



Wireless • Innovation • Networking

Professional Wireless Surveillance
WiFi Wireless Hotspot
Point-to-Multipoints Fixed Wireless
Wireless E1/T1
Solar Wireless
Wireless Mobile Surveillance
Antenna and Accessory

Professional Solution Catalogue



**Your One Stop
Customization and Consultation
Solution Provider**

RFNet Technologies Pte Ltd
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Website: www.rfnetech.com



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Content Overview

1. Point-to-Point and Point-to-Multipoint Fixed Wireless Solution supporting Voice, Data and Video signal with QoS
2. 3.5G HSUPA and Wireless LAN MIMO Multi Radios Access Point
3. Wireless Outdoor Surveillance System
4. Solar Powered Solution (Green Wireless)
5. Wireless Hotspot Solution
6. Wireless E1/T1 Solution
7. All in one Network Recorder and IP Camera Solution cum gateway router
8. Wireless Mobile Surveillance

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Outdoor & Fixed Wireless

Rugged and Waterproof



Wireless
Up to 25km radio Link

Up to 25km Light-of-Sight link with external antenna
Up to 25kmbps wireless data rate and 45Mbps TCP/IP throughput
Point-to-Point and Point-to-Multipoint bridge (WDS)
Support IEEE 802.11b or g or a and Super G with radio power control

Bandwidth control with QoS for VoIP and video
Power Over Ethernet (POE)
Support SNMP and Web Management
WPA, WPA-PSK, WEP (155bit) and AES security
MAC filtering, Remote AP associate control

**Security and
Multimedia ready**
With Quality-of-service



Product Type	2.2 GHz Built to order	2.4 GHz	3.3 ~ 3.8 GHz	5 ~ 5.9 GHz
500 AP mW (with two N port) Access Point Base Station Repeater Professional Vehicle WLAN Transceiver AP-xx68 family				
100 AP mW (with two N port) Access Point Repeater Point to Multi-Points Wireless Bridge Professional Vehicle WLAN Transceiver AP-xx61 family				
AP + CPE (Integrated Antenna) Access Point Wireless Bridge Client (CPE) AP-xx10 family				
CPE Wireless Bridge (CPE) Built-in Antenna				
Application and Target Market	<ul style="list-style-type: none"> • Fixed Wireless • Backhaul Link • Public Safety • Surveillance 	<ul style="list-style-type: none"> • Fixed Wireless • Backhaul Link • Public Safety • Logistic • Warehouse • Surveillance 	<ul style="list-style-type: none"> • Fixed Wireless • Backhaul Link • Public Safety • Surveillance 	<ul style="list-style-type: none"> • Fixed Wireless • Backhaul Link • Public Safety • Surveillance

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Point-to-Point & Point-to-Multi points Fixed Wireless with QoS Solutions

Cost-effective Carrier Class Wireless Deployment

2.2~2.3GHz, 2.4GHz, 3.3~3.8 GHz, 4.9~5.9 GHz

- Support up to 45Mbps TCP/IP Throughput
- Support Video, Voice and Data with Quality of Service (QoS)
- Point-to-point deployment up to 25km
- Available in unlicensed 2.4GHz and 5GHz, or license 2.2~2.3 GHz, and 3.5 GHz Band

The wireless link could go up to 25km (Actual tested distance but not limited to).

As a test reference point for performance capability, AP-1061 was tested with 24dBi grid antenna was proven to reach up to 23km with good Line of Sight conditions and still able to achieve 5~6Mbps on the average throughput.

In high-bandwidth requirement applications, our products are easy integrated with link aggregation switches which allow efficient load balancing between access points. This allows multiple trunk back haul link to be created thus multiplying the available throughput over huge distances by many folds.

RFNet Outdoor / Indoor fixed and vehicle mounted wireless products are of industrial grade that are armed with IP67 water ingress rating (waterproof), made of highly durable material (aluminum die-cast or polycarbonate Lexan-943) and of high temperature tolerance (- 35°C ~ +70°C).



