# CUERPO DE BOMBEROS DE LA CIUDAD DE IBARRA

CUERPO DE BOMBEROS IBARRA 1949

## CENTRAL DE RADIO DESPACHO

## INFORME ANUAL DE EMERGENCIAS Y SERVICIOS ATENDIDOS POR EL CUERPO DE BOMBEROS IBARRA AÑO 2015

| TOTAL GENERAL | | | | |
|---|---|---|---|---|
| ATENCIONES POR SINIESTROS | ATENCIONES PREHOSPITALARIAS | COORDINACIONES EN SINIESTROS Y ATENCION PREHOSPITALARIA CON OTROS CANTONES | ASISTENCIAS PRESTADAS | **TOTAL ATENCIONES CORDINACIONES Y ASISTENCIAS** |
| **1711** | **3874** | **2604** | **7623** | **15812** |

## DESGLOCE DE LAS ATENCIONES

| GESTION DE EMERGENCIAS MEDICAS Y ATENCION PRE HOSPITALARIA | |
|---|---|
| EVENTOS POR TRAUMA | 1013 |
| EVENTOS CLINICOS | 1680 |
| EVENTOS GINECO OBSTETRICOS | 186 |
| TRASLADOS | 210 |
| TOTAL | **3089** |

| ATENCIONES PREHOPITALARIAS POR ACCIDENTES DE TRANSITO (TRAUMA) | | | |
|---|---|---|---|
| TIPO DE ACCIDENTE | NUMERO DE ACCIDENTES | PACIENTES ATENDIDOS | **PERSONAS SIN SIGNOS VITALES AL ARRIVO DE AMBULANCIA** |
| CHOQUE COLISION | 167 | 285 | 6 |
| ESTRELLAMIENTO | 26 | 32 | 3 |
| VOLCAMIENTO | 28 | 43 | 3 |
| ARROLLAMIENTO | 9 | 8 | 3 |
| ATROPELLAMIENTO | 75 | 81 | 1 |
| CAIDA DE VEHICULO | 121 | 121 | 0 |
| CAIDA DE BICICLETA | 52 | 53 | 0 |
| TOTAL | **478** | **623** | **16** |

| ATENCIONES PREHOSPITALARIAS POR VIOLENCIA CIVIL (TRAUMA) | | | |
|---|---|---|---|
| TIPO DE INCIDENTE | NUMERO DE INCIDENTES | PACIENTES ATENDIDOS | **PERSONAS SIN SIGNOS VITALES AL ARRIVO DE AMBULANCIA** |
| AGRESISON FISICA / ASALTO | 113 | 112 | 1 |
| INTENTO AUTOLITICO / SUICIDIO | 33 | 27 | 6 |
| TOTAL | 146 | 139 | **7** |

| **TOTAL ATENCIONES PREHOSPITALARIAS** | **3874** |
|---|---|

062-607-122
062- 610-777

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# GESTION DE SINIESTROS

| TIPO | NUMERO | OBSERVACIONES | |
|---|---|---|---|
| **CONTROL DE INCENDIOS** | | | |
| INCENDIO ESTRUCTURAL | 36 | SINIESTROS CON PERDIDA DE BIENES Y PERSONAS AFECTADAS EN ALGUNAS OCACIONES. | |
| PRINCIPIOS DE INCENDIOS (CONATOS) | 37 | POCOS BIENES AFECTADOS Y EN LA MAYORIA DE CASOS CONTROLADOS POR PROPIETARIOS | |
| ALARMAS POR CORTOCIRCUITOS | 26 | DAÑOS EN CABLEADO ELECTRICO QUE NO PASA A MAYORES | |
| VEHICULOS INFLAMADOS | 25 | DAÑOS PARCIALES O TOTALES EN VEHICULOS | |
| INCENDIOS FORESTALES MAS DE 100 M² | 414 | TOTAL ALERTAS FORESTALES | **787** |
| CONATOS FORESTALES MENOS DE 99 M² | 77 | | |
| QUEMAS AGRICOLAS | 130 | AREA AFECTADA EN HECTAREAS | **2.260 ha CON 4341 M²** |
| QUEMA DE BASURA | 166 | | |
| COORDINACION CON OTROS CANTONES EN INCENDIOS Y ACCIDENTES DE TRANSITO | 66 | OTAVALO, ATUNTAQUI, COTACACHI, URCUQUI, PIMAMPIRO | |
| **TOTAL ATENCIONES POR INCENDIOS** | | **977** | |
| **INUNDACIONES/ DESLIZAMIENTOS/ COLAPSO DE VIENDAS** | | | |
| INUNDACIONES | 97 | EN INTERIOR Y EXTERIOR DE VIVIENDAS CON BIENES Y PERSONAS AFCETADAS. | |
| DERRUMBE DESLAVES | 6 | OBSTRUCCION DE VIAS Y DAÑOS EN VIVIENDAS | |
| **TOTAL ATENCIONES POR INUNDACIONES** | | **103** | |
| **MATERIALES PELIGROSOS** | | | |
| EXPLOSION POR ACUMULACION DE G.L.P | 1 | EN DOMICILIOS Y COMERCIOS | |
| FUGAS DE GAS G.L.P. | 270 | EN DOMICILIOS Y COMERCIOS | |
| FUGAS DE GAS CLORO | 3 | AFECTACION DEL MEDIOAMBIENTE | |
| DERRAME COMBUSTIBLE- ACEITE | 40 | GASOLINA, DIESEL, ACEITES, OTROS | |
| **TOTAL ATENCIONES POR MATERIALES PELIGROSOS** | | **314** | |
| **RESCATE Y SALVAMENTO** | | | |
| ESTRUCTURA COLAPSADA | 0 | RESCATE EN ESTRCTURAS COLAPSADAS | |
| ESPACIOS CONFINADOS | 1 | POZOS / ESPACIOS REDUCIDOS | |
| VERTICAL | 17 | RESCATE DE PERSONAS Y RECUPERACION DE CUERPOS | |
| VEHICULAR | 36 | PERSONAS ATRAPADAS POR ACCIDENTES DE TRANSITO | |
| DE MONTAÑA | 31 | PERSONAS EXTARVIADAS | |
| ACUATICO | 19 | PERSONAS EN PELIGRO DE AHOGARSE / AHOGADOS RECUPERACION | |
| ASCENSORES | 13 | PERSONAS ATRAPADAS EN ASCENSORES | |
| ANIMALES | 58 | ANIMALES EN PELIGRO | |
| ABRIR VIVIENDAS / VEHICULOS | 142 | EN CASOS PERSONAS ATRAPADAS | |
| **TOTAL ATENCIONES POR RESCATE** | | **317** | |
| **TOTAL SINIESTROS** | | **1711** | |

CUERPO DE BOMBEROS IBARRA
1949

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| ASISTENCIAS | | |
|---|---|---|
| TIPO | NUMERO | OBSERVACIONES |
| AUXILIOS EN GENERAL | 142 | ABRIR DEPARTAMENTO /CORTE DE ARBOLES/ OTROS |
| HUMECTACION DE VIAS / LAVAR CALZADA | 190 | VIAS EN MAL ESTADO QUE PRODUCEN MUCHO POLVO |
| SERVICIO DE TANQUERO | 1041 | REPARTO DE AGUA |
| EVENTOS | 446 | SEGURIDAD EN EVENTOS |
| INSPECCIONES | 5350 | REALIZADAS POR DEPARTAMENTO DE PREVENCION |
| SIMULACROS | 64 | EN DIFERENTES INSTITUCIONES |
| CONFERENCIAS CAPACITACIONES | 390 | REALIZADAS DEPARTAMENTO DE CAPACITACION |
| TOTAL | **7623** | |

| COORDINACIONES CUERPOS DE BOMBEROS IMBABURA | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CUERPO DE BOMBEROS CANTON | INCENDIO ESTRUCTURAL | CONATO ESTRUCTURAL | ALERTAS INCENDIO FORESTAL | MATERIALES PELIGROSOS | INUNDACIONES DESLIZAMIENTOS | ACCIDENTES DE TRANSITO | ATENCIONES PREHOSPITALARIAS | ASISTENCIAS SERV. TANQU. OTRAS |
| OTAVALO | 17 | 7 | 457 | 38 | 10 | 66 | 143 | 168 |
| ATUNTAQUI | 7 | 3 | 245 | 0 | 3 | 20 | 105 | 38 |
| URCUQUI | 4 | 1 | 147 | 0 | 4 | 17 | 155 | 98 |
| PIMAMPIRO | 3 | 0 | 65 | 0 | 7 | 26 | 221 | 95 |
| COTACACHI | 0 | 2 | 291 | 0 | 4 | 10 | 69 | 58 |
| SUBTOTAL | **31** | **13** | **1205** | **38** | **28** | **139** | **693** | **457** |
| | | | **TOTAL COORDINACIONES** | | **2604** | | | |

Atentamente,
ABNEGACION Y DISCIPLINA
Sgto. (B) Luis Mauricio Enríquez

062-607-122
062- 610-777

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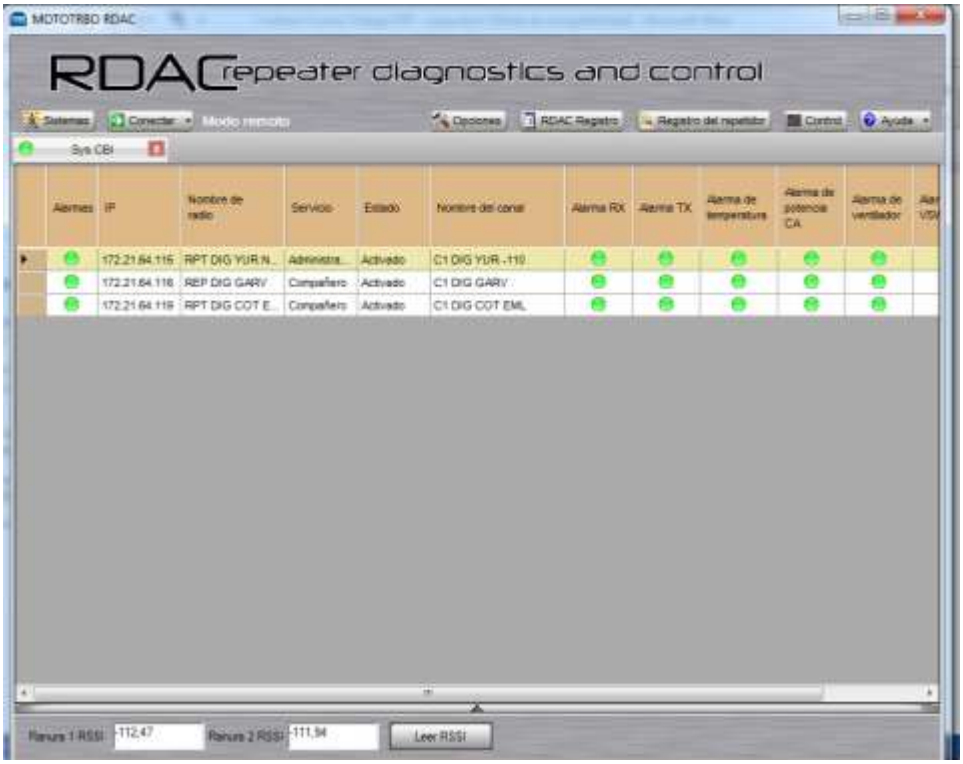
## Hojas de trabajo niveles de señales y cobertura de Operadoras Celulares

