

SOLUTION OVERVIEW

HONEYWELL MULTIRAE GAS DETECTION SYSTEM

INTRODUCTION

Honeywell's MultiRAE is an advanced, Wi-Fi enabled hazardous gas detector for chemical, food/beverage, oil, oil and gas (downstream), pharmaceutical, telecommunications, and wastewater treatment applications. The detector contains from one to six different gas sensors in a compact, portable unit. A local alarm and real-time gas level display alerts the user when toxic gas is detected, while remote monitoring personnel are notified wirelessly over Aruba wireless infrastructure.

Twenty-five field-changeable sensor options offer operational flexibility. Man-down and other status sensors quickly raise an alert even if the user is incapacitated.

Personnel location monitoring is provided internally by the MultiRAE units using Wi-Fi triangulation of LocaXion Anchors. Location monitoring can also be provided by Aruba's Analytics & Location Engine (ALE) using trilateration if sufficient access points are deployed, and a compatible location application is available.

Key features include:

- Wi-Fi access to real-time instrument readings, gas type, and alarm status from any location
- Local and remote notification of alarm conditions, including man-down
- More than twenty-five interchangeable sensor options including PID for VOCs, NDIR and catalytics for combustibles, and NDIR for CO2
- Intelligent sensors store calibration data so they can be swapped in the field without recalibration
- Continuous data-logging
- Personnel tracking with LocaXion Anchor points to fill Wi-Fi coverage gaps

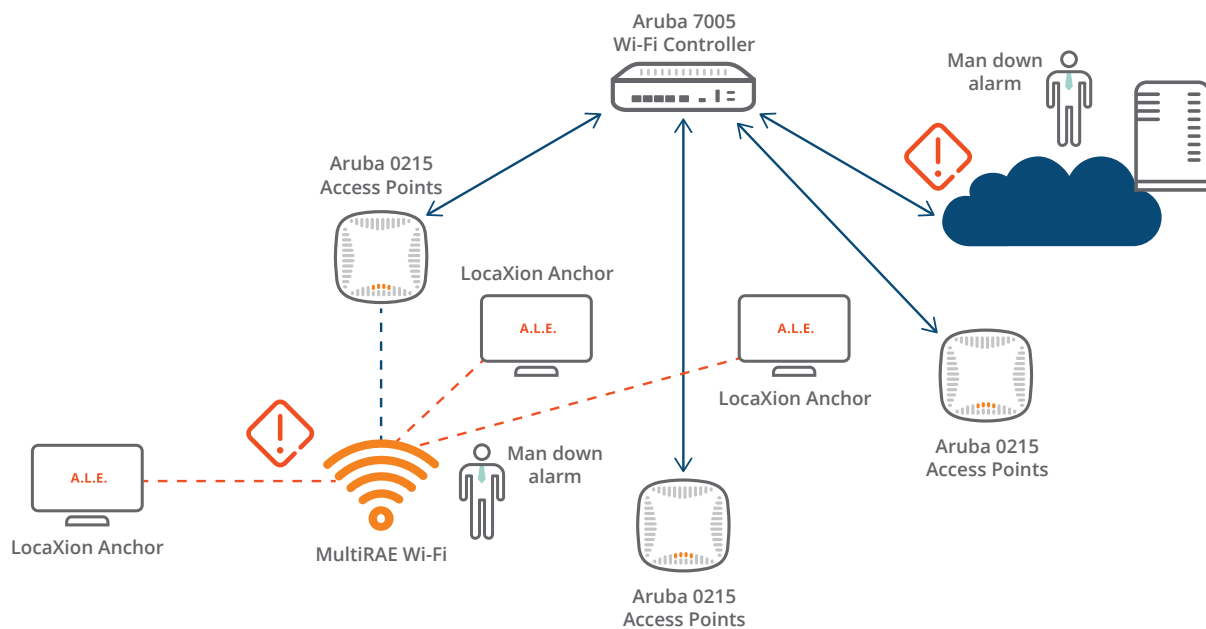


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SYSTEM CONFIGURATION

System configuration consists of deploying the hardware and installing the Location Manager.

Download the Location manager software and then right click on the site map to setup MAC address of Location Anchor, MAC address of Access point and the Geo reference point.

