

Wireless Networking that Meets all your Needs

Wireless Networking that Meets all your Needs – Starting your network the smart way – without wires! SMC's 11Mbps wireless LAN solution provides the easiest network alternative to wired LANs.

Just install enough access points to cover your network area, plug wireless cards into your PCs, and start networking. This wireless solution is ideal for SOHO applications, wherever roaming connectivity is a must. It provides adequate bandwidth for most common LAN applications, such as electronic mail, shared peripherals, and database access. It lets you immediately connect a remote workgroup, temporary office or conference room to your LAN. It also allows you to quickly expand your network throughput or coverage area by adding additional Access Points.

Seamless Network Integration

SMC's wireless solution is compatible with the IEEE 802.3 wired LAN and IEEE 802.11b wireless LAN standards. It provides up to 11Mbps wireless access for stand-alone cells, linked cells, or for integrated wireless/wired networks. An Access Point can comfortably serve several clients, acting as a direct link between wireless stations, as a repeater to another Access Point, or as a portal to a wired LAN. These products are based on performance-enhanced algorithms that deliver a more reliable and secure network than

most wired Ethernet networks. New clients are automatically registered with the Access Point that receives the strongest signal. Traffic is routed directly between wireless clients or through the wired LAN. And roaming users are seamlessly handed off to the next most suitable Access Point when they move out of range. Moreover, network security is guaranteed with client access controls, encryption and spread spectrum signalling, while Collision Avoidance is used to maximise bandwidth utilisation.

Simple Installation & Troubleshooting

Installation is so easy. Just power on the Access Point, install the wireless adapter cards, set the network type (ad hoc or infrastructure), and you are ready to go. No expert is needed to install this system, saving you time and money on training and maintenance. Comprehensive LEDs are also provided to assist in troubleshooting. Windows utilities are provided to display and configure all the SMC2655W Access Points connected to a wired LAN, allowing you to enhance performance by selecting the best location and radio channel.

SMC's 11Mbps Total Wireless LAN Solution The Components

SMC's wireless LAN solution is the easiest alternative to a traditional wired network. In the typical wireless configuration an Access Point (transceiver) connects to a wired network location via standard cabling. The Access Point supports several users located up to a maximum of 300 metres from the Access Point. Users access the LAN via the SMC wireless adapters in

their PC's. The wireless LAN adapters interface between the client Network Operating System and airwaves via an antenna (Access Point.) To grow the wireless LAN, just add Access Points. In a peer-to-peer configuration, one wireless SMC card is needed for each notebook, and no Access Point is required.

In evaluating a wireless LAN, it is essential to consider:

- Range coverage and throughput
- Compatibility with existing LANs
- Cost and scalability for future growth

Throughput is a key issue, and should be put into perspective:

The typical wireless LAN runs at an average of 1.6Mbps, thus the current standard of 2 Mbps is more than adequate for most common LAN applications. Increased user needs and more demanding new applications have created the demand for 11 Mbps wireless LAN products.

SMC 11Mbps Total Wireless LAN Solution Applications

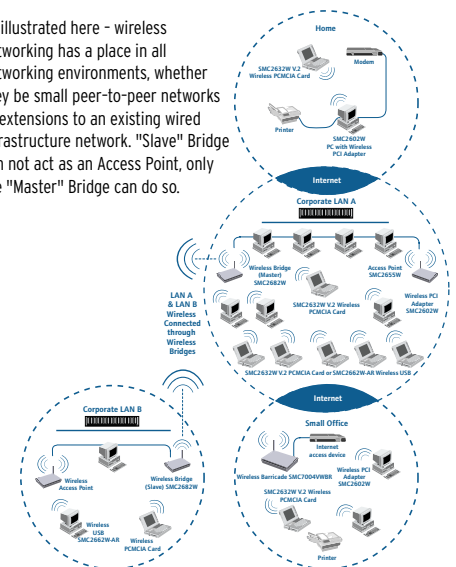
SMC's Wireless products offer a fast, reliable, cost-effective solution for wireless client access to the network in applications like these:

- Remote access to corporate E-mail, file transfer and terminal emulation
- Difficult-to-wire environments such as Historical or old buildings, asbestos installations, and open areas where wiring is difficult to employ
- Frequently changing environments such as Retailers, manufacturers and banks who frequently re-arrange the workplace and change location

- Access to database for Doctors, nurses, retailer, corporate mobile workers who require mobility within the hospital, retail store and office environment
- SOHO: Small office and Home office users who need easy and quick installation of a small computer network
- Home Users requiring peer-to-peer wireless networking

From Home networks through to corporate or enterprise networks – wireless networking enables quick and efficient creation or expansion of a network. With the increase of worker mobility, the importance of the Internet and the fast-changing environments encountered by network managers – wireless networking offers many benefits and cost savings.

As illustrated here - wireless networking has a place in all networking environments, whether they be small peer-to-peer networks or extensions to an existing wired infrastructure network. "Slave" Bridge can not act as an Access Point, only the "Master" Bridge can do so.



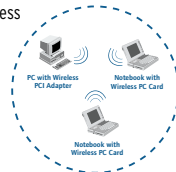
A Guide to Wireless LANs

Configuring the Wireless Lan

Using the components of the SMC Wireless LAN solution - access point and PCI or PCMCIA adapters - the following type of LANs can be configured. The type of configuration chosen will depend on the application, environment and presence of legacy wired ethernet networks.