| CELDAS SIN COBERTURA | Cantón (s) | Parroquias afectadas | Movistar | | Claro | | CNT | |
|---|---|---|---|---|---|---|---|---|
| | | | Cobertura | Señal (dBm) | Cobertura | Señal (dBm) | Cobertura | Señal (dBm) |
| 1 | Ibarra / Urcuqui | Lita / M. buenos Aires | | | | | | |
| 2 | Ibarra / Urcuqui | Lita / M. buenos Aires | | | | | | |
| 3 | Ibarra / Urcuqui | Carolina / M. Buenos Aires | | | | | | |
| 5 | Urcuqui | M. Buenos Aires | | | | | | |
| 6 | Urcuqui | M. Buenos Aires, Cahuasqui | | | | | | |
| 7 | Urcuqui / Cotacachi | M. Buenos Aires / Imantag | | | | | | |
| 9 | Cotacachi | Imantag, Apuela, Cuellaje | | | | | | |
| 11 | Cotacachi | Cuellaje | | | | | | |
| 12 | Cotacachi | Apuela | | | | | | |
| 13 | Cotacachi | Apuela, Imantag | | | | | | |
| 33 | Cotacachi | Apuela, Plaza Gutierrez | | | | | | |
| 35 | Cotacachi / Otavalo | Plaza Gutierrez, Quiroga / Selva Alegre | | -91 | | -90 | | |
| 36 | Cotacachi / Otavalo | Vacas Galindo / Selva Alegre | | -89 | | -67 | | |
| 37 | Cotacachi | Peñaherrera, Cuellaje, Vacas Galindo, Apuela | | | | -97 | | |
| 38 | Cotacachi | Peñaherrera, García Moreno | | | | -90 | | |
| 39 | Cotacachi / Otavalo | García Moreno, Vacas Galindo / Selva Alegre | | | | -87 | | |
| 40 | Cotacachi | García Moreno | | -93 | | -86 | | |
| 41 | Cotacachi | García Moreno | | | | | | |
| 42 | Cotacachi | García Moreno | | | | | | |
| ce1 | Ibarra, Urcuqui | Lita / M. buenos Aires | | -86 | | -87 | | |
| c1 | Ibarra | Lita | | | | | | |
| p8 | Otavalo | Selva Alegre | | -94 | | -17 | | |
| p9 | Cotacachi | García Moreno | | -89 | | -85 | | |
| p10 | Cotacachi | García Moreno | | | | | | |
| p11 | Cotacachi | García Moreno | | | | | | |
| p12 | Cotacachi | García Moreno | | | | | | |
| p13 | Cotacachi | García Moreno | | | | | | |
| p14 | Cotacachi | García Moreno | | | | | | |
| c1 | Cotacachi | García Moreno | | | | | | |
| c2 | Cotacachi | García Moreno | | | | | | |
| c3 | Cotacachi | García Moreno | | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| e4 | Cotacachi | Garcia Moreno | | | | | | | |
| e5 | Cotacachi | Garcia Moreno, Peñaherrera | | | | | | | |
| e6 | Cotacachi | Garcia Moreno, Peñaherrera, Cuellaje | | | | | | | |
| e7 | Cotacachi | Cuellaje | | | | | | | |
| e8 | Cotacachi | Cuellaje | | | | | | | |
| e9 | Cotacachi / Urcuqui | Imantag / M. Buenos Aires | | | | | | | |
| e10 | Urcuqui | M. Buenos Aires | | | | | | | |
| e11 | Urcuqui | M. Buenos Aires | | | | | | | |
| e12 | Urcuqui | M. Buenos Aires | | | | | | | |
| **CELDAS CON COBERTURA PARCIAL** | **Cantón (s)** | **Parroquias afectadas** | **Movistar** | | **Claro** | | **CNT** | | |
| | | | Cobertura | Señal (dBm) | Cobertura | Señal (dBm) | Cobertura | Señal (dBm) | |
| 4 | Ibarra | Carolina | | | | | | | |
| 8 | Urcuqui | Cahuasqui | | | | | | | |
| 10 | Urcuqui / Cotacachi | Cahuasqui / Imantag | | | | | | | |
| 14 | Urcuqui / Cotacachi | San Blas / Imantag | | | | | | | |
| 21 | Pimampiro | Pimampiro | | | | | | | |
| 24 | Pimampiro | Mariano Acosta, Sigsipamba | | | | | | | |
| 26 | Ibarra / Pimampiro | Angochagua / Mariano Acosta | | | | | | | |
| 34 | Cotacachi | Quiroga | | | | | | | |
| e2 | Ibarra | Carolina | | | | | | | |
| e3 | Ibarra | Carolina | | | | | | | |
| e5 | Ibarra | Carolina | | | | | | | |
| s1 | Pimampiro | Sigsipamba | | | | | | | |
| s2 | Pimampiro | Sigsipamba | | | | | | | |
| s3 | Pimampiro | Sigsipamba, Mariano Acosta | | | | | | | |
| p1 | Ibarra / Pimampiro | Angochagua / Mariano Acosta | | | | | | | |
| p2 | Ibarra | Angochagua | | | | | | | |
| p7 | Otavalo | Selva Alegre | | | | | | | |

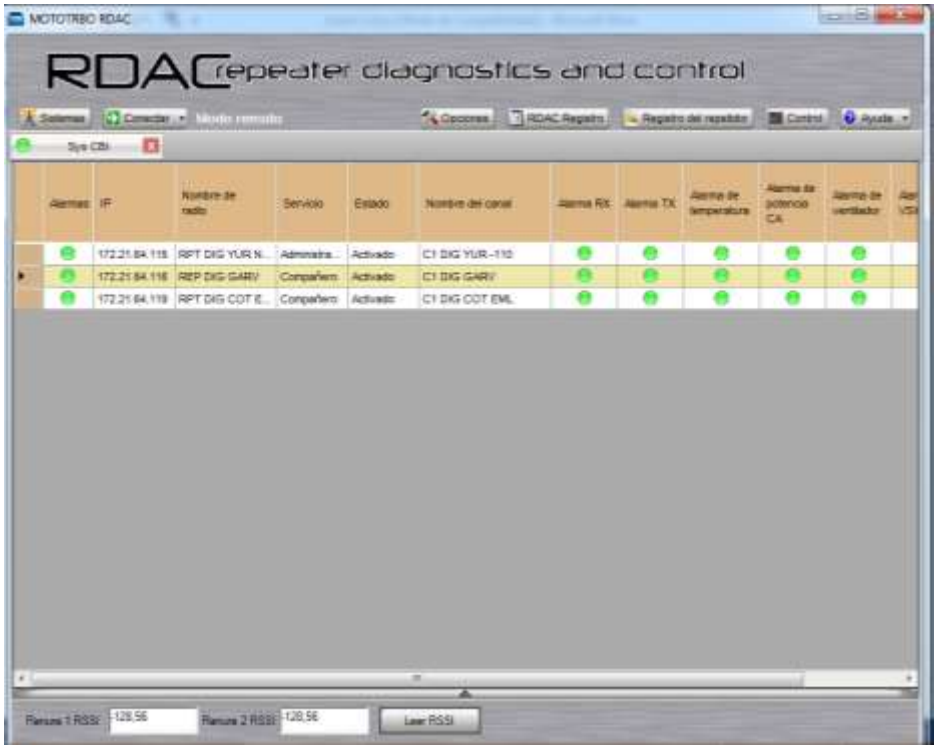
# NIVELES DE RSSI, REPETIDORAS CBPI

**Repetidor Yuracruz Promedio Toma 1, R1: -112.47 ; R2 : -111.94**

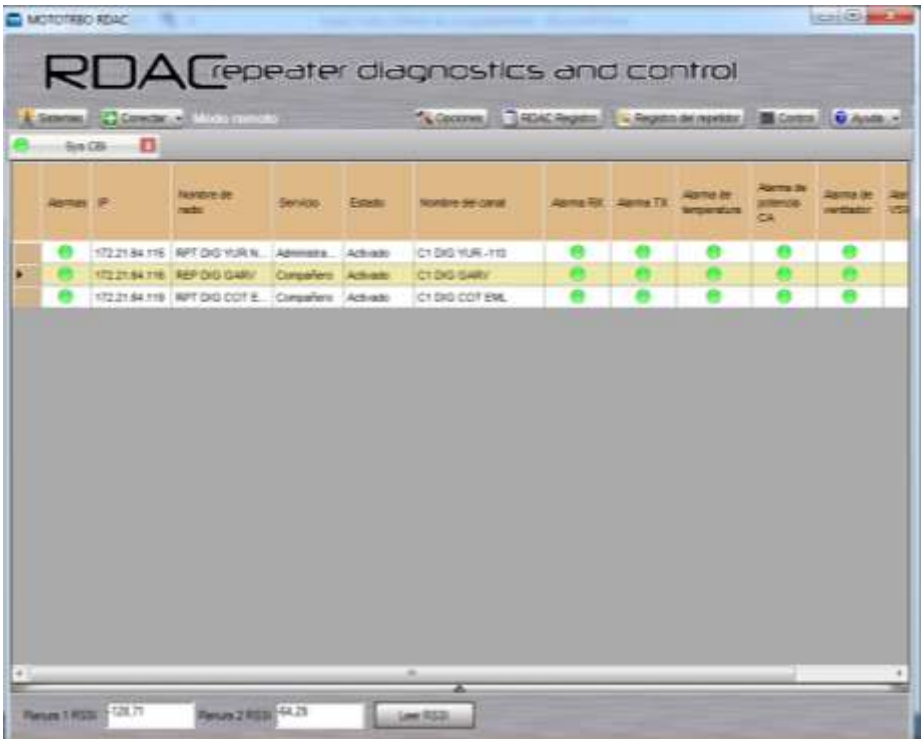



**Repetidor Yuracruz Promedio Toma 2, R1: -67.46 ; R2 : -113.47**

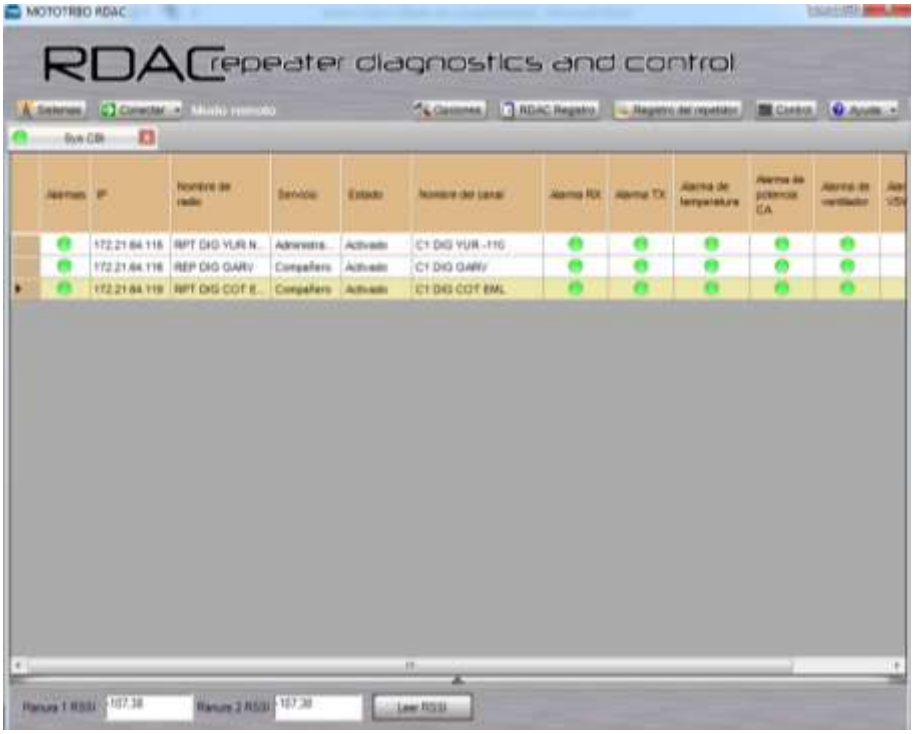
**Repetidor Concepción Promedio Toma 1, R1: -128.56 ; R2 : -128.56**



