10.4. Data Rate

There are 5 choices: 1Mbps, 2Mbps, 5.5Mbps, 11Mbps and the automatic setting.

| Environr | nent | Wireless Br | idge |
|-------------------------|---|---|---------|
| Status | Property | Encryptic | on mode |
| lick "Details" to | o open the dialo owever, usually | arious configurations og box for detail 1, detail configuration | |
| Operational Mode | Infrastructure | • | |
| SSID | Wavit | | 1 |
| Channel | 1 • | _ | |
| Data Rate | Auto | \Box | |
| Roanling Hidden node | Auto 1Mbit/s 2Mbit/s 5.5Mbit/s | Details | |
| compensation | 11Mbit/s | | |
| Back to d | efault | Back to previous | |



When the automatic setting is selected, Wavit11 makes communication in the fastest possible rate, and this depends on the equipment at the other end. If the communication environment is degraded and making communication in the present data rate becomes impractical, the data rate will be lowered and the wireless LAN communication will continue.

10.5. Roaming

This is a way to set whether the Wavit11does a roaming or not.

| Environme | ent | Wireless Br | idge |
|--|---|------------------|---------|
| Status | Property | Encryptic | on mode |
| n this page, you o Click "Details" to configuration. How will not be necess | open the dialog b wever, usually, de | ox for detail | |
| Operational Mode | nfrastructure | • | |
| ssid 🕅 | Vavit | |] |
| Channel 1 | - | | |
| Data Rate 🛛 | uto 💌 | | |
| |)isable 💌 | Details | |
| Hidden node compensation | nable | | |
| Back to det | fault | Back to previous | |
| | ОК | Cancel | Apply |



What is Roaming?

This function can be activated in an environment where multiple Access Points exist. If the wireless LAN under communication with a certain Access Point moves and fails in receiving the radio wave, the roaming function will enable Wavit11 to change the destination to the other nearby Access Point. If Wavit11 switches the Access Point successfully, it can send and receive the wireless LAN data without interruption, and that it can access the network without any interruption.



Setting up of Roaming function will be possible only if the operational mode is as follows: Infrastructure mode AP mode

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10.6. Hidden Node Compensation

Depended on the placement of multiple wireless LANs, there is a case that the wireless LAN communication disturbance caused by other wireless LANs takes place and the data rate may be fallen off. If the Hidden Node Compensation is set to Enable, the Wavit11 seizes the wireless LAN communication line prior to the actual data transmission, so it can mitigate the mutual disturbance of wireless LAN communication and the degradation of data rate.

| Environn | nent | Wireless Bridge |
|---|---|-----------------|
| Status | Property | Encryption mode |
| lick "Details" to onfiguration. Ho vill not be neces Operational | can change variou open the dialog bo owever, usually, det isary. | ox for detail |
| Mode | | |
| SSID | Wavit | |
| Channel | 1 💌 | |
| Data Rate | Auto 💌 | |
| Roaming | Disable 💌 | Details |
| compensation i | Disable 💌 Disable Enable | $\overline{)}$ |
| Back to d | | ack to previous |



What is Hidden Node?

In the wireless LAN system, many wireless LANs communicate each other on the same frequency. Normally every wireless LAN senses whether or not another wireless LAN has already started the wireless LAN communication so as not to disturb the already started wireless LAN communication.

However, some wireless LANs disturb the already started wireless LAN communication transmitting the data without sensing the existence of another wireless LAN communication. Such a kind of wireless LAN that may disturb the other wireless LAN communication is called Hidden Node.

10.7. Details

Click the "Details" button to enable the Wavit11 detailed setting.

| Environn | nent 🌔 | V | Vireless Brid | lge |
|--|--------------------------------------|-------------|---------------|-------|
| Status | Property | | Encryption | - |
| n this page, you Click "Details" to configuration. Ho vill not be neces | o open the dialo owever, usually, | g box for (| detail | |
| Operational Mode | Infrastructure | • | | |
| SSID | Wavit | | | |
| Channel | 1 💌 | | | |
| Data Rate | Auto | • | | |
| Roaming | Disable | | Details |) |
| Hidden node compensation | Disable | - - | | |
| Back to d | efault | Back to | o previous | |
| | | Car | 1 | Apply |



Normally you do not need to change these items.