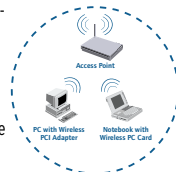
A) Peer-to-Peer Wireless Network

A peer-to-peer wireless Lan is a group of computers, each equipped with one wireless LAN adapter (PCI or PCMCIA), connected as an independent wireless LAN. Each computer in the LAN is configured at the same radio channel to enable peer-to-peer networking. No Access Point is necessary.



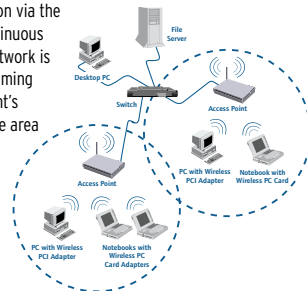
B) Stand-alone Wireless Network with Access Point

Similar to the Peer-to-peer wireless network - this configuration includes an Access point which effectively doubles the wireless transmission range for 2 LAN PCs. The Access Point simply forwards the data to the PC's associated with it.



C) Wireless Extension to Wired LAN Network

This configuration integrates a wireless and wired LAN so that Wireless LAN equipped desktop PC or notebook can talk to any computer on the wired LAN infrastructure via the Access Point. In the configuration illustrated, seamless roaming within the network is enabled by a continuous connection via the access points. A continuous connection to the network is maintained when roaming from one Access Point's wireless cell coverage area to the other.



Wireless Bridges - Connecting Separate LANs

A Wireless Bridge is an alternative to connecting two or more separate LANs with cable. With a Wireless Bridge you gain wireless connectivity between two or more remote LANs.

There are three main types of Wireless Bridge applications. In every case, a Wireless Bridge unit is installed on each separate LAN and one of the Wireless Bridges has to be designated as the "Master" unit and the remaining units as "Slaves". For example, in a University Campus the "Master" Bridge unit would generally be found in the main Administration or MIS building with other Department or Faculty buildings housing the "Slave" units.

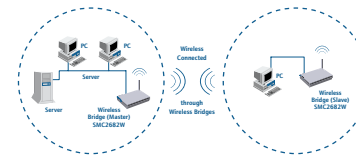
In each illustrated scenario (right), wireless connectivity between remote sites removes the need for expensive cabling and additional hardware to cope with the distances.

Some compelling reasons for adopting the SMC 11 Mbps total wireless LAN solution:

- Users get instant access to shared information without the need to plug in
- Network managers can set up or expand a new LAN without the need for installation or moving wires
- 11 Mbps performance will meet all your foreseeable networking needs.
- Wireless LANs are tremendously convenient, enhance productivity, and provide a real cost benefit over traditional wired networks.
- SMC's Wireless solution seamlessly integrates with existing Ethernet networks.

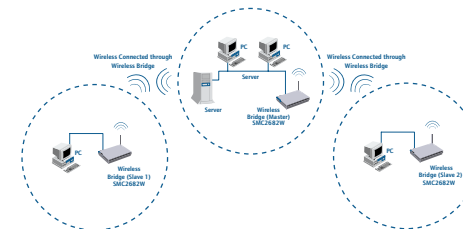
A) Point-to-point Wireless Bridging

The Point-to-Point Wireless Bridge configuration uses two Wireless Bridge units to connect two separate LANs - in this illustration LAN A and LAN B. One of the Wireless Bridges is set up as the "Master" unit and the other as "Slave"



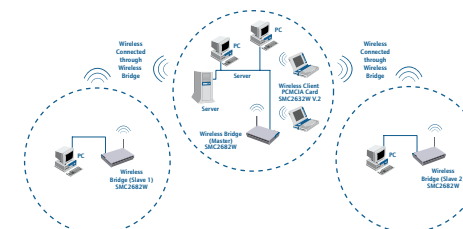
B) Point-to-Multipoint Wireless Bridging

When connecting three or more separate LANs, each LAN location or building requires a wireless bridge. This is called Multipoint wireless bridging and again requires one "Master" Bridge unit and 2 or more "Slave" Bridge units as required.



C) Wireless Bridging with Wireless Client Nodes

A Wireless Bridge master unit is able to provide LAN connectivity to wireless client nodes within its location, building or area of coverage. The wireless client is there-fore able to access all local and remote LANs, servers and other network resources.



Benefits at a Glance

- 11Mbps Wireless LAN Solution provides fast and instant LAN connectivity without having the hassle of cables
- Integrates seamlessly into 10Mbps Ethernet networks - fully compliant with IEEE 802.3 and IEEE 802.11b
- 2.4GHz DSSS wireless LAN meets all current requirements for installation in US/Canada, Europe and Japan
- Intelligent handover and broad cell coverage permit seamless roaming - freely move within your service area
- Supports great interoperability with flexible roaming between 1, 2, 5.5 and 11 Mbps wireless networks
- Provides data integrity equal to or better than wired networks
- Delivers significant savings on long-term network maintenance compared to wired networks
- Minimises costs of moves and changes compared to physically rewiring a cabled network
- Augments traditional wired LANs for mobile applications or temporary workgroups
- Easy installation - readily installs under Windows 95/98/NT/ME/2000 and XP