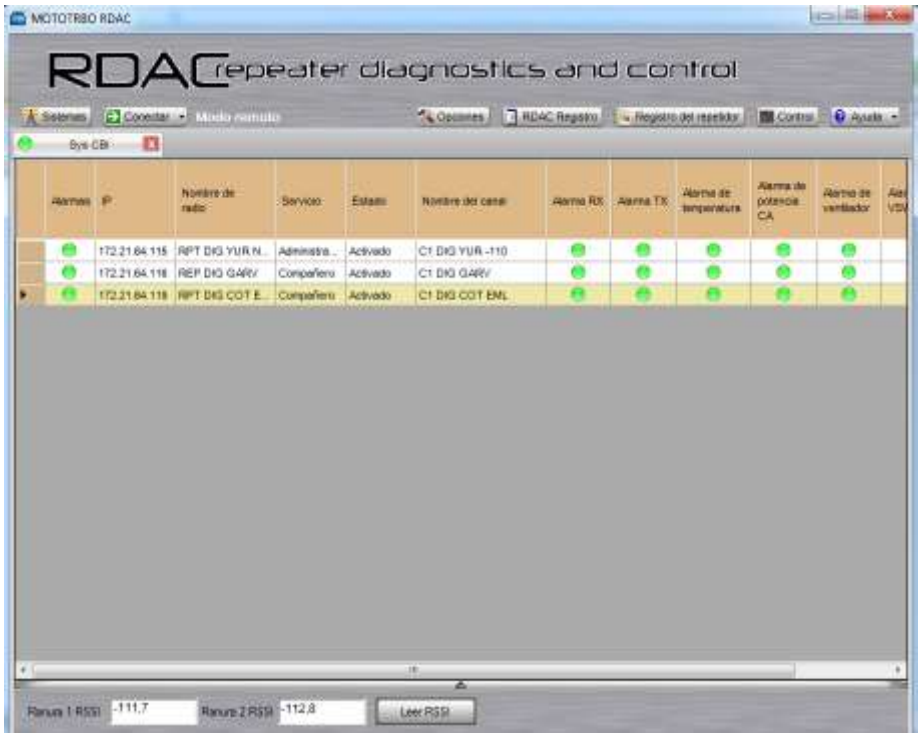

**Repetidor Concepción Promedio Toma 2, R1: -128.71 ; R2 : -64.29**



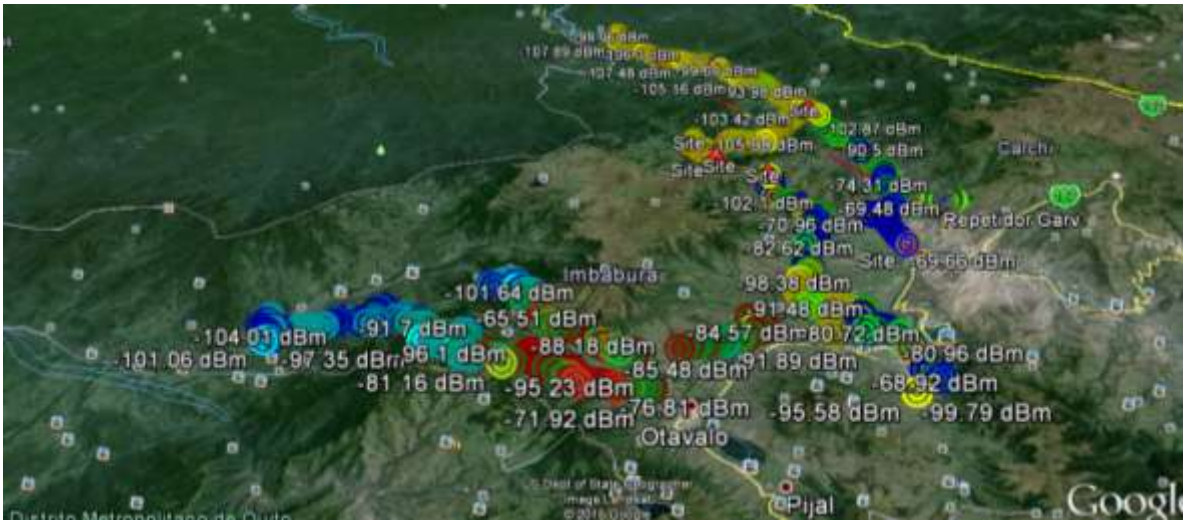
**Repetidor Cotacachi Promedio Toma 1, R1: -107.38 ; R2 : -107.38**




**Repetidor Cotacachi Promedio Toma 2, R1: -111.7 ; R2 : -112.8**

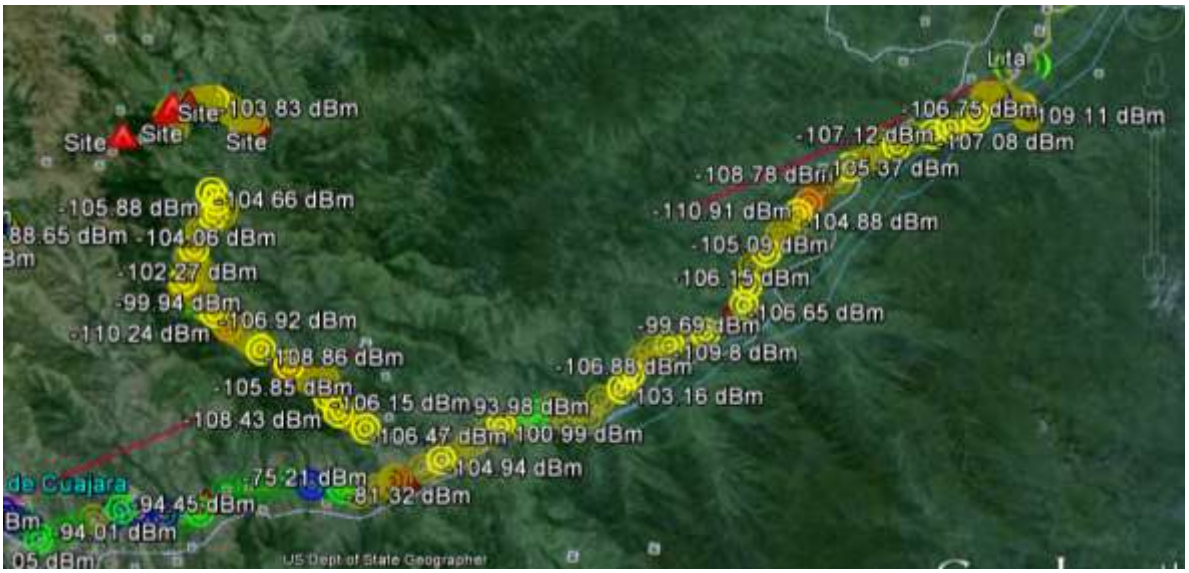


**Niveles de Señal Site Survey Mototrbo Provincia de Imbabura**

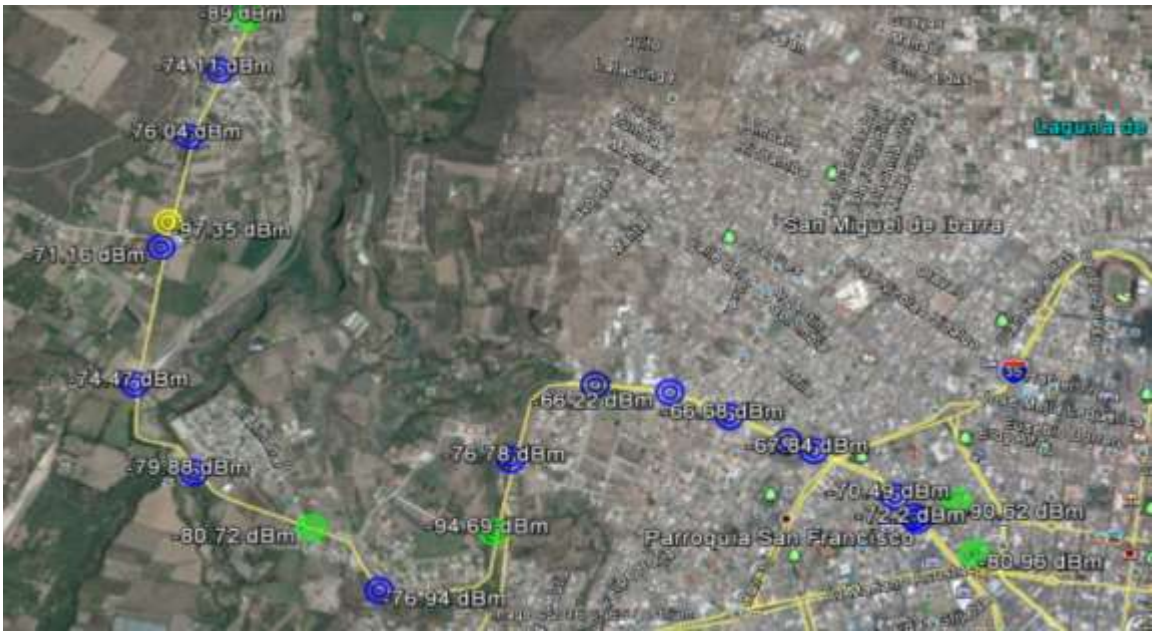



**Niveles de Señal Site Survey Mototrbo Provincia de Imbabura (Sector Intag, Zonas Rurales)**

**Niveles de Señal Site Survey Mototrbo Provincia de Imbabura (Sector Lita, la Carolina, Zonas Rurales)**




**Niveles de Señal Site Survey Mototrbo Provincia de Imbabura (Centro de Ibarra, Zona Urbana)**



## PLANES DE DATOS OPERADORA CLARO

**https://www.miclaro.com.ec/personas/web/app_dev.php/main/#/servicios/activar/internet**

| DETALLE | PRECIO FINAL |
|---|---|
| **Paquete Bam 100 Megas 3 Días $3** | $ 3.00 |
| **Paquete Bam 100 Megas 3 Días $3 Recurrente** | $ 3.00 |
| **Paquete Bam 200 Megas 7 Días $5** | $ 5.00 |
| **Paquete Bam 200 Megas 7 Días $5 Recurrente** | $ 5.00 |
| **Paquete Bam 500 Megas 15 Días $10** | $ 10.00 |
| **Paquete Bam 500 Megas 15 Días $10 Recurrente** | $ 10.00 |
| **Paquete Bam 1000 Megas 30 Días $20** | $ 20.00 |
| **Paquete Bam 1000 Megas 30 Días $20 Recurrente** | $ 20.00 |

# EXPLORER 510

Ultra-Portable Satellite Companion

September 2014 Product Sheet

The most important thing we build is trust

# EXPLORER 510

Ultra-Portable Satellite Companion

## A rugged BGAN fit for purpose

The all new EXPLORER 510 is the smallest ever EXPLORER BGAN and the ideal combination of performance and portability.

The durable magnesium casing and a dust and water resistant design makes the EXPLORER 510 the perfect choice when working off the beaten track, but still dependant on a reliable connection.

EXPLORER 510 will be available in December 2014.

## Portable performance

Smaller than a standard laptop and weighing less than 1.4 kg, this satellite terminal is easy to carry along when travelling the world.

It supports your need for performance and provides simultaneous high quality voice and broadband access at speeds up to 464 kbps.

Connect the optional EXPLORER LTE Modem to the USB port and turn your device into a true communication SmartHub. Use local cellular net when available and BGAN if no other option.

## Satellite connectivity made simple

EXPLORER 510 is easy to set-up and to operate. The user interface is intuitive and can be accessed from your PC or any kind of smart device.

With the EXPLORER Connect App you can use your smart device to make calls or easily access the internet even in areas with no terrestrial or cellular coverage. The EXPLORER Connect App with a SIP softphone will be available on Android and IOS.