Check each item of this manual, when the setting should be modified.

10.8. RTS Threshold

In the case that the Hidden node compensation is set to Enable, setup of RTS threshold will be possible.

The Wavit11 seizes the wireless LAN communication line prior to actual data transmission if the data length is greater than RTS Threshold. When the Hidden node compensation is set to Enable, the initial value is 0, therefore, the Wavit11 seizes the wireless LAN communication line prior to every length of actual data transmission.

| Detail configuration | × |
|-----------------------------|--|
| | fault configurations can be used hange them by some reason, fully before doing so. |
| RTS threshold 12 | 28 byte [0 - 2347] |
| Fragment threshold 234 | l6 byte [256 - 2346] (Even number only) |
| Short Retry Limit | 7 byte [1 - 255] |
| Long Retry Limit | 4 byte [1 - 255] |
| Beacon interval 10 | ⁰⁰ ms [20 - 1000] |
| SSID transmission Enabl | 8 |
| Authentication algorithm | System 🔽 Setting is impossible while the mode is set to "Disable". |
| Basic Rate Set 2, 1M | bps 💌 |
| ОК | Cancel |



The wireless LAN performance will improve when this RTS Threshold is enlarged, in the case that Hidden node disturbance is not so violent. Check the performance by modifying the RTS threshold, when you modify the value from the initial value, because the optimal RTS threshold depends on the placement and application of wireless LAN.

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10.9. Fragmentation Threshold

In the case that the transmitted data do not correctly reach the wireless LAN on the partner side, the Wavit11 will retransmit the data predefined times. This retransmission occurs frequently by a communication error under poor communication condition and the performance of the wireless LAN network sometimes deteriorates.

There is a way to mitigate the performance deterioration, that is the retransmission of divided frame. Thus, the wireless LAN frame should be divided into small pieces, and here is a way to set the size of divided frame.

| Detail configuration | × |
|--------------------------|--|
| | |
| Fragment threshold 25 | |
| Short Retry Limit | 7 byte [1 - 255] |
| Long Retry Limit | 4 byte [1 - 255] |
| Beacon interval 10 | 0 ms [20 - 1000] |
| SSID transmission Enable | |
| Authentication Open | System 💌 Setting is impossible while the mode is set to "Disable". |
| Basic Rate Set 2, 1Mt | ps 💌 |
| ОК | Cancel |



All frames are sent without any data frame division in default setting.

10.10. Short Retry Limit

In the case that the transmitted data do not correctly reach the wireless LAN on the partner side, the Wavit11 will retransmit the data predefined times and the number of retransmission times is set here. In Short Retry Limit, the number of retransmission is set, for the data frame whose length is below RTS threshold.

| Detail configuration | × |
|--------------------------|---|
| | ault configurations can be used hange them by some reason, fully before doing so. |
| RTS threshold 234 | 7 byte [0 - 2347] |
| Fragment threshold 234 | 6 byte [256 - 2346] (Even number only) |
| Short Retry Livit | te [1 - 255] |
| Long Retry Limit | 4 byte [1 - 255] |
| Beacon interval 10 | 0 ms [20 - 1000] |
| SSID transmission Enable | |
| Authentication algorithm | System Y bystem Y to "Disable". |
| Basic Rate Set 2, 1Mb | ops 💌 |
| ОК | Cancel |



If a big value is set needlessly, the Wavit11 may try to retransmit data many times to the wireless LAN at which the radio wave cannot get, so the performance of the whole wireless LAN can be deteriorated. Closely examine the degree of performance required by the application, if you modify the setting.

