



# PRODUCT DATA

# Wi-Fi RF Survey

**COST-EFFECTIVELY  
ACHIEVE SUPERIOR  
WI-FI PERFORMANCE  
WITH THE BEST  
SOLUTION FOR SMALLER  
SITES WITH STANDARD  
APPLICATIONS**



THE INTRODUCTION OF WIRELESS TECHNOLOGY INTO TODAY'S BUSINESS ENVIRONMENTS CAN CAUSE AS MANY PROBLEMS AS IT IS DESIGNED TO SOLVE. EVEN STANDARD, EVERYDAY APPLICATIONS SUCH AS E-MAIL, PRINTING, AND GENERAL FILE SERVER ACCESS & INTERNET USE NEED THE BEST NETWORK DESIGN POSSIBLE. A RED-M WI-FI RF SURVEY GIVES YOU THE COVERAGE AND PERFORMANCE TO MEET YOUR NEEDS.

### WHY CONSIDER A RED-M SURVEY?

A Red-M Wi-Fi RF Survey should be a key component of your wireless networking strategy because:

- 'Best-guess' siting of Access Points (APs) will result in poor performance, increased business risks, higher costs and ongoing technical problems
- You need to maximise the performance of all Standard Applications in smaller sites
- The physical environment has a major impact on performance
- Wi-Fi has 3 aspects: RF, Physical and IT. RF is the foundation and, unless the RF design is accurate, even if you use self-adjusting APs, applications won't work as desired

### WHAT WILL A RED-M SURVEY GIVE ME?

A Red-M Wi-Fi RF Survey is the value-for-money solution for a strong, robust Wi-Fi infrastructure:

- The network works right - first time, every time
- Total confidence - our survey is based on site measurements that establish optimum AP placement: the best way to develop a solution
- Provides the required levels of:
  - Coverage - no black spots, holes or dead zones
  - Performance - delivering what your applications and users need
  - Quality - excellence assured with correct installation and set-up

### VARYING RF PROPAGATION LEVELS

BARRIER TYPE	%POWER
BLOCK WALL A	0.251
BLOCK WALL B	0.126
BRICK WALL	0.316
DOUBLE GLAZED GLASS A	0.063
DOUBLE GLAZED GLASS B	0.002
OFFICE FLOOR A	0.032
OFFICE FLOOR B	0.001
STUD PARTITION WALL A	0.398
STUD PARTITION WALL B	0.126

The table above shows how apparently similar building materials cause major variations in RF propagation levels. It is factors such as these that make a Red-M Wi-Fi RF Survey an essential component of your Wi-Fi strategy. By taking measurements around your site, we discover the best locations for your APs, ensuring that even in smaller sites running standard applications, your Wi-Fi network always performs as it should.

## COMMON WI-FI TECHNICAL CHALLENGES

There are four key factors:

- **Mobility** - seamless connectivity between Wi-Fi cells requires cell overlap, switching time and channel usage to be optimised
- **In-Building** - different structures and materials seriously affect Wi-Fi signals: for example, the design should account for reflection & attenuation
- **Applications** - getting the right coverage is difficult: too few APs means poor connectivity, too many APs causes interference and degrades operation
- **Conflict** - Wi-Fi shares frequencies with other low power and unlicensed devices, so any solution needs to avoid potential interference problems

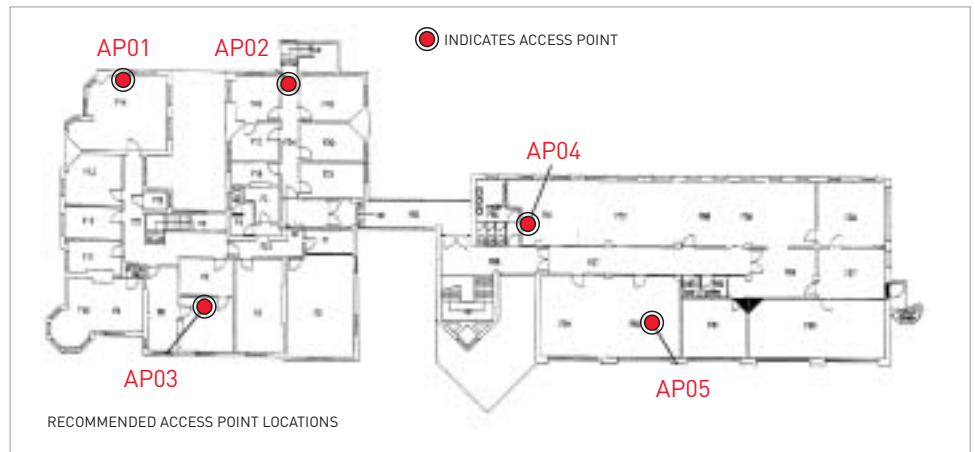
All this points to the need for a precision approach to network design\* - which is what Red-M delivers.

## WHAT DOES A RED-M SURVEY INVOLVE?

Our design methodology comprises four distinct phases:

- **Confirm requirements** - precise definition of needs and objectives
- **Site visit** - data capture to measure noise and any existing Wi-Fi activity, and precisely establish AP location
- **Data processing** - experts translate the findings into a tailored solution that fully meets your requirements
- **Survey report** - detailed results within seven working days of site visit

\*For more complex applications such as voice and video it will be necessary to commission a Red-M W-Fi RF Design.



A Red-M Wi-Fi RF Survey Report contains technical data, supported by diagrams and photographs, on survey results including the recommended placement of Access Points together with details of AP type, plus the required channel and power settings.

## WHAT ARE THE RF SURVEY OUTCOMES AND DELIVERABLES?

A network survey report that contains all vital data and gives you graphically supported proposals in line with pre-agreed parameters:

- **Design survey** - aspects of the environment are described, together with details of existing Wi-Fi systems or other sources of interference within the Wi-Fi bands being surveyed
- **Design proposals** - an accurate plan listing AP locations, channels used, power settings, antenna types and orientation
- **Implementation** - photographs detail how and where to install APs, with advice on AP installation techniques

## WHAT ARE THE BUSINESS BENEFITS?

Leveraging our in-depth expertise and track record of 100s of successful wireless implementations, a Red-M solution delivers tangible, competitive edge benefits for your business:

- **Cost efficiency** - accurate design means less wastage and more performance
- **High user productivity** - consistently and without fail because the network works now and in the future
- **Mobile, flexible employees** - who can work more effectively and efficiently
- **Simplified effective management** - maximise use of resources with less problem solving
- **Maximum Return on Investment**

Independent of equipment vendors and technologies, Red-M enables organisations to fully realise the benefits of wireless systems by delivering high quality solutions through an integrated, five-step cycle of best practice:

### 1. CONSULTING

Defining exactly how, when and where wireless will be used.

### 2. AUDIT

Understanding what is happening and developing a design baseline.

### 3. DESIGN

Optimum wireless performance from a design that works right, first time.

### 4. IMPLEMENT

A non-disruptive installation using best-of-breed technologies.

### 5. MANAGE

Maintaining a healthy network that continues to meet your needs.



## CORPORATE OFFICES

Graylands, Langhurstwood Road, Horsham, West Sussex, RH12 4QD, UK  
t: +44 (0) 1403 211100 f: +44 (0) 1403 248597

For more information visit [www.red-m.com](http://www.red-m.com) or email [info@red-m.com](mailto:info@red-m.com)

DOC.REF: SUR-WFRF-0407:4

# Red-M

when wireless matters™