## Specifications

| | |
|---|---|
| **Dimensions** | |
| Total H / W / D: | 202 / 202 / 51.8 mm<br>7.8 / 7.8 / 1.6 inches |
| **Weight (incl. battery):** | 1.4kg / 3.1lbs |
| **Data capabilities** | |
| Standard IP: | Up to 464 kbps |
| Streaming IP: | 32, 64, 128 kbps |
| **Voice capabilities** | |
| Standard voice: | 4 kbps |
| Premium voice: | 3.1 kHz audio, 64 kbps |
| **Text capabilities** | |
| SMS: | 160 characters |
| **Inmarsat frequencies:** | 1518.0 - 1525.0 MHz (Rx) (EMEA)<br>1525.0 - 1559.0 MHz (Rx)<br>1626.5 - 1660.5 MHz (Tx)<br>1668.0 - 1675.0 MHz (Tx) (EMEA) |
| **EIRP:** | 15.1 dBW ±1dB |

| | |
|---|---|
| **User interface:** | Two LED (WLAN, Status), 1 Power Button<br>USB Host, Cobham web interface |
| **Languages:** | UK, FR, DE, ES, RU, JP and CN |
| **Approvals:** | CE, FCC, IC<br>Inmarsat Class 2 Type Approval |

*Subject to change without further notice*

## Interfaces

| | |
|---|---|
| **WLAN Access Point** | |
| Standard: | IEEE 802.11 b/g/n |
| **1 x USB host interface** | |
| Version: | 2.0 (host) |
| Charging: | Up to 1A |
| **1 x BGAN SIM-Card slot** | |

## Environmental conditions

| | |
|---|---|
| **Temperature** | |
| Operational (ambient): | -25°C to +55°C / -13°F to +131°F |
| Storage (excl. battery): | -40°C to +80°C / -40°F to +176°F |
| **Battery storage temperature** | |
| 1 month: | -20°C / -4°F to +60°C / +140°F |
| 3 months: | -20°C / -4°F to +45°C / +113°F |
| 1 year: | -20°C / -4°F to +20°C / +68°F |
| **Relative humidity:** | 95% non-condensing<br>at +40°C/+104°F |
| **Robustness:** | 0.5 m/1.64 ft drop on concrete<br>(operational, 95% survival) |
| **Storage temperature:** | -40°C to +80°C<br>-40°F to +176°F |
| **Water and dust:** | IP-66 Compiant (TBC) |

## Power

| | |
|---|---|
| **DC input range:** | 10.5-32VDC |
| **Power consumption** | |
| Standby / transmit: | 0.8W / 14W (typical) |
| During charging: | 38W (max.) |
| Connector type | 2.5mm EIAJ RC-5320-IV |
| **AC/DC power supply** | |
| Input: | 100-240VAC, 47-63Hz, 50W |
| Output: | 19VDC |
| **Built-in Battery:** | Lithium ion (rechargeable) |
| Stand-by time (TBC): | 36h, 0°C/+32°F to 55°C/+131° |
| Standard call: | 3h, 0°C/+32°F to 55°C/+131° |
| Premium voice call: | 1h30m, 0°C/+32°F to +55°C/+131°F |
| Receive time, max.: | 3h30m @ 128kbps (25°C / 77°F) |
| Transmit time, max.: | 2h15m @ 128kbps (25°C / 77°F) |
| Min. number of charges: | 300 |
| Recharge time: | Less than 3 hours |
| Charge temperature: | 0°C / +32°F to +45°C /+113° |

## Other features

**EXPLORER Connect App for IOS and Android*:**

The App includes a SIP Softphone converting your Smart Device into a satelilite phone, Terminal Access to control your BGAN and Pointing Assistance.

* Will be available for download from Apple App Store and Google Play in November 2014.

**EXPLORER LTE Modem for USB*:**

With the EXPLORER LTE Modem you can connect local cellular networks and use the EXPLORER 510 as wireless router for all your devices.

* To be confirmed - expected to be available in Q1 2015.

## Package

- EXPLORER 510 terminal
- Built-in Rechargeable Lithium Ion Battery
- EXPLORER Softbag
- USB to Ethernet Converter Cable
- 100-240VAC Power Supply
- Multi-Languge Quick Start Quide
- Multi-language webserver and embedded manual (ENG, FR, DE, ES, RU, JP and CN)

## Accessories

- Polemount
- EXPLORER Softbag (included in the package)
- 100-240VAC power supply
- Car Charger cable
- EXPLORER 4G USB Modem (expected to be available in Q1 2015)

## Product number

| | |
|---|---|
| 403711A-00500 | EXPLORER 510 Terminal |

For further information please contact:

Ground Control
+1.805.783.4600
www.GroundControl.com
sales@groundcontrol.com

CONETCTA

*Consultora Networking Comunicaciones*

# PROFORMA 030-3987

Cliente: Ing. Cristian Torres

Dirección: Ibarra

Ciudad: Ibarra

Fecha: 09/12/2015

**Es grato hacerle llegar la siguiente cotizacion**

| ítem | Descripción | Cantidad | Valor Unitario | Valor Total |
|---|---|---|---|---|
| 1 | Radio estación fija HF ICOM ICF8100 | 2 | 3700,00 | 7400,00 |
| 2 | Antena NVIS incluye Sintonizadores de antenas, AH-760 más cables RF, y conectores. | 2 | 2350,00 | 4700,00 |
| 3 | Fuente de Poder RS20ASBB | 1 | 300,00 | 300,00 |
| 4 | Material e instalación en vehículo de rescate, Bullbar | 1 | 700,00 | 700,00 |
| 5 | Terminal Satelital fijo voz y datos BGAN Explorer 510 | 1 | 3125,00 | 3125,00 |
| 6 | SIM servicio de datos 100 MB | 1 | 525,00 | 525,00 |
| 7 | RoIP 102 T | 2 | 110,00 | 220,00 |
| 8 | Router ELINS H820T | 1 | 480,00 | 480,00 |
| | | | | |
| **SON:** | **DIECISIETE MIL CUATROCIENTOS CINCUENTA 00 /100 DÓLARES AMERICANOS** | | SUBTOTAL | 17450,00 |
| | | | | |
| | | | TOTAL | 17450,00 |

**Precios no incluyen I.V.A.**

**Condiciones comerciales:**

Forma de Pago: 50% de anticipo, 50% contraentrega

Plazo de entrega: 10 dias

Vigencia de la oferta: 30 dias

**Atentamente,**

CONETCTA

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# Cross-Network Gateway
# (Radio,VoIP,Public Announce)

# User Manual

ROIP102 Series

Version：1.0

2011-4-9

For environmental protection,please view this manual electronically and only print the pages you need


**- RoIP-102 -**

# Content

# I. Important Notices

**i.** This product is used to link up the civilian radio network,internet,and cellular phone network.Its operation and performance rely on the broadband network connections via private and/or public networks and the cellular phone networks.Due to the stability and reliability of these networks,this product may not be able to link up all the networks connected without any interruptions.Therefore,it is not recommended to use this product in an emergency system or a communication system with zero-failure.

**ii.** This product can bridge and extend radio networks all over the world.Please consult your local regulations in order to use this product legally.

**iii.** This product requires the use of dynamic DNS(DDNS) service.For testing purpose,this DDNS service is temporary provided for free by DBL Technology(Hong Kong).How ever,this service is not guaranteed without any interruptions.Customers are urged to build their own DDNS server or obtain this service from a DDNS provider.Free DDNS server software may be obtained freely from your local network service provider.

**iv.** Customers and/or users are taking full responsibilities and all risks in using this product.We are not responsible for any direct or indirect losses caused by,but not limited to,communication failures as a result of product failure or network problems.

**CUSTOMERS ARE ASSUMED TO HAVE READ AND ACCEPTED WITH FULL UNDERSTANDINGS OF THE IMPORTANT NOTICES STATED ABOVE.**

# II. Gift Box Check List

Upon unpacking the gift box,please check carefully that all items listed below are included.Please report to your supplier for any missing items immediately.

1×PPT Adapter Cables

1×AC/DC Adapter

Input:110/220 VAC

Output:12VDC,2A

1×Main Unit

1×Ethernet Cable

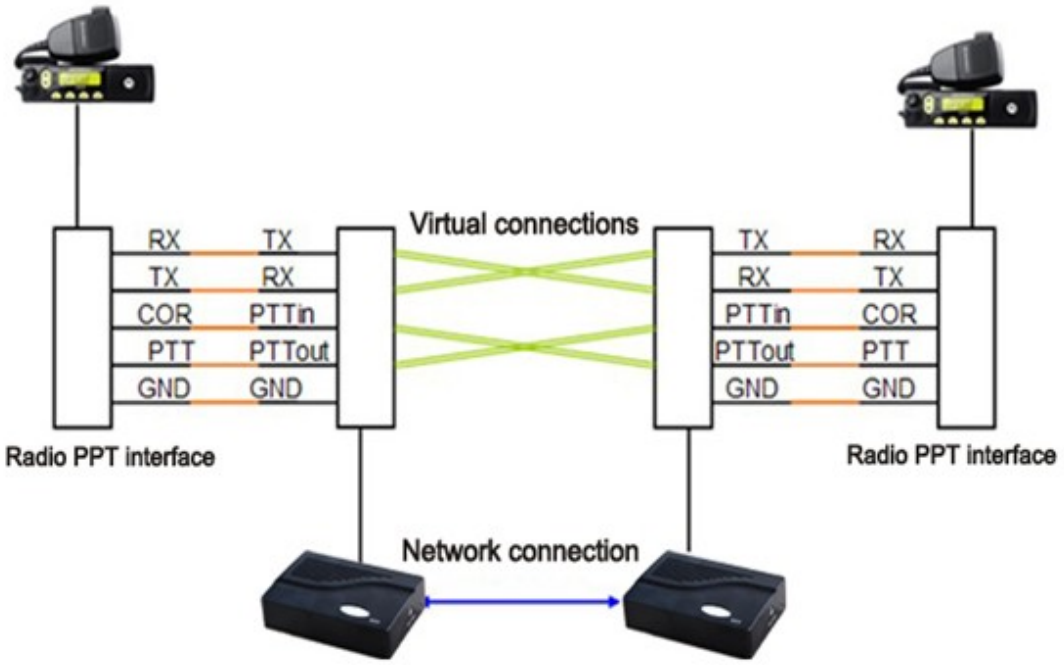
# III. Overview

The fundamental of RoIP Radio over IP technology is to convert the audio and PTT signals in a radio terminal into IP packets and then transmit the data via the IP networks.The challenge in this technology is to insure that the audio is transmitted in real time and the PTT control signal is transmitted immediately and reliably.The radio range is general limited by the restricted transmitting power,the antenna sensitivity,and other environmental factors.The success deployment of this technology extends the coverage of a radio network without using expensive repeaters or links up multiple radio networks in the world.In addition,this technology can also link up the radio world to the VoIP world and the cellular world easily.It truly makes voice communications across multiple networks possible.

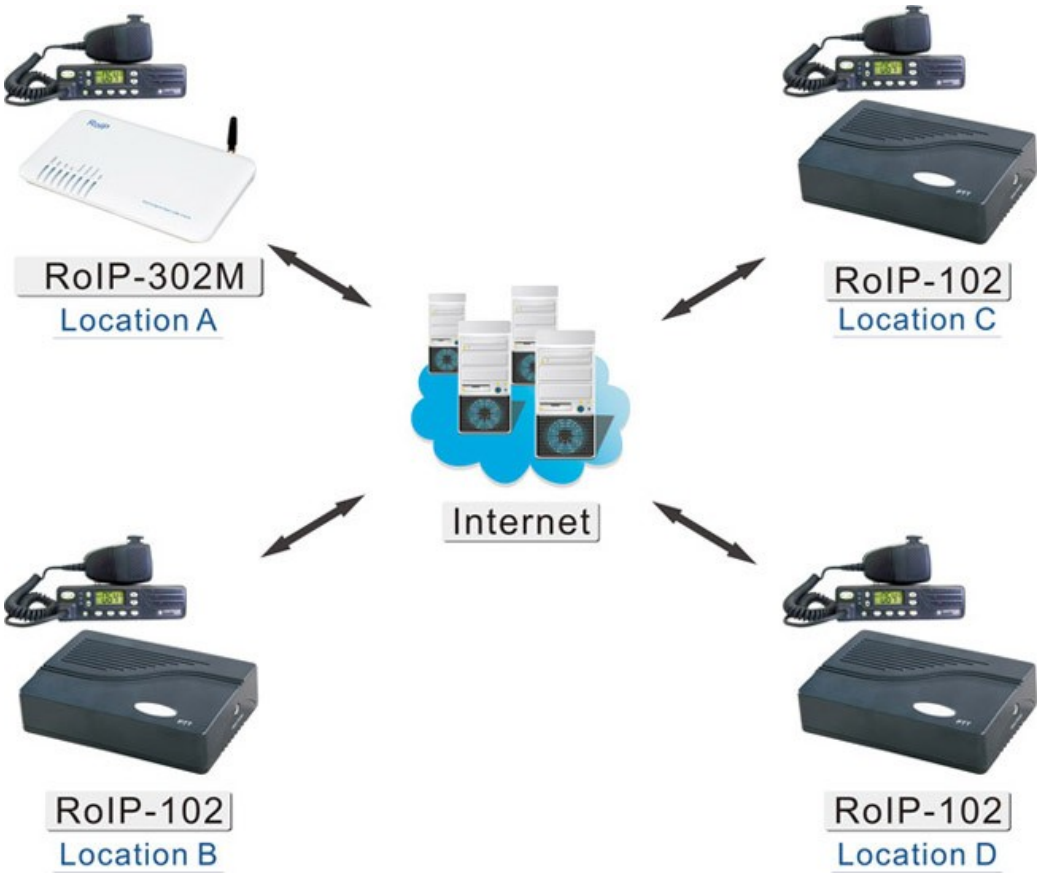
RoIP 102 basic version is a more compact, more practical high-tech multiple network (Radio,Cellular,VoIP) equipment,which access to a group,no GSM module,simply complete the radio voice signals into IP signals,access to the Professdional Edition or Stardard Edition RoIP 302M group,to achieve the client and the central station intercom communication.Also has a remote control switch interface,which enables remote control.