10.11. Long Retry Limit

In the case that the transmitted data do not correctly reach the wireless LAN on the partner side, the Wavit11 will retransmit the data predefined times and the number of retransmission times is set here. In Long Retry Limit, the number of retransmission is set, for the data frame whose length is above RTS threshold.

| Detail configuration | | × |
|--------------------------|-----------|---|
| | ed to cha | It configurations can be used nge them by some reason, y before doing so. |
| RTS threshold | 2347 | byte [0 - 2347] |
| Fragment threshold | 2346 | byte [256 - 2346] (Even number only) |
| Short Retry Limit | 7 | byte [1 - 255] |
| Long Retry Limit | 4 |)byte [1 - 255] |
| Beacon interval | 100 | ms [20 - 1000] |
| SSID transmission [| Enable | <u> </u> |
| Authentication algorithm | Open Sy | stem Setting is impossible while the mode is set to "Disable". |
| Basic Rate Set | 2, 1Mbps | - |
| ОК |] | Cancel |



If a big value is set needlessly, the Wavit11 may try to retransmit data many times to the wireless LAN at which the radio wave cannot get, so the performance of the whole wireless LAN can be deteriorated. Closely examine the degree of performance required by the application, if you modify the setting. 10.12. Beacon Interval

The Wavit11 in AP mode periodically transmits special frame called Beacon to information about current setting to another Wavit11 that tries to join the wireless LAN network. Here, is a way to set the Beacon interval.

| Detail configuration | | × |
|--------------------------|----------|--|
| | d to cha | Ilt configurations can be used inge them by some reason, ly before doing so. |
| RTS threshold | 2347 | byte [0 - 2347] |
| Fragment threshold | 2346 | byte [256 - 2346] (Even number only) |
| Short Retry Limit | 7 | byte [1 - 255] |
| Long Retry Limit | 4 | byte [1 - 255] |
| Beacon interval | 100 | m [20 - 1000] |
| SSID transmission | Enable | • |
| Authentication algorithm | Open Sy | stem 🔽 Setting is impossible while the mode is set to "Disable". |
| Basic Rate Set 🛛 | 2, 1Mbp: | 3 |
| ОК |] | Cancel |



This item can be set only if the operational mode is AP mode.

10.13. SSID transmission

This is a description to set SSID transmission. It is possible to select whether SS ID should be included in Beacon frame transmitted by Wavit11 in AP mode.

| etail configuration | | × |
|---------------------|---|---|
| | ed to cha | Ilt configurations can be used nge them by some reason, ly before doing so. |
| RTS threshold | 2347 | byte [0 - 2347] |
| Fragment threshold | 2346 | byte [256 - 2346] (Even number only) |
| Short Retry Limit | 7 | byte [1 - 255] |
| Long Retry Limit | 4 | byte [1 - 255] |
| Beacon interval | 100 | ms [20 - 1000] |
| Authentiesticn | Enable Disable Enable 2, 1Mbps | Setting is impossible while the mode is set to "Disable". |
| ОК |] | Cancel |



This item can be set only if the operational mode is AP mode.

10.14. Authentication Algorithm

The algorithm that is used for the Authentication between Wavit11 is selected. There are 2 kinds of Authentication Algorithm, Open System and Shared Key, and the checking of the encryption key is carried out mutually in Shared Key.

| Detail configuration | × | | | |
|--|--|--|--|--|
| In this page, normally, all default configurations can be used as they are. If you need to change them by some reason, read the User's manual carefully before doing so. | | | | |
| RTS threshold 234 | 47 byte [0 - 2347] | | | |
| Fragment threshold 234 | 46 byte [256 - 2346] (Even number only) | | | |
| Short Retry Limit | 7 byte [1 - 255] | | | |
| Long Retry Limit | 4 byte [1 - 255] | | | |
| Beacon interval 10 | 00 ms [20 - 1000] | | | |
| SSID transmission Enabl | | | | |
| algonuryn | System Setting is impossible System Divide the mode is set System to 'Disable''. | | | |
| Basic Rate Set Share | | | | |
| ОК | Cancel | | | |



You can set this item in the following operational mode. Infrastructure mode AP mode Both mode **802.11 Ad-Hoc mode**



You cannot set this item if the encryption mode is set to Disable.