Location Anchor

Assign a name and the MAC address of the Location Anchor. You will need at least two of Location Anchor in the system to calculate location.

The screenshot shows a dialog box titled "LocationAnchor2". It contains the following fields:

- Name: LocationAnchor2
- Tx Power(dB): 20
- MAC address #1: 000666215762

At the bottom, there is a yellow highlighted section labeled "Name: Name" and two buttons: "OK" and "Cancel".

Access Point

Assign the name of the Wi-Fi access point and MAC address. At least two access points are needed in the system for reliable operation.

The screenshot shows a dialog box titled "Aruba-PSK". It contains the following fields:

- Name: Aruba-PSK
- Tx Power(dB): 20
- MAC address #1: aca31ec70b0c
- MAC address #2: (empty)
- MAC address #3: (empty)
- MAC address #4: (empty)
- MAC address #5: (empty)
- MAC address #6: (empty)
- MAC address #7: (empty)
- MAC address #8: (empty)

At the bottom, there is a yellow highlighted section labeled "Name: Name" and two buttons: "OK" and "Cancel".

Geographic References

Assign the Geographic location reference of the Anchor Point by entering the latitude and longitude coordinates. You will need at least three Georeference reference locations.

The screenshot shows a dialog box titled "Geo-Reference4". It contains the following fields:

- Name: Geo-Reference4
- Altitude: 0
- Longitude: -121.948473
- Latitude: 37.410751

At the bottom, there is a yellow highlighted section labeled "Name: Name" and two buttons: "OK" and "Cancel".

MultiRAE

Use ProRAE Studio II utility to setup Wi-Fi configuration, including the Location Anchor SSID, Location Manger IP address, the Access Point SSID and the security protocol in use.

Power up ProRAE Studio II, click on administration, type the password "rae" and then click OK.

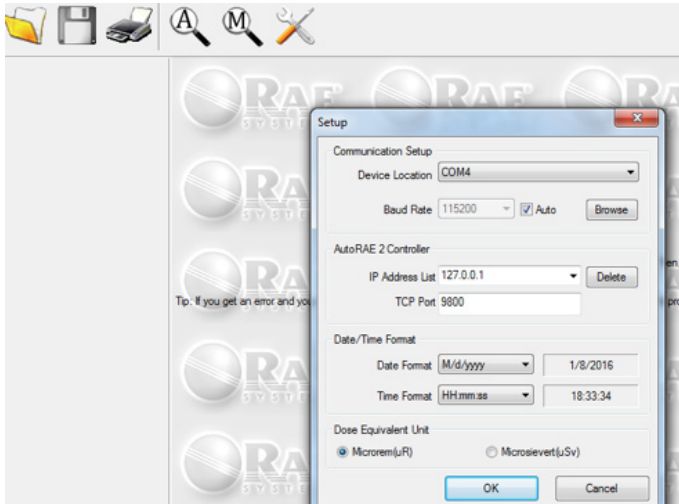
The screenshot shows the ProRAE Studio II application interface. A "Login" dialog box is open in the foreground, showing the following options:

- Select User Type:
 - Basic User (No password)
 - Data Manager
 - Administrator
- Password field: (masked with three asterisks)

At the bottom of the dialog box is an "OK" button. The background shows the ProRAE Studio II application window with a menu bar (File, Operation, Help) and a toolbar.

Connect a USB cable from the MultiRAE unit to a PC, and set the MultiRAE to communication mode.