AP-3068, 3GHz AP/CPE



AP-5010, 5GHz AP/CPE

Proven Integrity with exceptional range and throughput

RFNet Technologies is a R&D company dedicated in bringing wireless technology into the next level. Moving in this fast paced wireless development, RFNet wireless products aggressively closes the gap between costs and benefit thus creating maximum value for our customers. However, performance is a criteria that cannot be compromised. We pride ourselves in the proven wireless range and throughput as value which we bring to our customers.

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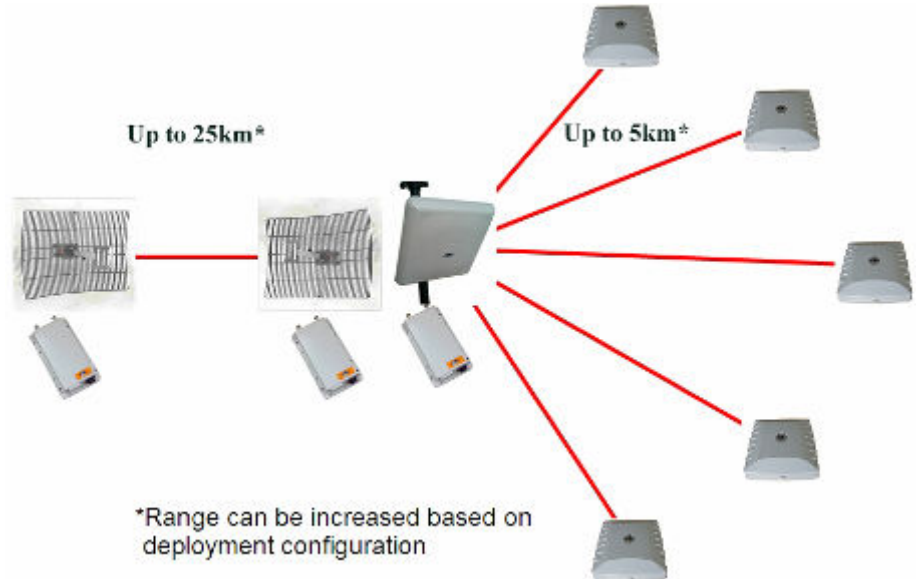
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Point-to-Point & Point-to-Multi points Fixed Wireless with QoS Solutions

Integrity Wireless Transmission over land and water



Multiple Bandwidth 5/10/20/40 MHz and Turbo mode up to 108 Mbps data rate

The flexibility to support multiple bandwidth and multiple wireless data rate between 1Mbps to 108 Mbps (turbo mode), give user the ability to balance between range, throughput and coverage. The narrow bandwidth of 10MHz has better radio sensitivity and thus provide longer radio link. The use of narrow bandwidth also allow a better reuse of radio channel frequency when need.

Centralize Management and Features

RFNet packs in features like RF power control, Site survey, Hot-standby, SNMP Manager, Link aggregation, Multiple SSID, Unique operating frequencies, SSID Suppress and more in the Indoor / Outdoor products to compliment as a total solution provider.

Please also refer to our central network control management software for more information

key Feature

- **IP67 Industrial Grade** Product range
- Integrated **14dBi** antenna for 2.4GHz models and **18dBi** antenna for 5GHz plus **support for external antennas**
- Improved Outdoor Temperature from **-35°C ~ +70°C**
- **Adjustable** RF Power Control
- Supports **Power Over Ethernet**
- **Solar Power Kit, SNMP Manager, Hot-Standby** and **Link Aggregation** optional
- Support **Centralize Management**

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3.5G HSDPA and IEEE 802.11N Radios Outdoor Wireless AP / Router / CPE Solution

Supports Multiple Communication Technologies



AP-8061-3G Outdoor Professional Wireless AP/Router/CPE

- **Supports 3.5G (HSUPA) / Tri-band WCDMA (UMTS) / Quad-band GSM / GPRS / EDGE / GPS**
- **Features IEEE802.11 N with wireless data rate up to 300Mbps**
- **Built for Industrial outdoor Applications**

To reach a remote area, you do not need a control station on site now. You do not even need a computer.