10.15. Basic Rate Set

The sending speed of broadcast and multicast frame can be set.

| Detail configuration | × |
|---|----|
| In this page, normally, all default configurations can be use as they are. If you need to change them by some reason, read the User's manual carefully before doing so. | Ь |
| RTS threshold 2347 byte [0 - 2347] | |
| Fragment threshold 2346 byte [256 - 2346] (Even number only) | |
| Short Retry Limit 7 byte [1 - 255] | |
| Long Retry Limit 4 byte [1 - 255] | |
| Beacon interval 100 ms [20 - 1000] | |
| SSID transmission Enable | |
| Authentication algorithm Open System Setting is impossi while the mode is to "Disable". | |
| Basic Rate Set 2, 1Mbps | |
| 0K Cancel | |
| | 12 |

10.16. Encryption mode

The Encryption mode used for the wireless LAN communication between Wavit11 is selected.

| pWavit11 Wirel | ess LAN | | × |
|----------------|--|--|---|
| Environme | ent | Wireless Bridge | 1 |
| Status | Property | Encryption mode | 1 |
| | Disable S Original 40bit WEP 128bit WEP matically, inpu blank space n lick "Generate | when the her than Disable. merals(00-FF), tder to generate t five alphanumeric ext to "Generation string" ". Generate | |
| Key1 ×× ×× | NX XX XX | In this page, all settings are not effective unless you click "Write". | |
| Key3 🔽 | | | |
| Key4 👫 🔭 | ×× ×× ×× | | |
| Default Key 👖 | 7 | Write | |
| | ОК | Cancel Apply | |



It is not possible to make communication between Wavit11 with different encryption mode.

10.17. Encryption Key

It is the Encryption key for the encryption of data transmission. Set the same encryption key to each Wavit11.

There are two ways to set encryption key:

- You set some string and the Wavit11 automatically generate encryption key from string.
- You set the encryption key directly.

| Status Property Encryption mode Encryption mode Original Image: Comparison of the state of | Er | vironm | nent | | Wireless Bridge | | |
|---|--|--|---|--|--|--|--|
| this page, you can set security keys when the norpption mode is set to any mode other than Disable. esides direct input of hexadecimal numerals(00-FF), eneration string is also available. In order to generate sourity keys automatically, input five alphanumeric naracters to the blank space next to "Generation string" elow, and then click "Generate". Generation string abcde Generate Key1 ** ** ** *** In this page, all settings are not effective unless you click "Write". Key3 ** *** *** *** | Status | | | Proper | ty Encryption mode | | |
| Acryption mode is set to any mode other than Disable. esides direct input of hexadecimal numerals(00-FF), eneration string is also available. In order to generate curity keys automatically, input five alphanumeric haracters to the blank space next to "Generation string" alow, and then click "Generate". Generation string abcde Generate Generate Key1 ** ** ** *** Key2 ** ** ** *** Key3 ** ** ** *** Key3 ** ** *** *** | ncryptio | n mod | e Ori | ginal | • | | |
| Key1 *** *** *** In this page, all settings are not effective unless you click "Write". Key3 *** *** *** *** | esides di eneration ecurity ke naracters elow, ani | rect in string sys aut to the d then | put of is also comation blank click ' | hexado availa cally, in space ' <u>Gener</u> | ecimal numerals(00-FF), able. In order to generate put five alphanumeric next to "Generation string" ate". | | |
| Key2 ** ** ** ** you click "Write". Key3 ** ** ** ** | | × × | | ** > | In this page, all settings | | |
| | Key1 | | | | are not effective unless | | |
| <ey4 td="" xx="" xx<=""><td></td><td>× ××</td><td>**</td><td>** ></td><td>you click "Write".</td></ey4> | | × ×× | ** | ** > | you click "Write". | | |
| | Key2 | | | | | | |
| Default Key 1 🔄 Write | Key2 📑 Key3 📑 | × × | | ** > | | | |