RoIP102 gateway can be installed in IP networks with intranet or internet connections via ADSL modem,Cable modem,or Local Area Network (LAN). The unique built-in DDNS client can help to simplify the installation and configuration without relying on a voice relay server in order to achieve interconnections among RoIP Series gateways.

## i. Basic link diagram

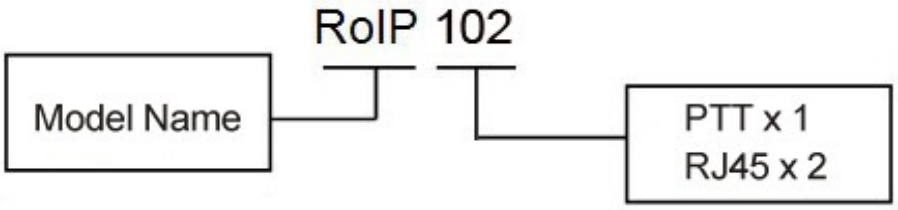


## ii. Basic networking:multi-region over internet



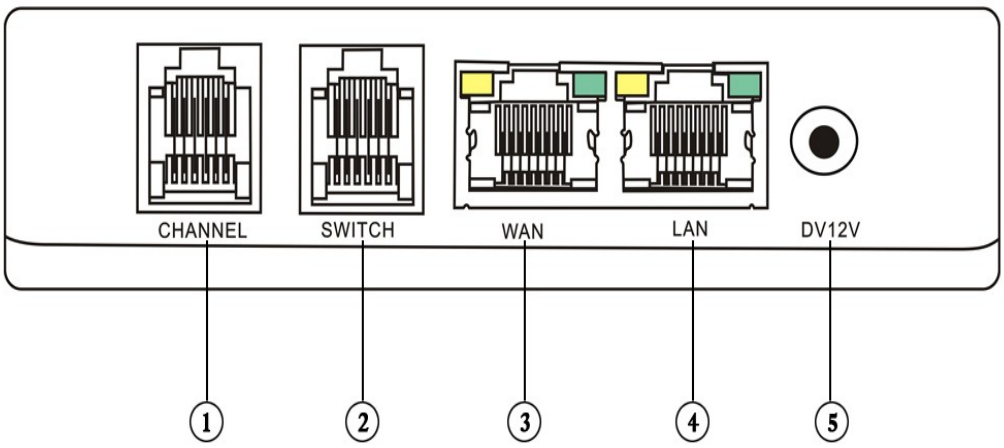

The diagram above demonstrates A to use with the conference system RoIP302M as a central switching point,the other three regions using RoIP102.Through this link,ABCD four areas to achieve multi-region interconnections among RoIP Series gateways.

## iii. Model Nomenclature



# IV. Installation

## i. Back Panel



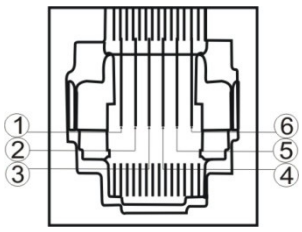

| Label | Name | Description |
|---|---|---|
| 1 | PTT1 | 6-pin RJ11 port for PTT Adapter Cable |
| 2 | Reote Switch | Relay switch with 220VAC input and 500 mA load current. |
| 3 | WAN | 10/100Base-T WAN connection for external |
| 3 | LAN | 10/100Base-T LAN connection |
| 5 | Power | 12V 1A |

## ii. LED Indicators

| LED | Function | Description |
|---|---|---|
| Power | Pwoer | Lights up when the power is connected |
| RUN | RoIP Status | Flashes every 4 s indicates the device is not ready<br>Flashes every 2 s indicates the device is ready |
| LAN | LAN port status | Lights up when the LAN port is connected<br>Blinks when there are data transmissions. |
| PC | PC port status | Lights up when the PC port is connected.<br>Blinks when there are data transmissions. |
| Channel 1 | Channel 1 Tx/Rx status | Channel 1 is receiving / transmitting. |

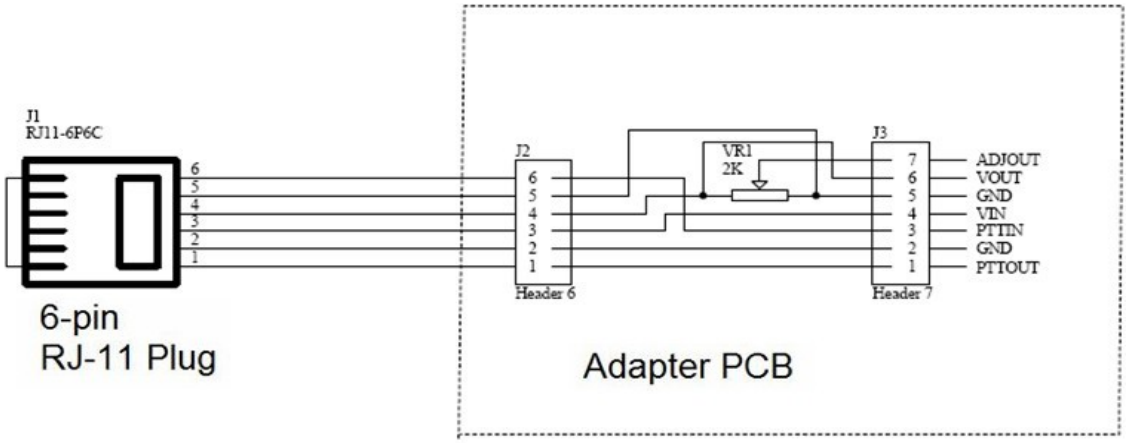
## iii. Channel Port Pin Assignment

The channel port is 6-pin RJ-11 Socket

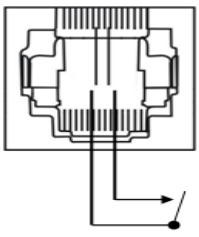



1、 PTTOUT　2、GND
3、Vin（RX）　4、Aout（TX）
5、GND　　6、PTTIN

## iv. PTT Adapter Cable wiring Diagram

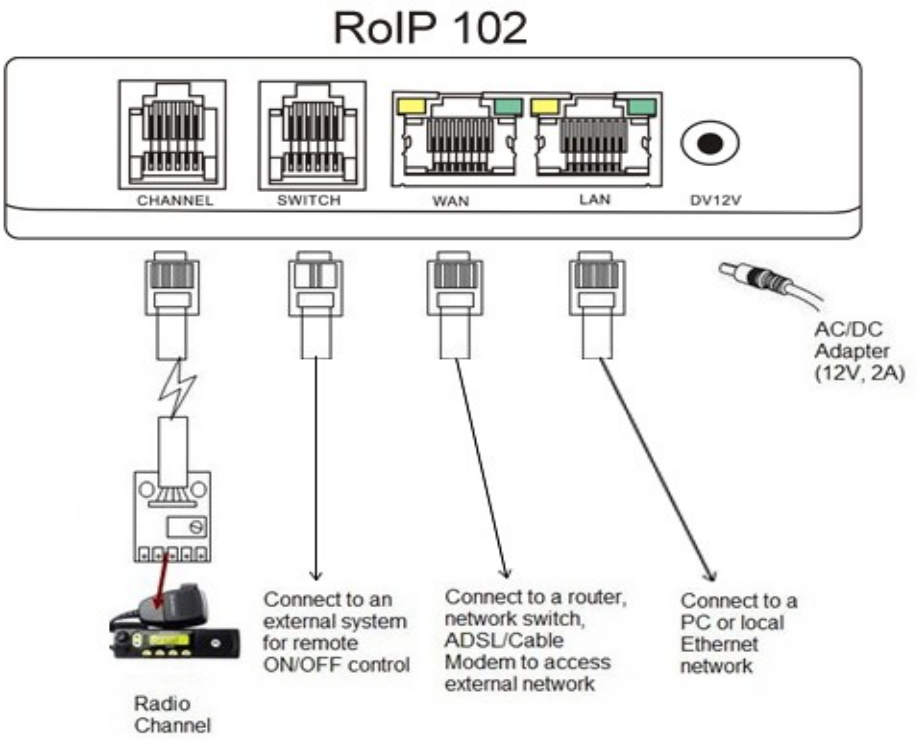



## v. Switch Port



The built-in relay switch is connected to the middle two pins of the RJ-11 socket.It acts as an ON/OFF switch for the external system connected.

## vi. Main Unit Setup




Connect the Channel Port to a Radio Channel via the PPT Adapter Cabel provided.Up to 1 channel is supported.

Connect the WAN Port to a router,network switch,ADSL/Cabel Modem for access an external network or the public network.

Connect the Switch Port to an external system fro remote control.It can be used to switch on and off a Public Announce (PA) system to instant broadcast.If the relay switch is connected to high voltage load.The maximum rating for the internal relay is 240VAC and 500 mA load current.

Connect the LAN Port to a local PC or a local Ethernet network(LAN).This allows sharing the external network connected to the WAN Port with the local network.However,the shared network is intended for configuration the device and is best not used for high data traffics applications in order for the device to insure the best voice quality.

# V. Default Factory Settings

The table below shows the factory default settings.There are two way to reset to the factory default settings:

## i. Press the RESET switch for more than 15 seconds.

## ii. In the Configuration paga,select Tools and then Reset Config.

| Item | Factory Default Settings | Range |
|---|---|---|
| Login ID | admin | |
| Login Password | admin | Programmable(16 characters in the ASCII table) |
| WAN Port Setting | DHCP | |
| LAN Port Setting | 192.168.8.1 | |
| PTT State | “0” is active | “0” is active low<br>“1” is active high |
| PTT maximum duration | 60 seconds | Less than 600 seconds |
| Jitter Delay | 60 milliseconds | 20-220 milliseconds |

# VI. Device Configuration Via Built-in Web Server

The built-in web server provides a comprehensive way to fully program the device manually

## i. Web Server Login

There are two methods to access the built-in web server.

Method 1 is to access the built-in web server via the LAN port.Connect a computer to the LAN port of the RoIP102 and configure its IP to 192.168.8.x(x=2 to 254).Type the IP address 192.168.8.1 in the address field of a web browser.The following login window is then displayed.


Enter the User name and the password now.The user name for the administrative level is “admin” and the default password is “admin”.

Please make sure to click on “Save Changes”after configuring the device.

Method 2 is to access the built-in web server via the WAN port.The WAN port is set to DHCP mode as a default factory setting.When it is first connected to a network with a DHCP host,it obtains an IP address automatically from the host.In order to listen to the IP obtained,make a call to the PSTN number.Once the call is answered,the device plays a voice prompt to ask for password.Dial “*00” and the device then reads out the WAN port IP address.