AP-8061-3G is designed as a Industrial Outdoor AP / Router / CPE equipment. With it, there is no longer need to use a wireless repeaters to link up to a remote site kilometers away.

Supporting various telecommunication technologies, AP-8061-3G gives you the options to chose which technology to leverage on. As a replacement for expensive back hauling systems in low bandwidth applications, this device operates as a HSUPA router to link up your remote network to the internet where you can access it from anywhere in the world.

This makes the solution ideal for IP SCADA systems and the like.

AP-8061-3G, a router, an access point, a bridge and more.

Technology Leverage

Telecommunication technologies as we know, has advanced at an alarming pace. To keep up and realize the technologies full potential, Telecommunications Systems Designer would have to integrate multiple connections to have a good mix of back hauling as well as last mile connections.

Many telecommunications companies have spent millions of dollars just to extend their 3G network coverage. It is for this reason that we are taking the opportunity to leverage on it.



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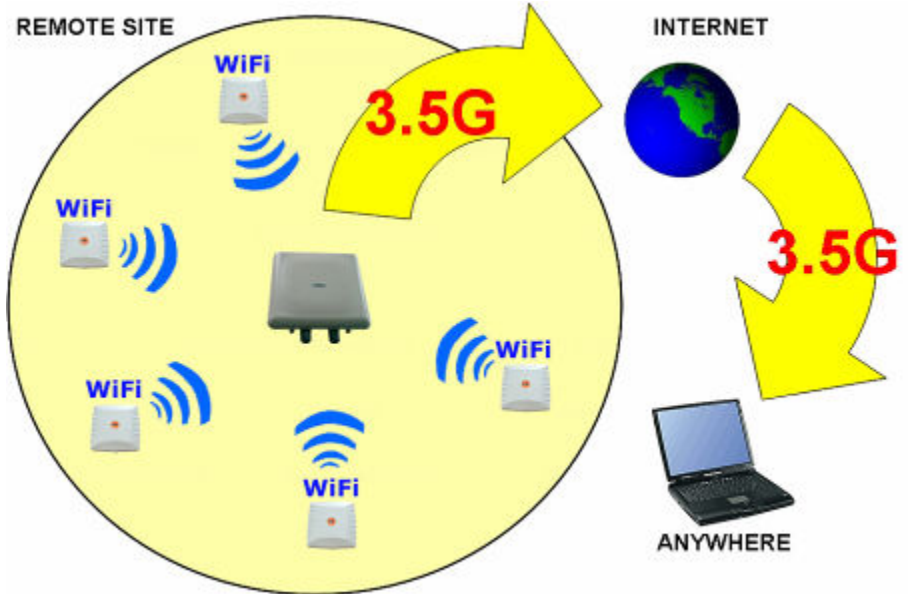
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Solar Powered Wireless Surveillance Truly Wireless

No more kilometers of cabling. No more excavations.



WiFi and HSPA Combined Setup

Ideal Combination for Remote Sites

Most deployments of networks using wireless require Point-to-Point arrangement for back hauling. With AP-8061-3G, you can erase that step together with the many repeaters you probably have to deploy. Leverage on service providers' 3G equipment and HSPA back to your central station from your remote site. Easy deployment and easy relocation.

The world is increasing aware of the need to go Green. This is matched by the need to move into wireless faced by many industries as telecommunication technology improves. Moving in the same direction on different driving agendas, these two technologies were finally merged to provide the current world with an economic and eco-friendly solution to support remote sites.