| ncryption mode Original this page, you can set security keys when the cryption mode is set to any mode other than Disable. sides direct input of hexadecimal numerals(00-FF), meration string is also available. In order to generate curity keys automatically, input five alphanumeric aracters to the blank space next to "Generation string" slow, and then click "Generate". Generate this page, all settings are not effective unless you click "Write". ey3 2a 69 62 4a c8 | Environ | ment | Wireless Bridge |
|---|---|---|---|
| this page, you can set security keys when the cryption mode is set to any mode other than Disable. esides direct input of hexadecimal numerals(00-FF), ineration string is also available. In order to generate curity keys automatically, input five alphanumeric aracters to the blank space next to "Generation string" slow, and then click "Generate". Generation string eneration string evaluation of the space and this page, all settings are not effective unless evaluation of the space and the space and effective unless evaluation of the space and the space and the space evaluation of the space and the space and the space evaluation of the space and the space and the space evaluation of the space and the space and the space evaluation of the space and the space and the space and the space evaluation of the space and the space and the space and the space evaluation of the space and the space and the space and the space evaluation of the space and t | Status | Property | Encryption mode |
| cryption mode is set to any mode other than Disable. sides direct input of hexadecimal numerals(00-FF), meration string is also available. In order to generate curity keys automatically, input five alphanumeric maracters to the blank space next to "Generation string" slow, and then click "Generate". Generate deneration string Generate Generate Leg 2 9 e8 0e 26 in this page, all settings are not effective unless ey2 e6 33 12 1f 0a you click "Write". Leg 2 26 69 62 4a c8 Leg 2 66 14 2d 63 02 | Encryption mo | de Original | • |
| cer1 a2 29 e8 0e 26 no this page, all settings ale not effective unless you click "Write". cey2 e6 33 12 1f 0a you click "Write". cey3 2a 69 62 4a c8 cey4 0c 14 2d 63 02 | ncryption mod esides direct i eneration strin ecurity keys an naracters to th | e is set to any mode nput of hexadecima g is also available. I utomatically, input fi ie blank space next | e other than Disable. I numerals(00-FF), n order to generate ve alphanumeric |
| ey2 e6 33 12 1f 0a not effective unless ey3 2a 69 62 4a c8 ey3 2a 69 62 4a c8 ey4 0c 14 2d 63 02 | Generation str | | Grenerate |
| ey2 e6 33 12 1f 0a you click "Write". ey3 2a 69 62 4a c8 ey4 0c 14 2d 63 02 | Kep1 a2 2 | | |
| end Dc 14 20 63 02 | .ey2 e6 3 | 3 12 1f Oa y | |
| | ey3 2a 6 | 9 62 4a c8 |) |
| | Kent Oc f | 4 2d 63 02 | / |
| Verault Key Write | | | (mar.) |
| | Derault Ney | | Write |
| OK Cancel Ap | | | |

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10.18. Default Key

This is one of the encryption keys Wavit11 use for data transmission.

| Environn | nent | Wireless Bridge |
|---|---|--|
| Status | Property | Encryption mode |
| Encryption mod | e Original | • |
| ncryption mode esides direct in eneration string ecurity keys aut naracters to the | is set to any mo put of hexadeci is also available tomatically, inpu | y keys when the ode other than Disable. mal numerals(00-FF), e. In order to generate t five alphanumeric ext to "Generation string" a" |
| | | |
| Generation strir | ng | Generate |
| | ng e8 0e 26 | In this page, all settings |
| (ey1 a2 29 | - , | |
| <ey1 29<br="" a2=""><ey2 33<="" e6="" td=""><td>e8 0e 26</td><td>In this page, all settings are not effective unless</td></ey2></ey1> | e8 0e 26 | In this page, all settings are not effective unless |
| Key1 a2 29 Key2 e6 33 Key3 2a 69 | e8 0e 26 12 1f 0a 62 4a c8 | In this page, all settings are not effective unless |
| Key1 a2 29 Key2 e6 33 Key3 2a 69 Key4 0c f4 | e8 0e 26 12 1f 0a 62 4a c8 | In this page, all settings are not effective unless you click "Write". |
| | e8 0e 26 12 1f 0a 62 4a c8 | In this page, all settings are not effective unless |



You can set this item if the Encryption Mode is either "Original" or "40bit WEP".