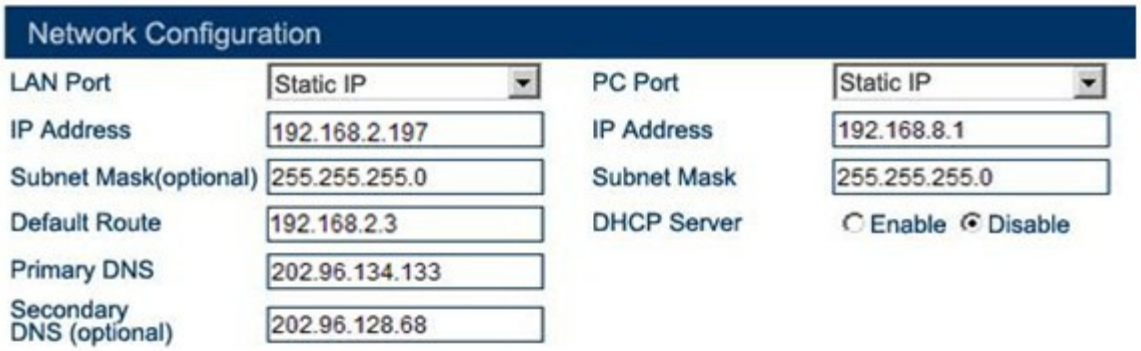
Enter this IP in the address field of a web browser to get a login window as described in Method 1.

## ii. Network settings:

The network settings determine the work’s normal and stable of RoIP102.The network

connection's optimal environment is private network with static IP route,followed by a dyamic public IP,such as ADSL,Radio and TV network,under the shared router IP network is relatively unstable.If you must use the network shared line,strongly recommended the router set to DMZ to RoIP102 used IP.

Setting up a network first used to confirm the network status,the general recommendation to use a fixed IP.Choose a fixed IP,WAN port on the network set the bar drop-down menu to select "Fixed IP",in accordance with the network administrator to provide the IP,subnet mask,default route (gateway),DNS server,fill in the correct column in the network settings,Below:




If you are using ADSL dial-up needed line,select the WAN port to PPPoE,the corresponding usename and password to complete the following chart:

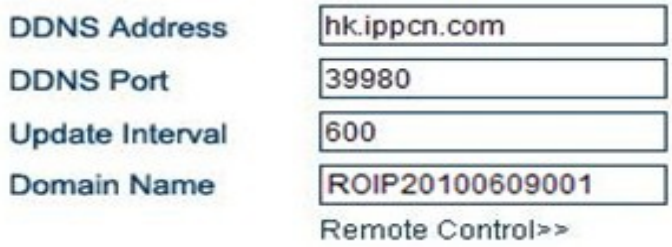

## iii. DDNS Settings:

If you use dynamic IP dees not depend on the exchange server,the user can use the DDNS service.is provided free of charge's dynamic IP address resolution services by DBLTEK.

If you use dynamic IP does not depend on the exchange with server,the user can use the DDNS service.DDNS service is a dynamic IP address resolution services is provided free of charge by DBLTEK.Use of the function,any RoIP device can be used body No as domain name.Through the DDNS server for the called party's IP(both sides are using DDNS) setting mode as shown below.First select the DDNS,and then accordance with existing service providers addresses to fill out "DDNS server address" hk.ippcn.com,port:39980,update time:600 (second) and the device serial number(see bottom bar code paper machin SN: ).

After using DDNS,the connected address will be

www.device serial number.com。



# VII. Call settings

## i. Call Logic :

RoIP can be connected between each other by SIP server as a proxy,can also be used independently by the way point to point.Because communication through the server will reduce efficiency and increase instability,it is strongly recommended to use the way point to point network.Therefore,this guide focuses on telling point is configured.

## ii. Log in and call logic

Between the different RoIP102 need to know each other's IP and the attribution,so you need to login.In the case of using the SIP server mode,all terminals connected in network must be log in to the SIP server,Phone number is allocated by the SIP server.

When using point to point connection,any RoIP102 as a Host to other terminal login,and the host itself need to log into owns IP address.Host set up own's phone number to be called by another terminal.The terminal need to log in to the host must have to set themselves phone number for identification.

## iii. Call Settings


**Group** 1：is to set the group number.Each RoIP1102 need to set a number.

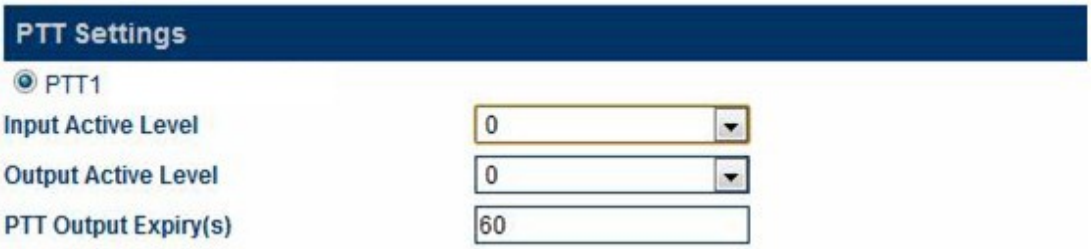
**Group SIP Number**：is connected to the PPT group and the group's unique idendifier,if using a SIP server provided by the server end.If use of point to point connections from their own layout manager.

**SIP Proxy**：is the SIP service address.When using point to point connection,if RoIP102 as a host,you need to fill out itselves IP address or DDNS address.If as a terminal,fill the host should be log in whos IP address or DDNS address.

**Auto Dial Number**：is a appropriate number in the terminal it self to call the host automatically.

When registered successful after start up,the terminal will automatically calls the number corresponding to a connection.

## iv. PTT Settings：



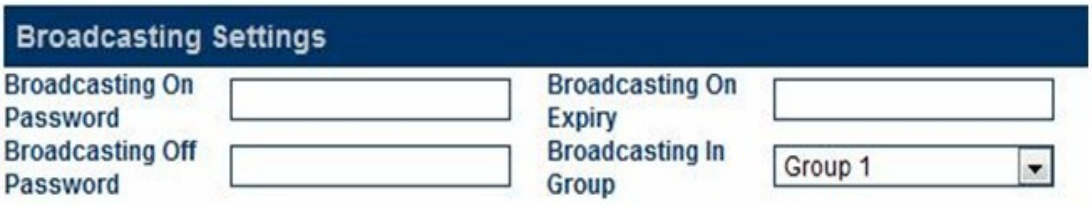

PTT setting is to determine each PPT input and output Active level RMS value.PTT settings determine each of the input and output RMS level,set “0” represents the effective interface potential efficient PTT is low,is set to “1” indicates that the PTT interface is high potential effect.For different types of radio stations require accurate selection.

PTT Output Expiry (second) is to protect the station will launch as a means for long,press the specific needs of the setting

## v. Recorder Settings


Redorder Setting is set for each group recording audio server address need to recording,refer to the recording software instructions.

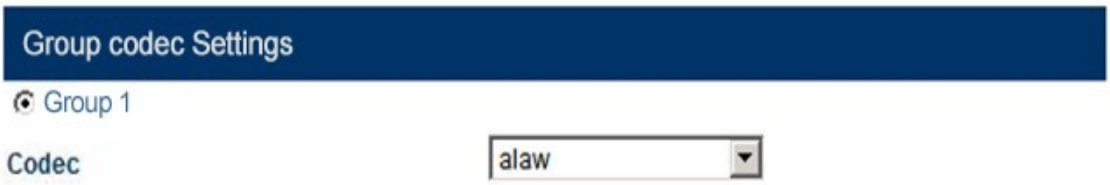
## vi. Broadcasting Settings




Broadcasting Settings is actually seeting the password for Radio remote switch,when the switch is opened and not receiving the turn off password,then the Radio by the length of time to decide when to switch off automatically(time in seconds).

Remote switch can only be control by a member of a group,so please select the which group is radio remote switch belonged to.

## viii. Public Announce (PA) Settings




The RoIP302 provides a relay switch to control a PA system. When the RoIP302 receives the PA ON Password, it turns on the relay to activate the PA system. Audio is transmitted to the PA system at this time. When the RoIP302 receives the PA OFF Password, it turns off the relay to deactivate the PA system. The duration for the relay to be in the ON state is limited by the value set in the parameter PA ON Expiry. This mechanism shuts down the PA System automatically. The PA Control Group defines which group has the control over the relay switch. Only the radio terminals in the group specified can broadcast to the PA System.

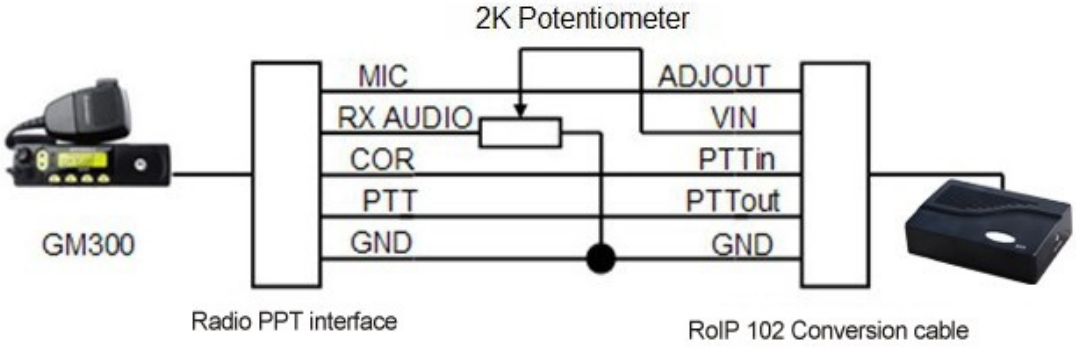
**All those terminal involved in the same group must use the same Announce coding.**

# VIII. Application Examples

**Example 1:** Linking up two MOTO GM300 Radio terminals in peer-to-peer mode with two RoIP102. The network access method is ADSL.

**Operating procedures:**

**i.** Connect the PTT Interface of the radio terminal (GM300) with the PTT Interface Cable as shown in the diagram below. Connect the RJ-11 plug of the PTT Interface Cable to PTT1 port of the RoIP102.



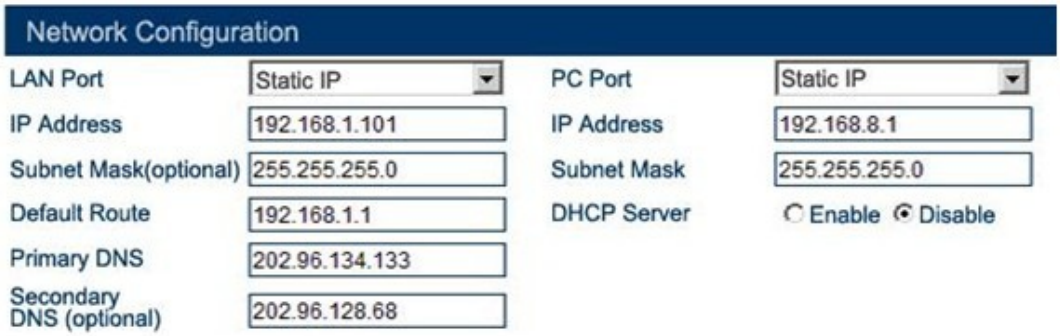

**ii.** Connect the RoIP302 LAN port to an Ethernet port of the ADSL Router

**iii.** Assign a fixed IP to the RoIP302 LAN port. This fixed IP must be in the same segment as the LAN port of the ADSL Router. For example: if the LAN of the ADSL Router has an IP 192.168.1.1, then the LAN port RoIP302 could be set to 192.168.1.101.

**iv.** Configure the DMZ mode of the ADSL Router to fixed IP assigned to the RoIP302 LAN port. For DMZ configuration, please refer to the User Manual of the Router.