An Industrial WiFi complimented with HSPA Solution

Key Feature

- Support Multiple Transmit and Multiple Receiver (2x2 MIMO)
- Support 3.5G HSPA/ Tri-band WCDMA(UMTS)/ Quad-band GSM/ GPRS/ EDGE/GPS
- Outdoor IP67 Industrial Grade
- Integrated 18dBi antenna for 5GHz or 14dBi for 2.4GHz plus support for external antennas
- Improved Outdoor Temperature from -35°C ~ +70°C
- Supports and comes with IEEE802.3af POE
- Solar Power Kit, SNMP Manager, Hot-Standby and Link Aggregation (optional)

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This is a outdoor surveillance solution for monitoring of activities: Buildings, Roads, Flyovers

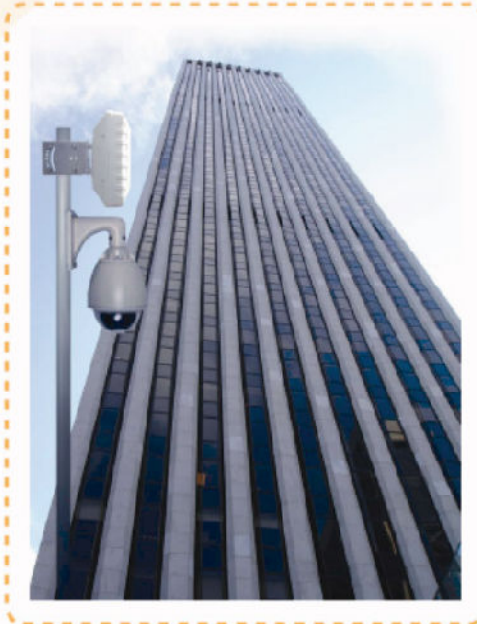


Outdoor Wireless AP

Waterproof outdoor wireless
 Central configuration and monitoring
 Data, Voice and Video over Ethernet
 Multiple Wireless ESSID (optional)
 Enhanced security with wireless isolation, WPA and more
 Bandwidth control per camera

MPEG4 hardware compress, compatible with WMV
 Media Player real-time play
 Leading stream media technology for fluent image
 small symbol stream and high grade picture
 Long-range WEB configuration control
 Auto Motion detect and Multi-user control
 Auto Iris, Auto Focus and mirror image
 360° continuous pan rotation
 90° continuous tilt rotation

Weatherproof IP Camera



APRT-2801RC

Cost Effect in Surveillance
 Recorder Gateway



AP - 1068

Outdoor AP
 2.4 GHz, 500 mW



AP - 5068

Outdoor AP
 5 GHz, 500 mW



AP - 1061

Outdoor AP
 2.4 GHz



AP - 1010 AP - 5010

Outdoor AP/CPE
 Built-in High gain antenna
 2.4 GHz or 5 GHz

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Solar Powered Wireless Surveillance Solution



**RFSLR-1275100
Outdoor Solar
Power Kit**

No more wires for Outdoor Surveillance

- **Independent solar power for remote location**
- **Full Battery Load support wireless surveillance up to 4 days**
- **Combined with Outdoor Wireless to save total project implementation cost and lead-time**



**AP-X068 Outdoor
Professional Wireless
AP/CPE with RF Ant**



**Panasonic WV-960
Outdoor PTZ IP Camera**

How many times do you face challenges on planning cabling route? How many times do you have to come up with troubleshooting measures when the wire is cut when it is underground? How much do you have to spend on those thick power cables which have to be laid kilometers away to a remote site? What if you need to relocate the surveillance point? Not to mention the hefty cost of excavating while conforming to the requirements, getting the approval to do so and the lead-time needed.

Truly Wireless

In the history of surveillance, technology came up with Analog Camera CCTV Systems. It was a system where all the cameras are linked back using a coaxial cable back to the DVR system. To improve on this, technology revolutionized to bring the world IP Cameras with IEEE 802.13af Power Over Ethernet which allows cabling from POE switches up to 100m away which helped reduce the amount of cabling work that is required. Now we bring you Solar Powered Wireless Surveillance solution to compliment on IP Cameras' capability on minimum cabling to no cabling. We call it Truly Wireless.

Solar Powered Wireless Surveillance gives you the flexibility of relocation, save on your project budget and lead-time as well as ease of maintenance. A full load solar kit will power RFNet Wireless Access Point and an IP camera for as long as 4 days without charging.

Set it up on the planned surveillance location and let it run all by itself, recharging by the day and utilizing the conserved battery power at night.