When the different Default Key is set to each Wavit11, the security against the illegal wiretapping is strengthened.

10.19. Destination Address

Set the MAC address of the Wavit11 on the other side for Wireless Bridge operation. The MAC address is indicated at the label put at the back of the Wavit11.

| Wavit11 Win | eless LAN | | | |
|--|--|--------------------------------|-----------------------------------|--|
| Status | Property | 1 | Encryption mode | |
| Environ | ment | | Wireless Bridge | |
| First, please in sent over the before you clic | ou can configure \ put MAC address I wireless below. Th k "OK". It is impos vrong MAC addres | to whic en che ssible fi | h the frame is ck it carefully | |
| | o communicate w | 1 | 0 : 12 | |
| | | _ | | |
| | | | | |
| | | | | |
| | | | | |
| | ок (| Ca | incel | |



Make sure to satisfy the following condition to set the MAC address correctly for the successful Wireless Bridge operation:

- Wavit11 should be in Wireless Bridge mode
- Channel should be the same

11. Interoperability with third vendor wireless LAN

Wavit11 has interoperability with third vendor wireless LAN under certain conditions. If you install intermixed wireless network of third vendor Wireless LAN and Wavit11, refer to User's Manual enclosed in the package of third vendor wireless LAN. However, Mitsumi does not guarantee that Wavit11 can communicate with non-Wavit11 wireless LAN.

11.1. Confirmed wireless LAN card

Table 1.1 Wireless LAN Card information

| Vendor | Product | Model# | Firmware Version | Driver Version |
|---------|---|--------------|---------------------|----------------|
| 3Com | 3ComAirConnect Wireless LAN PC Card | 3CRWE737A | V2.20-01 | 2.2.5.10 |
| Apple | AirMac Card | M7600J/B | 1.3.1 | |
| Cisco | Cisco Aironet 340 Series Wireless PC Card | AIR-PCM-342 | 4.23 | 6.64 |
| COMPAQ | WL-100 Wireless LAN PC Card | WL-100 | 00.08.00.00 | 0.29.4 |
| Corega | corega Wireless LAN PCC11 | CG-WLPCC11 | | 0.29.4 |
| Corega | corega Wireless LAN PCCA11 | CG-WLPCCA11 | | 0.29.4 |
| Elecom | Laneed Wireless PC Card | LD-W11/PCC | 0.7.5 | 1.0.4 |
| Linksys | Instant Wireless Network PC Card | WPC11 | 00.08.00.00 | 0.29.10a |
| Lucent | ORINOCO PC Card Gold | PC24E-H-FC | 4.04/6.16 | 6.28 |
| Melco | AirStation Wireless LAN Card | WLI-PCM-L11 | | 1.21 |
| Melco | AirStation Wireless LAN Card | WLI-PCM-L11G | | 1.21 |
| Melco | AirStation Wireless LAN Card | WLI-PCM-S11 | | 1.01.00.0 |
| NEC | WarpStar Aterm WL11C | PC-WL/11C | | 1.0.0.0 |
| NTT-ME | MN128 SS-LAN CARD11 | WLC010-D53 | 00.07.05.00 | 0.29.4 |
| Samsung | SWL-2000N 11Mbps Wireless LAN PC Card | SWL-2000N | 0.75 | 3.65 |
| Symbol | Spectrum24 PC Card 11Mbps | LA4121-1020 | V2.20.01 | 2.2.5.10 |

