u>mail.example.com</u> in Inbound Option Step 1: In Load Balance → Inbound 	
 Address Canonical Name Mail eXchanger Name : mail.example.com IP Address : Address : WAN3 	page, click Add new item , select DNS Type as Address , and configure host name for the Mail server address entry: Enter: Name: <u>mail.example.com</u>	
Ok Cancel	rather than Name: <u>host3.example.com</u> Port: WAN3	
Configure Inbound (Addr) Select DNS Type	Step 2: Load Balance → Inbound → Add new item → Configure Inbound (Addr):	
Address C Canonical Name Mail eXchanger Name : mail.example.com IP Address : Address : Address : Ok Cancel	Enter the same domain mail.example.com to WAN4	

Configure Inbound (CName)	Step 3:
configure insound (ondate)	Load Balance $ ightarrow$ Inbound $ ightarrow$
Select DNS Type	Add new item \rightarrow Configure
	Inbound (CName):
C Address	
© Canonical Name	Select Canonical Name and
C Mail eXchanger	enter the name as
Name : smtp.example.com	smtp.example.com, select
Host : mail.example.com	Host with mail.example.com
Ok Cancel	
Configure Inbound (CName)	Step 4:
	Load Balance $ ightarrow$ Inbound $ ightarrow$
Select DNS Type	Add new item \rightarrow Configure
	Inbound (CName):
C Consider Norma	
C Moil a Vahanger	Similarly, do the previous step
	again for pop3.example.com.
Name : pop3.example.com	
Host : mail.example.com	
Ok Cancel	
Configure Inhound (MX)	Step 5:
configure insound (FR)	Load Balance $ ightarrow$ Inbound $ ightarrow$
Select DNS Type	Add new item \rightarrow Configure
belees bub lipe	Inbound (MX):
C Address	
C Canonical Name	Select Mail eXchange as DNS
Mail eXchanger	type and enter:
	Name: <u>example.com</u>
Name : jexample.com	Host. mail.example.com
Host : mail.example.com	
Ok Cancel	

	InBound Los	Step 6: Load Balance → Inbound: The Mail Server is configured by the last 5 entries of the DNS Name table.					
	I Name host1.example.com host1.example.com www.example.com host2.example.com host2.example.com host2.example.com ftp.example.com mail.example.com smtp.example.com pop3.example.com	nbo Type A A C A A A A C C A A C C C MX	Address WAN1 WAN2 host1.example.com WAN1 WAN2 WAN3 WAN4 host2.example.com WAN3 WAN4 mail.example.com mail.example.com	Modify 0 0 0 0 0 0 0 0 0 0 0 0 0			
Welcome Work Mode System Status WAN Configure Bandwidth Usage Configure LAN&DI Routing Table Access Control QoS Load Balance Advance Remote Configure Virtual Server	Image: Control of the second state		Virtual Server	Locz 192.168.1.1 192.168.1.2 192.168.1.2 192.168.1.2	4 1P 100 200 2 2	Covistink Corp.	Step 7: Advance → Virtual Server: Now we finish the IN-BOUND ROUTER DNS server setting, and we still have to link the WAN IP addresses with the Internal & local LAN servers. This is done by the Virtual Server. Just specify the Global Port, Local Port, Local IP Address, and select Enable.

The ratio was specified: WAN1, WAN2, WAN3, WAN4 = 1:2:3:4

- www.example.com uses WAN1 and WAN2 with a ratio of 1:2. The IP addresses return to the queries for the Web Server accesses are: WAN1, WAN2, WAN2, WAN1, WAN2, WAN2..., etc.
- ftp.example.com uses WAN1 WAN4 with a ratio of 1:2:3:4. The IP addresses return to the queries for the Web Server accesses are: WAN1, WAN2, WAN2, WAN3, WAN3, WAN3, WAN4, WAN4, WAN4, WAN4, and the sequence will repeat.
- Mail.example.com uses WAN3 and WAN4 with a ratio of 3:4. The IP addresses return to the queries for the Web Server accesses are: WAN3, WAN3, WAN3, WAN4, WAN4, WAN4, WAN4, and the sequence will repeat.

For multiple Internet servers, if you have Multiple Public Static IPs, you may use the Multiple DMZ to map public static IP address to each server. Or, if you are using Apache or Microsoft Windows Server, then you can use the Virtual Hosting and Virtual Servers function respectively.