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Solar Powered Wireless Surveillance

Truly Wireless

No more kilometers of cabling. No more excavations.



Setup of Solar Powered Wireless Surveillance



Green and Wireless Combined

The world is increasing aware of the need to go Green these days. This is matched by the need to move into wireless faced by many industries as telecommunication technology improves. Moving in the same direction on different driving agendas, these two technologies were finally merged to provide the current world with a economic and eco-friendly solution.

This solution is best deployed in facilities which are already built up as excavation for cabling would damage the building's integrity on the ground. The wireless equipment is capable of beaming back the video feeds to the Control Room which is up to 25km away with good Line-Of-Sight conditions which also makes it a good alternative for remote surveillance site deployment.

Go Green. Go Wireless. Save Cost. Save Time. Save on Maintenance.

key Feature

- Solution elementary components are of **Outdoor Industrial Grade**
- Point-to-Point deployment **up to 25km**
- **Advanced QoS** and **Stable Throughput** ensure smooth delivery of video and audio feeds.
- Wireless transmission available in **2.4, 3** and **5GHz frequencies**
- Built-in **Load Switch**
- **SNMP Manager, Hot-Standby** and **Link Aggregation** (optional)

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Broadband In-Building Hotspot Solution

This is a complete broadband solution for venue owners: Shopping, Hotel, School and Cybercafe

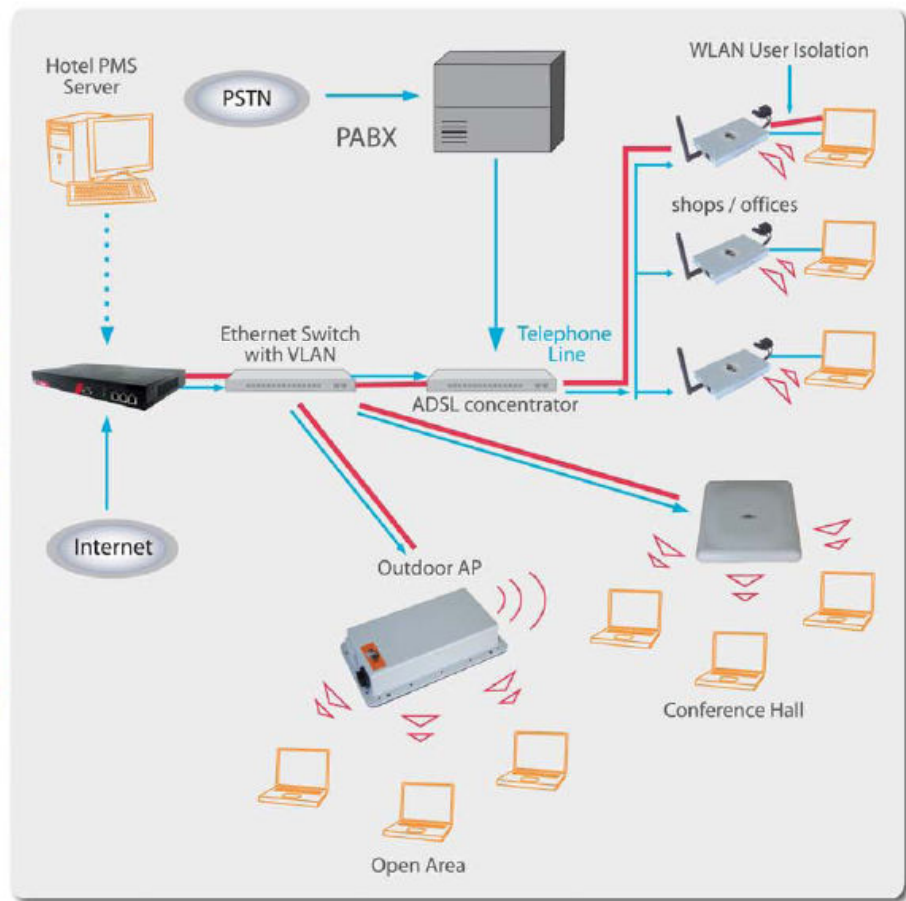


Wireless Seamless Roaming

- Indoor and outdoor wireless
- Central configuration and monitoring
- Data, Voice and Video over Ethernet or ADSL backbone
- Multiple Wireless ESSID
- Enhanced security with wireless isolation, VLAN, WPA and more