Table 1.2 Test results

| | | | | | | Results | | | | |
|--------------|--------------|---------|-------|--------|---------|----------|--------|---------|------------|--------|
| X 7 1 | | | AdHoc | | 802.1 | 1AdHoc(1 | BSS) | Ir | frastructu | re |
| Vendor | Model # | WEP | WEP | WEP | WEP | WEP | WEP | WEP | WEP | WEP |
| | | Disable | 40bit | 128bit | Disable | 40bit | 128bit | Disable | 40bit | 128bit |
| 3Com | 3CRWE737A | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Apple | | - | - | - | OK | - | - | OK | - | - |
| Cisco | AIR-PCM-342 | - | - | - | OK | OK | OK | OK | OK | OK |
| COMPA Q | WL-100 | ОК | ОК | ОК | OK | ОК | ОК | ОК | ОК | ОК |
| Corega | CG-WLPCC11 | OK | OK | - | - | - | - | OK | OK | - |
| Corega | CG-WLPCCA11 | OK | OK | - | - | - | - | OK | OK | - |
| Elecom | LD-W11/PCC | OK | OK | - | - | - | - | OK | OK | - |
| Linksys | WPC11 | OK | OK | OK | OK | OK | OK | OK | OK | OK |
| Lucent | PC24E-H-FC | - | - | - | OK | NG(2) | NG(2) | OK | OK | OK |
| Melco | WLI-PCM-L11 | OK(1) | OK(1) | - | - | - | - | OK(1) | OK(1) | - |
| Melco | WLI-PCM-L11G | OK | OK | OK | - | - | - | OK | OK | OK |
| Melco | WLI-PCM-S11 | OK | OK | - | - | - | - | OK | OK | - |
| NEC | PC-WL/11C | NG | NG | - | - | - | - | OK | OK | - |
| NTT-ME | WLC010-D53 | OK | OK | OK | OK | OK | OK | OK | OK | OK |

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| Samsung | SWL-2000N | OK | OK | OK(1) | - | - | - | OK | OK | OK(1) |
|---------|-------------|----|----|-------|----|----|----|----|----|-------|
| Symbol | LA4121-1020 | OK | OK | OK | OK | OK | OK | OK | OK | OK |

(1) This product does not receive fragmented frame.

(2) This product does not support hexagonal encryption key setting.

11.2. Confirmed Access Point

Table 2.1 Wireless LAN Access Point Information

| Vendor | Product | Model # | Firmware Version |
|---------|--|--------------|------------------|
| 3Com | 3ComAirConnect Wireless LAN Access Point | 3CRWE747A | 01.50.10 |
| Apple | AirMac Base Station | M7601J/B | |
| Cisco | Cisco Aironet 340 Series Access Point | AIR-AP342E2C | 4.25.08 |
| COMPAQ | WL-400 Wireless LAN Hardware Access Point | WL-400 | 2.5.3 |
| corega | corega Wireless LAN AP-11 | CG-WLAP11 | 4.5.5G |
| Elecom | Laneed Airhawk | LD-W11/AP | 2.0.0 |
| IO-DATA | Wireless LAN Access Point | WN-B11/AXP | 3.0.39 |
| Lucent | ORINOCO WavePOINT2 Access Point | WavePOINT2 | 3.71 |
| Melco | AirStation Access Point WLA-T1-L11 | WLA-T1-L11 | v100 |
| Melco | AirStation Access Point WLA-L11 | WLA-L11 | 6.08 |
| Melco | AirStation Access Point WLA-L11G | WLA-L11G | 6.08 |
| NEC | WarpStar Aterm WL50T | PC-WL50T1 | |
| NTT-ME | MN128 SOHO SLOT IN AirPack11 | | 1.70 |
| Symbol | Spectrum24 Access Point 11Mbps | AP4121-1050 | 02.20.04 |
| YAMAHA | Net Volante RT60w | RT60w | 5.0010 |