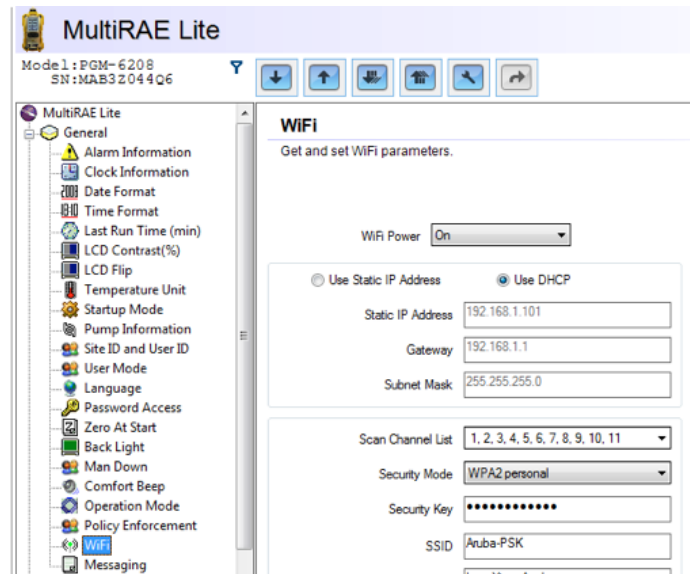
Click the last tab - "Setup option" - to check the communication port operation. If good click OK and proceed to the next step.




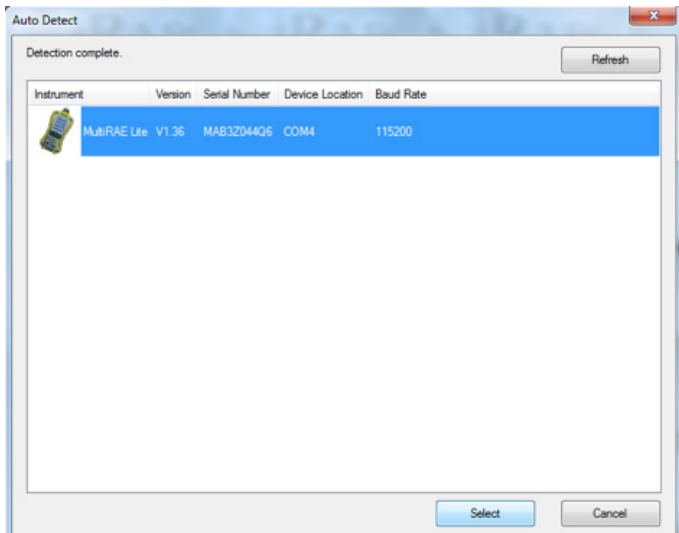
Click on Setup to download data from the monitor unit.



Within the General section click on the Wi-Fi option to view the available Wi-Fi parameters.



Click on the  tab to automatically detect the gas monitor. Then select the Device in use and click Select to open the configuration setting page.



Enter the Wi-Fi access point and Location Manager connection information.

WiFi

Get and set WiFi parameters.

WiFi Power On

Use Static IP Address Use DHCP

Static IP Address

Gateway

Subnet Mask

Scan Channel List 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

Security Mode WPA2 personal

Security Key

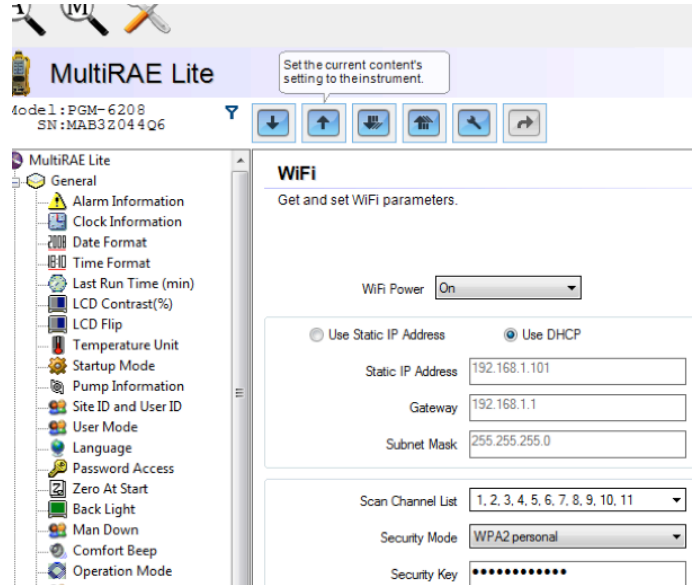
SSID

Location Anchor SSID

Location Manager IP

Location Manager UDP Port

When done click the up arrow to save the changes in the device. Click on the download arrow to ensure that all of the changes are in place.



Aruba Controller and Access Point

Setup the security protocol, SSID, password, and Access Point roaming information.

The configuration is now complete.