- Pre-paid, by hour or per day billing
- Zero user PC configuration is needed (IP address, DNS or Proxy setting)
- Walled garden for advertisement (Web login page)

Zero Configuration



AP-2001g - M Shop / Office AP



AP-2061 Outdoor AP Open Area



AP-2010 Conference Hall AP / Boardroom AP



APRT-2518 - M Indoor AP



DSLAM



Access Controller

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Wireless E1/T1 Backhaul Solution

Make E1/T1 wireless over miles



IP 6700 TMD Over IP Switch

- Up to 45Mbps TCP/IP superior stable throughput
- Low latency in audio signal with QoS
- Available in 2.4,3,5GHz
- Support up to 3 x E1/T1 switches

the more expensive professional signal cables around.

RFNet professional solutions makes E1/T1/DTE/E3/DS3 (TDM) setup and relocation a breeze. By introducing a TDM over Ethernet Switch, the signal is changed to Ethernet IP signals. When this is done, the IP data is sent through to the final location via Fixed Wireless Point-to-Point setup.



AP-X068

Cost-Effective E1/T1

TDM traffic is the core of voice telecommunications but effectively deploying it is difficult due to the high investment cost of laying cables. Under high-speed conditions, a E1/T1 cable has to be laid underground over high distances to provide a leased line to the subscribers' location.

The wireless client at subscribers' location will then convert the signal back to E1/T1 signals back again. Deployments using this solution have been implemented up to 25km away with up to 45Mbps of throughput. Each Access Point is able to support up to 3 E1/T1 switches.



RFAnt-50GP-31

Laying of E1/T1 cables faces the same challenges in laying any signal cable. These include high excavation cost, difficult excavation in urban areas, long lead-time, site management, high cabling as well as maintenance cost. To make the cost higher, E1/T1 happens to be one of

With RFNet professional Wireless E1/T1 solution, backhauling have never been this easy, flexible and cost-effective.

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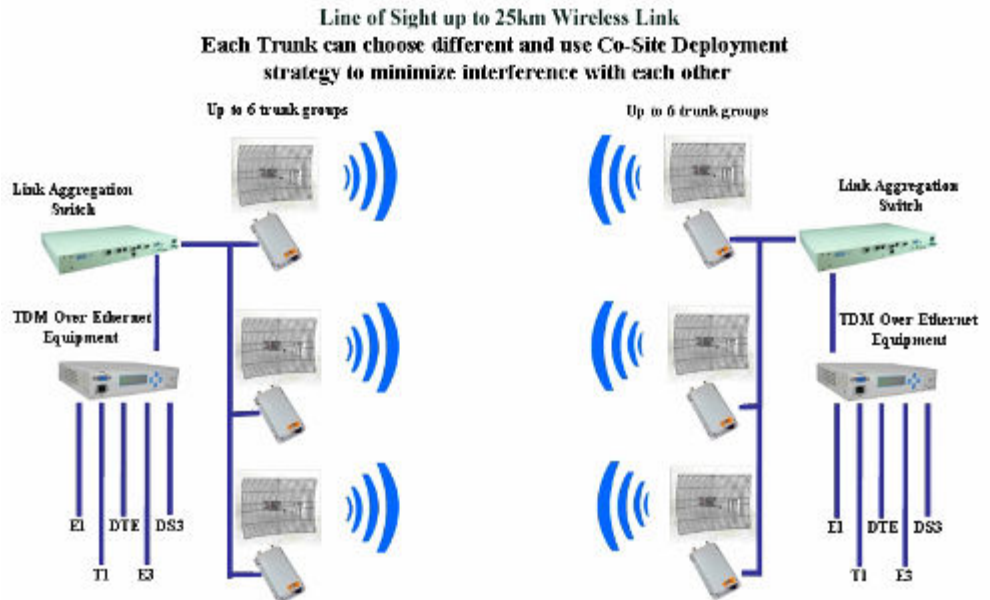
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Wireless E1/T1 Flexible, Stable, Cost-Effective

Transports E1/T1/DTE/E3/DS3 signals over kilometers



Setup of E1/T1 Data Analyzer



Link Aggregation & Hot-Standby

Backhauling is the most important link to the remote site. There should be no downtime ideally for this link. However in real life situations, there isn't any equipment that can achieve this forever.