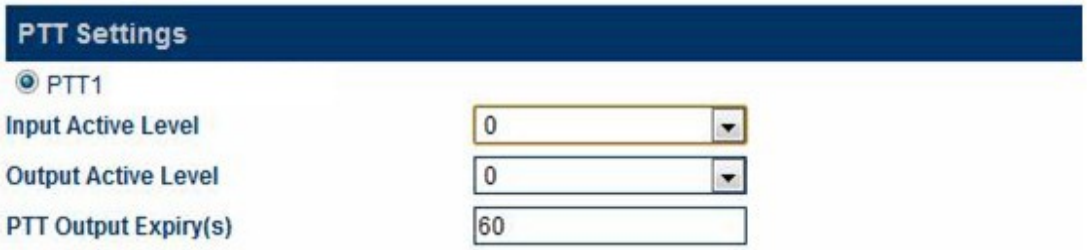
**v.** Login to the RoIP Webpage and program the Network Settings as shown below. Please note that the DNS addresses should be programmed as provided by from your local ISP

## Network settings:




Domain name server address on the above map according to local service providers' domain name server address (DNS) to be adjusted.

GM300 in the PTT (COR) is low input and output RMS,so PTT settings are :




**A: set for the host,the number is set to 101,the body number is :**
ROIP2010060005,DDNS,and call setup is as follows:


DDNS Settings

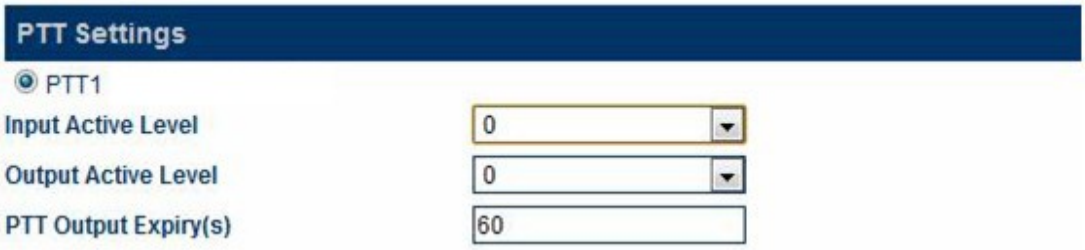
## Call Settings:


**B: body number ROIP20100610006,the DDNS and call settings is as follows：**

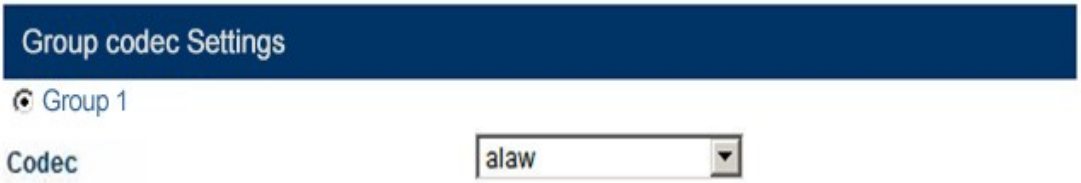

DDNS Settings


where xxx in www.xxx.com is host A inside the body number,such as ROIP20100610005

Connected to only one radio in two side,so the group set as follows:




Choose the best sound quality for Communications,so both sides have chosen alaw as speech coding:




Complete the connection,save the configuration after the restart RoIP102,open the Radio,the two place can Communications,After connecting through the respective end of the potentiometer adjustment adjust the volume to the best sound quality
(DMZ's Settings,please refer to the router manual).

# IX. Hardware Specifications

## i. Physical and Operating Conditions

- Dimension: 25 x 14 x 3 cm
- Main Unit Net Wegith: 380 g
- Storage Temperature: -40℃ - 80℃
- Operating Temperature: 0°C - 40°C

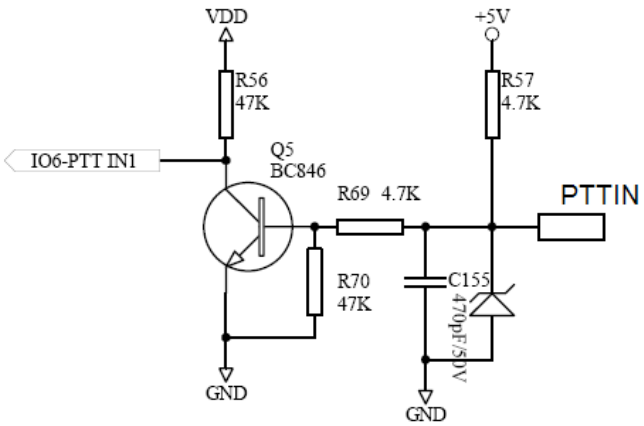
## ii. Core Design

- CPU: ARM9
- RAM: 16MB
- FLASH: 4MB
- DSP: 116 MHz, 16 Bit Bus

## iii. T Interface

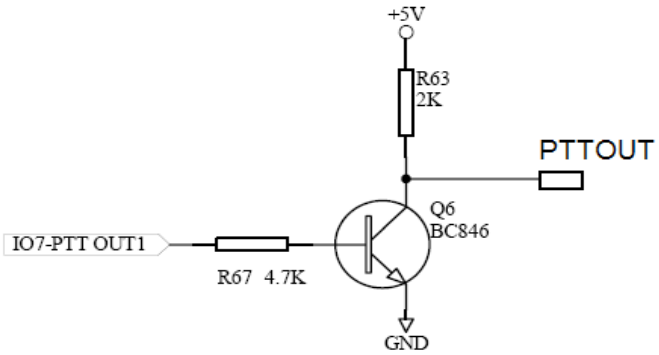
- PTTIN Active Low: <0.7V (4.7KΩ load)
- PTTIN Active High: >1.2V
- PTTOUT High Output: 5V (4.7 KΩ load)
- PTTOUT Low Output: 0V
- APUT Output: 8Ω 750mW 5V P-P
- AIN Input: 600Ω Internal Impedance, 0 – 0.6Vp-t-p
- ADJOUT (on the Adapter Cable): 2KΩ Potentiometer
- RAM: 16MB

## PTTIN Circuit:




***Based on the circuit above,the PTT Input level is high when it is open ended.**

## PTTOUT Cicuit:




### iv. Network Port

-Ethernet Port:10/100 Base-T
-Standard Supported:IEEE802.1p
-IP Standard:IPV4

## v. Firmware

| Item | Description | Remark |
|---|---|---|
| OS | Linux | Version 2.6 |
| IP Voice Protocol | SIP 2.0 | Include SIP INFO extension |
| Network Protocol | IP、TCP、UDP、HTTP、ICMP、DHCP CL & SRV、NTP、TFTP、ToS、telnet | |
| Codecs | G.711 a&μ G.729A G.729AB G.723.1 GSM | |
| Configuration GUI | Html XML2.0 JAVA | |

# H820t 4G LTE Router Datasheet

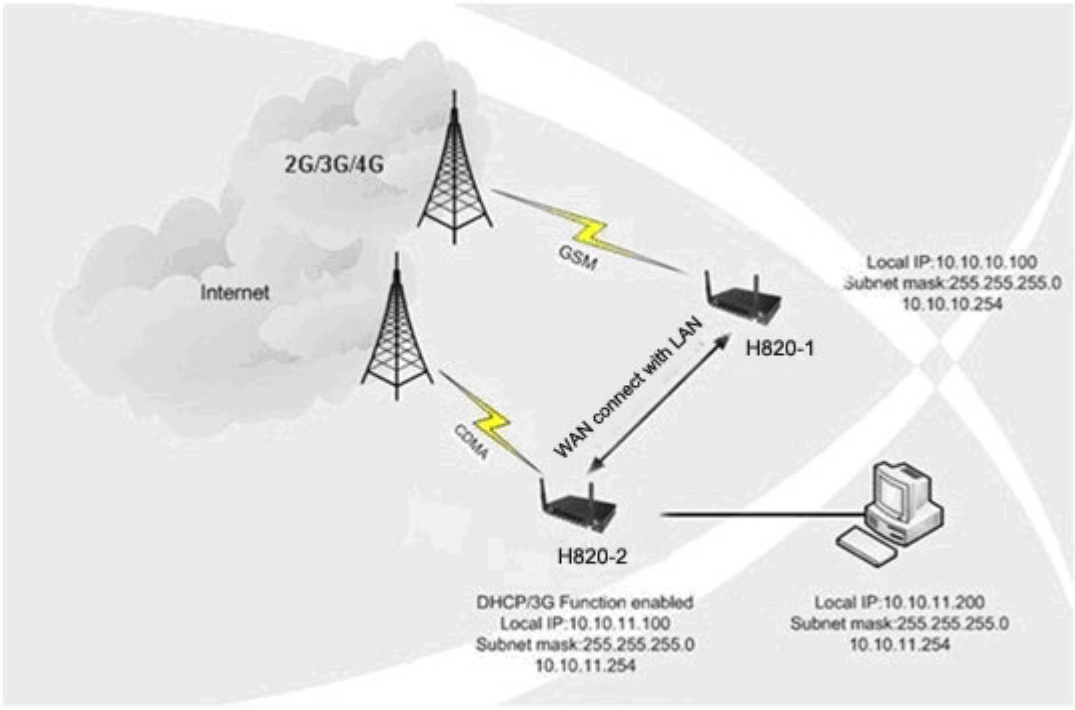
## >>| Product Introduction

The H820t 4G LTE Cellular Router designed for establish a 2G/3G/4G LTE cellular and Wi-Fi wireless network and share a cellular broad band Internet connection. The H820 series Cellular Router enables users to quickly create a secure Wi-Fi (802.11 b/g/n) network and provide access to the Internet using a cellular network. By connect to cellular mobile network; an Internet connection can be accessed and shared virtually anywhere within a wireless broadband network.

E-Lins' mobile data products are widely used in more than twenty industrial fields, such as power control, water schedule, traffic, oil field, weather forecast, environmental protection, street lamp control, post, bank and many other areas.

## >>| Typical Topology


Single H820 Typical Application Diagram




Dual H820 Typical Application Diagram

| Dual H820 Application Combination type | |
|---|---|
| **H820-1** | **H820-2** |
| Network A | Network B |
| Network A | Network A |
| It means H820-1 and H820-2 can be same network, also can be different network.<br>Network A can be any one of GSM/GPRS/EDGE/UMTS/HSDPA/HSUPA/HSPA/HSPA+/4G LTE/CDMA1x/EVDO;<br>Network B can be any one of GSM/GPRS/EDGE/UMTS/HSDPA/HSUPA/HSPA/HSPA+/4G LTE/CDMA1x/EVDO;<br>Please specify with us which network you will use before order. | |

## >>| Industrial Application

- Remote Data Monitor and Control
- CCTV, security surveillance
- Water, gas and oil flow metering and schedule
- AMR (automatic meter reading)
- Power station monitoring and control
- Remote POS (point of sale) terminals, ATM,

- Traffic signals monitor and control, Traffic info guidance
- Oil field, weather forecast, environmental protection, street lamp monitoring and control
- Early Warning of Mountain Torrent
- Fleet management
- Power distribution network supervision
- Central heating system supervision
- Weather station data transmission
- Hydrologic data acquisition
- Vending machine
- Telemetry, SCADA
- Vehicle logistics and diagnostics controlling
- Parking meter and Taxi Monitor
- Telecom equipment supervision (Mobile base station, microwave or optical relay station)