To tackle this, our systems provide the Hot-Standby feature with Link Aggregation. With up to 6 trunks (for normal transmission, 2 trunks are sufficient) transmitting at different channels of the frequency band, the net throughput is loaded evenly to the 6 different links. Should any of the equipment experience down-time, the entire link remains up and intact with only a marginal reduction in net throughput. The only effect the application will experience is a slightly lower throughput than normal. A slight pinch without compromising on the overall performance.

Stable yet cost-effective outdoor professional backhauling.

Key Feature

- **500mW** transmit power. PTP Long Distance Up to **25km**
- **IP67 outdoor industrial grade**
- **QoS with bandwidth control**
- Available in **2.4, 3 and 5GHz frequencies**
- Operate as **AP/CPE/Repeater**
- Turbo G at **108Mbps** data rate
- **Solar Power Kit, SNMP Manager, Hot-Standby and Link Aggregation optional**

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All in one Network Video Recorder and IP Camera System

Cost-effective surveillance for SOHO



Panasonic BL-C101

- **View live Video through Internet from anywhere**
- **High Quality image from Panasonic camera**
- **IP Video and Voice recording**
- **PC-free recording**

Simple Network Recording without PC

Security Surveillance is a common application that is available currently in the market. Even more so for the SOHO market. Traditional CCTV and the new IP camera systems remain at the technology frontline competing with each other. CCTV as the cost leader and IP Camera providing differentiation for better quality feeds and images and convenient to access to IP camera from Internet.

Traditional IP Camera Surveillance Systems are more expensive as you require equipment such

as the NVR and/or PC to record the video and the Internet access through a network router.

RFNet APRT-2801GS Wireless IP Camera Recorder with an external Harddisk and Panasonic BL-C101 IP Cameras provide a cost effective replacement to the traditional network recording system. Same time it support useful features such as:

- 1.Remote live viewing through Internet to check your house or office from outside.**
- 2.Video and Voice Recording**
- 3.Video and Voice Playback**
- 4.Recording without a PC with 15 watts of power consumption**
- 5.Stateful firewall security**
- 6.Wireless Wifi access**
- 7.Support dynamic DNS**



APRT-2801GS Router cum Video Recorder

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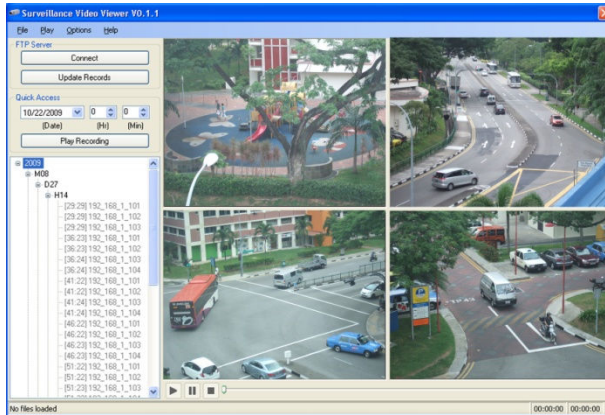
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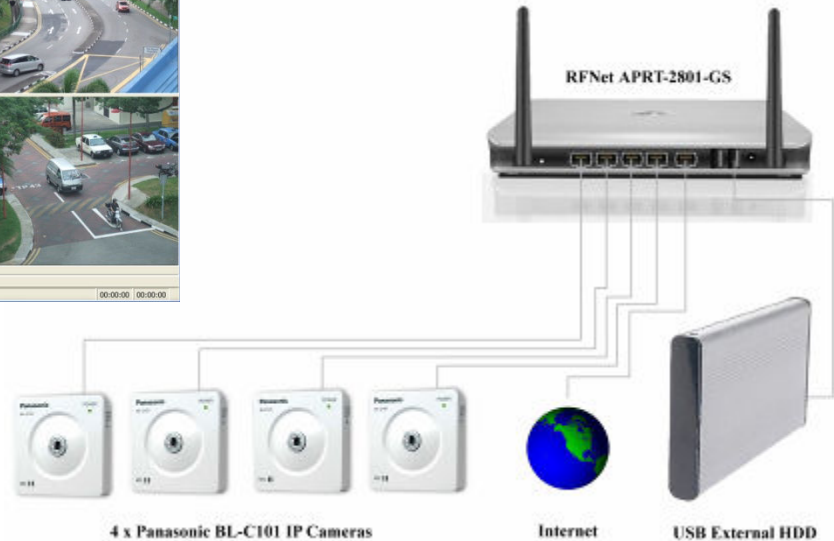
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Save on Electrical Bills, Space and Equipment costs
Get your security done Cost-Effectively
Without sacrificing good quality

View your recordings as when required. Video & Voice



Surveillance Viewer Software



4 x Panasonic BL-C101 IP Cameras

Internet

USB External HDD

Monitor, Recording and Playback

This solution is idea and cost effective for small office and home office (SOHO). It give you the total convenient to view and monitor your asset from anywhere in the world through Internet. The live view of MPEG4 video stream can be done with any Internet explorer on a computer or mobile phone.

The 24hr x 7 days a week video recording give you continue monitoring of your asset without the worry of power consumption. As the network only consume 15 watts of power.

Please contact RFNet now for more information or visit our website at www.rfnetech.com

key Feature

- Supports but not limited to 4 **Panasonic BL- C101** Video and Voice IP Cameras (Wireless accessories optional)
- **Wireless Router, Switch, Recording** all in one
- Save on **Electrical Bills, Space and Setup costs**
- **Automatic recycling** of HDD space.
- Need to increase your recording? Just change your **external HDD**.
- IP Camera Surveillance System becomes **affordable**.

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Wireless Mobile Surveillance For Transportation Market

For Train, Bus, Police Car and Trucks



detects a loss in signal and automatically resumes uploading when this vehicle arrives at another station, thus ensuring no loss of video data and maximizing file transfer throughput. The uploaded files will then be seamlessly transferred to the Central Storage.

WV-WCRU also supports onboard recording to a solid-state storage, thus providing a more reliable and infallible recording. In the event that the vehicle is unable to return to station/base timely, the onboard recording can provide recording up to 3 days before it starts to perform a fully automated file recycling process.

WV-WCRU is a rugged, onboard surveillance solution customized for deployment on transportation systems such as petrol car, bus, train and money truck. Being a fully automated system, WV-WCRU requires no user intervention in the entire recording flow; from the initial uploading of JPEG images from each vehicle to station, to the transferring of these files to a central repository.

WV-WCRU utilizes the state-of-the-art wireless transfer system, which detects vehicles when they return to home base or any station. An automatic file transfer using FTP protocol will be thus initiated. As the FTP protocol supports multiple connections, JPEG images from multiple vehicles may be uploaded concurrently.

WV-WCRU also monitors the “alive” status of cameras and station uploading software, and highlight hardware failure or network error to users for immediate attention.

In the event that a vehicle leaves base/station before an upload is complete, WV-WCRU



key Feature

- Wireless in vehicle video and voice recording
- Equipped with 3 type of state of the art radio technologies:
 - 5GHz wireless LAN for video upload at depot
 - 2.4GHz wireless LAN for Inter-WCRU connection
 - 3.5G UMTS/HSDPA for remote Internet live view
- Fast wireless video file upload at depot/station
- Central view and playback of video
- Central network management
- Central video storage
- Support seamless roaming at depot with load balancing
- Emergency portable remote view kit (Optional)

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