## >>| Specification

| Wireless | |
|---|---|
| **Compatible Mobile Networks** | 4G LTE (FDD/TDD)<br>Back compatible to 3G UMTS WCDMA (HSUPA/HSDPA/HSPA/HSPA+/DC-HSPA+);<br>2G GSM EDGE/GPRS<br>CDMA1x, CDMA2000 EVDO Rev 0, Rev A, Rev B<br>TD-SCDMA |
| **Cellular Frequency** | 4G FDD LTE:<br>Band 1--2100Mhz<br>Band 2--1900Mhz<br>Band 3--1800Mhz<br>Band 4—AWS(1700/2100Mhz)<br>Band 5--850Mhz<br>Band 7--2600MHz<br>Band 8--900Mhz<br>Band 12--700Mhz<br>Band 13--700(B13)Mhz<br>Band 17--700(B17)/AWS<br>Band 19—800Mhz<br>Band 20--DD800Mhz<br>Band 21<br>Band 25 –1900Mhz G Block<br>Band 31– 450Mhz |

| | |
|---|---|
| | Other FDD band…<br><br>4G TDD LTE:<br>Band 41 – 2500/2600Mhz<br>Band 40 -- 2300Mhz<br>Band 39 – 1900Mhz<br>Band 38 -- 2600Mhz<br>Other TDD band…<br><br>UMTS/HSPA/HSUPA/HSPA/HSPA+/DC-HSPA+ (WCDMA/FDD): 850/1900/2100 MHz, option for 850/900/1900/2100Mhz/1700Mhz/AWS;<br><br>3G TD-SCDMA: 2010~2025MHz/1880~1920MHz<br><br>Quad-band GSM/GPRS/EDGE 850/900/1800/1900Mhz;<br><br>CDMA1x/EVDO: 800/1900Mhz, option for 450Mhz;<br><br>Notes: 4G LTE is new. There are many different band and frequence. Please confirm the detailed band and frequency with your carriers before order. |
| **Bandwidth** | 4G LTE<br>FDD LTE: 100Mbps or 150Mbps or 300Mbps downlink, 50Mbps uplink;<br>TDD LTE: 150Mbps downlink, 50Mbps uplink;<br><br>DC-HSPA+: Downlink 42Mbps, Uplink 5.76Mbps;<br>HSPA+(H): Downlink 21Mbps, Uplink 5.76Mbps;<br>HSPA+(L): Downlink 14.4Mbps, Uplink 5.76Mbps;<br>HSUPA: Downlink 7.2Mbps, Uplink 5.76Mbps;<br>HSDPA: Downlink 7.2 Mbps, Uplink 384k bps;<br>WCDMA/UMTS: Downlink/Uplink 384 kbps;<br><br>EDGE: Downlink 384 kbps, Uplink 118 kbps;<br>GPRS: Downlink 108 kbps, Uplink 42.8 kbps;<br><br>CDMA1x: Downlink/Uplink 153.6kbps;<br>CDMA EVDO:<br>Rev B: 14.7Mbps downlink, 5.4Mbps uplink<br>Rev A: 3.1Mbps downlink, 2.4Mbps uplink<br>Rev O: 2.4Mbps downlink, 153.6kbps uplink |

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| | 3G TD-SCDMA: 2.8Mbps<br><br>Notes: the bandwidth is peak value. Real value depends on carrier network support. |
| **Network and Band Lock Feature (Option)** | Default is unlocked, can use this feature to lock |

## Main Features and Performance

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|---|---|
| **USB Host** | No |
| **SMS/Voice(Option)** | SMS/Voice call to control router to be online, offline, reboot and status monitor; SMS is default feature, Voice is option;<br>SMS text sending and receiving; |
| **GPS (Option)** | GPS feature |
| **DTU (Option)** | With DTU feature (Serial to Cellular Gateway feature, RS232 or RS485 port option).<br>Details:<br>Serial Baudrate: 300bps, 600bps, 1200bps, 2400bps, 4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps;<br>Serial Parity: none, even, odd;<br>Serial Databits: 7, 8;<br>Serial stopbits: 1, 2;<br>Serial flow control: none, hardware, software;<br>Mode: Server (up to 4 server centre, can OEM to be more), Client;<br>Protocol: TCP, UDP ;<br>Heart Beat : Yes; |
| **VPN** | PPTP, L2TP, IPSec, GRE, Tunnel (PPTP server, PPTP client, L2TP client, IPSec client, IPsec server) |
| **OpenWRT (Option)** | Optional |
| **VRRP (Option)** | Optional |
| **Route** | Static Route;<br>Optional for Dynamic Route (BGP, BGPD, OSPF, Zebra, Rip); |
| **SNMP** | Support V1, V2. V3 |
| **VLAN** | Support multi-LAN IP address, support two IP address |
| **Wi-Fi** | Optional, 802.11b/g/n; 150Mbps default. 300Mbps optional.<br>Can be used as AP and client; |

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| | Frequency from 2.4GHz to 2.483GHz,Access Points, Routers and Gateway Server Applications, wireless up to 254 PC users |
| **Fail Over Redundancy (network Backup feature)** | Auto-dial feature, keep alive link;<br>LCP, ICMP check;<br>Built-in watch dog;<br>Cellular (2G/3G/4G), RJ45 WAN (xDSL, DHCP, Fixed IP), WiFi client three line redundancy;<br>Two H820 dual sim same network(Network1+ Network1);<br>Two H820 dual sim two network (Network2+ Network 2);<br>Two H820 dual sim dual mode network (WCDMA+CDMA2000, WCDMA+LTE, CDMA2000+LTE);<br><br>Cold Backup is default, Hot Backup is option;<br>Cold Backup=WAN RJ45 and Cellular WAN not online at the same time. One line online and the other line standby, switch freely with triggers;<br>Hot Backup=WAN RJ45 and Cellular WAN are online at the same time. Data goes the main line, and switch to the other line. Hot Backup switch time is shorter than Cold Backup. |
| **POE** | No, can be ODM |
| **Firmware update** | support firmware update locally or remotely (LAN, WiFi and OTA WAN) |
| **Syslog** | local and remote |
| **DDNS** | Yes |
| **DHCP Server** | Yes |
| **Others** | DNS proxy;<br>Optimized EMC design;<br>Real-time clock (NTP, support update with defined hours);<br>WAN/LAN/Memory statistics;<br>Local/remote profiles backup and retrieve; |
| **Management System** | Option |
| **Protocol** | |
| **Protocol support** | TCP, UDP, SMTP, POP, ICMP, FTP, PPP, PPPoE, DHCP, DDNS, DNS, WPS, DMZ, NAT, xDSL, NTP, QoS, etc. |
| **Security** | |

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| **Firewall** | support 64/128 bits WEP, 802.1x, WPA, and WPA2<br>support WDS<br>support WPA1/2 – PSK<br>support WPA1/2 – 802.1x<br>support EAP – TLS, TTLS, LEAP, PEAP<br>TKIP, AES encryption<br>support access with user name & password.<br>support access control base WAN/LAN interface<br>support access control base source IP address<br>defense DOS attack, support SYN flooding, IP surfing, ping of Death, fragile, teardrop, land etc.<br>support PAP & CHAP<br>support IP filtering<br>support content filtering<br>support NAT/NAPT/Port forwarding/DMZ |
| **Advanced Firewall Features** | Stateful Packet Inspection (SPI)<br>VPN Pass-through |
| **Media Access Control** | CSMA/CA with ACK |
| **Certifications** | REDIUS Client |
| **Interface** | |
| **LAN/WAN** | 4X 10/100M LAN port (RJ45 interface)<br>1X 10/100M WAN port (RJ45 interface)<br>(WAN RJ45 can convert into LAN RJ45 to get 2 LAN RJ45);<br>WAN ports support Cell/Static IP/DHCP/PPPoE (on demand, keep alive, schedule, manual) |
| **Antenna** | 2 antenna for Wi-Fi (detachable, SMA interface * 1, Internal *1)<br>3 antenna for Cellular and GPS (detachable, 50Ω SMA female interface), Cellular support diversity receiving (MIMO) option |
| **Led** | SYS*1<br>WPS*1<br>VPN*1<br>Signal*1<br>Cell*1<br>WAN*1<br>LAN (10/100M) 1, 2, 3, 4<br>WiFi*1 |
| **Button** | Reset |

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| **Console** | 1 console port |
| **Serial port** | RS232 or RS485 DB9 interface |
| **IO Port (option)** | 2 |
| **Management** | Easy to use and management;<br>Web/Telnet/SSH/CLI, support remote management<br>SMS;<br>SNMP;<br>RMS (Remote Management System) |
| **At command** | Supported |
| **UIM/SIM Card Slot** | Support 1.8V/3V UIM/SIM cards, one sim card slot |
| **DC Jack** | Two types of input jack for DC<br>2.5mm DC jack * 1<br>Terminal Block * 1 |
| **Power** | |
| **Power supply** | DC5V-50V , typical DC 9V1A or 12V1A, 12v CAR USE;<br>DC5V~40V is the default, DC5V~50V is the option |
| **Current** | Idle: about 100mA@12VDC<br>Communication: about 260mA@12VDC |
| **Software** | |
| **Device Management** | WEB interface (Internet Explorer v6 or Later; Mozilla Firefox v1.5 or Later, or other Java-enabled Browsers, Chome, Opera, Sarafi, etc.) |
| **Minimum System Requirements** | Windows, Linux, Mac OS, IOS, Symbian, Android, other OS support web browser;<br>Network Interface Card |
| **Physical** | |
| **Operating Temperature** | Storage Temperature: -40 ~ 85°C<br>Working Temperature: -30 ~ 75°C |
| **Humidity** | 95% Maximum (Non-condensing) |
| **Dimensions** | PCBA: 156mm x 104mm x 20mm<br>With case: 168mm x 104mm x 25mm |

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| **Weight** | 455g (not including the antenna)<br>550g (including the antenna)<br>850g (including all accessories, without package) |
| **Color** | Metal Gray-Black, OEM is available |
| **Others** | |
| **Warranty** | 1 Year default. Option extends to 5 years maximum. |
| **Package Contents** | H820 Series wireless Router<br>Ethernet Cable<br>Power Adapter<br>Antenna<br>Others depends on option features |

## >>| H820 model and types

**H820 x - - - XXX (option)**

**W:** WiFi WLAN

**G:** GPS

**RS232/RS485:** DTU feature (cellular to serial), RS232 or RS485 for choice

**50V:** DC input 5~50V support, default is 5~40V

**t:** 4G LTE version. Support FDD LTE or TDD LTE or FDD+TDD LTE, back compatible to 3G and 2G

**w:** 3G WCDMA HSPA version, support HSUPA/HSDPA/UMTS/EDGE/GPRS/GSM

**p:** 3G WCDMA HSPA+ version, support HSPA+/HSUPA/HSDPA/UMTS/EDGE/GPRS/GSM

**eva:** 3G CDMA2000 EVDO version, support EVDO RevA/EVDO Rev0/CDMA1x

**evb:** 3G CDMA2000 EVDO version, support EVDO RevB/EVDO RevA/EVDO Rev0/CDMA1x

**td:** 3G TD-SCDMA version, support TD-HSUPA/TD-HSDPA/TD-SCDMA/EDGE/GPRS/GSM

**Notes:**

1) option feature can be select one or all

2) for LTE version, please confirm your LTE band and Network Carrier with order to avoid wrong selection

Notes: please be informed the following features are option. Please indicate before order.

1) Cellular diversity receiving MIMO (with this feature, router can get better signal and

speed)

2) WiFi Feature

3) GPS feature

4) Serial to cellular feature, RS232 or RS485 can choose one

5) Voice/SMS control

6) DC5V~50V(default is DC5V~40V)

7) Dynamic Route.

## >>| Package & Accessories

- The H820 Series wireless Router
- Ethernet Cable
- Power Adapter
- Antenna
- Others depends on option features

DB15 to DB9 Cable

DB9 serial cable

RJ45 to DB9 Cable

USB Cable

EU Power Supplier

US Power Supplier


AU Power Supplier

Desktop Power Supplier
EU, US, AU, UK for choice

UK Power Supplier

Metal Mangetic-Mount W/ Cable

Rubber antenna

Rubber Mangetic-Mount W/ Cable

CD-Rom with Manual/Data

E-Lins Technology Co.,Limited
Add: #901-902,Unit B, Jiayun Bld., Huada Rd., Dalang, Longhua, Shenzhen, 518000, China
Tel: +86-755-29230581 83700465 E-mail: sales@szelins.com www.szelins.com www.e-lins.com

Notes:

1) We packed the units with free accessories; default packed depends on stock and the device's feature requirement. If you need specify the type, please inform us when you order.

2) Different places have different band and frequency. Signal quality affects the data speed. The antenna in the packages is free default. It's a world-wide use type. Our free antenna may not get good signal or good speed in your area. Please get the dedicated antenna for your area yourself to get the best signal and data speed.

3) E-Lins has high gain antenna for option.

**Atención de un Volcamiento en la Celda c5 (Cobertura parcial repetidoras CBPI), solución de Comunicaciones Electrónicas Operativa.**

- Unidad de Rescate con la Solución de Comunicaciones Electrónicas Instalada, acceso a través de la operadora celular Claro

- Volcamiento del Vehículo, Unidades de Apoyo Ambulancias