Table 2.2 Test Results

| | | | Results | |
|---------|--------------|---------|---------|--------|
| Vendor | Modem # | WEP | WEP | WEP |
| | | Disable | 40bit | 128bit |
| 3Com | 3CRWE747A | OK | OK | - |
| Apple | | OK | - | - |
| Cisco | AIR-AP342E2C | OK | OK | OK |
| COMPAQ | WL-400 | OK | OK | OK |
| corega | CG-WLAP11 | OK | OK | OK |
| Elecom | LD-W11/AP | OK | OK | - |
| IO-DATA | WN-B11/AXP | OK | OK | - |
| Lucent | | OK | OK | OK |
| Melco | WLA-T1-L11 | OK | - | - |
| Melco | WLA-L11 | OK | OK | - |
| Melco | WLA-L11G | OK | OK | - |
| NEC | PC-WL50T1 | OK | OK | - |
| NTT-ME | AirPack11 | OK | OK(1) | OK(1) |
| Symbol | AP4121-1050 | OK | OK | - |
| YAMAHA | RT60w | OK | OK | - |

11.3. Setting

The general setup method to connect with third vendor wireless LAN is as follows, for each communication mode.

(Ad-Hoc mode)

In Ad-Hoc mode, set same channel to both Wavitr11 and third vendor Wireless LAN.

(802.11 Ad-Hoc mode)

In 802.11 Ad-Hoc mode, set same SSID to both Wavit11 and third vendor wireless LAN.

(Infrastructure mode)

In Infrastructure mode, set same SSID to both Wavit11 and third vendor Access Point.

(AP mode)

In AP mode, set same SSID to Wavit11 and third vendor Wireless LAN.

(Wireless Bridge mode)

In Wireless Bridge mode connection to the third vendor wireless LAN is not possible. You need to use two Wavit11s when you set up a wireless bridge.

| Wavit11 mode | Wavit11 setting | Wireless LAN | Access Point setting |
|-----------------|-----------------|----------------|----------------------|
| | | setting | |
| Ad-Hoc | Channel | Channel | |
| 802.11Ad-Hoc | SS ID | SS ID | |
| Infrastructure | SS ID | | SS ID (ESS ID) |
| Both | SS ID | SSID | SS ID (ESS ID) |
| | Channel | Channel | Channel |
| AP | SS ID | SS ID (ESS ID) | |
| Wireless Bridge | | | |

12. Troubleshooting

Situations Verifying Measures It does not work Does Power LED light up? Connect AC Adapter to Wavit11. Connect AC Adapter to the outlet. Does LINK LED light up? Connect 10BASE-T cable properly. Check 10BASE-T cable polarity. Install Wavit11 near the target Does TX/RX LED light up? Wirebss LAN, and confirm the communication. By using configuration tool, Are the configuration settings meet check configuration. appropriate to the condition of the target Wavit11? It does not communicate in Is the channel settings In Ad-Hoc mode, the same Ad-Hoc mode. should be set. Open the appropriately? configuration tool. and confirm channel settings. Are the encryption keys You need to set the same appropriately set? encryption keys. Open the configuration tool, and write in encryption keys again. It does not communicate in Is the appropriate SSID set? You need to set the same SSID 802.11 Ad-Hoc mode. with that of other Wavit11.Open the configuration tool, and confirm the SSID. the encryption You need to set the same Are keys appropriately set? encryption keys. Open the configuration tool, and write in encryption keys again Is the appropriate SSID set? You need to set the same SSID It does not communicate in Infrastructure mode. with that of Access Point. Open the configuration tool, and confirm the SSID. You need to set the same the encryption Are keys appropriately set? encryption keys. Open the configuration tool, and write in encryption keys again It does not communicate in Is the channel set appropriately? You need to set the same channel in Both mode. Open Both mode. the configuration tool, and confirm channel settings. You need to set the same the Are encryption keys appropriately set? encryption keys. Open the configuration tool, and write in encryption keys again. Does the SSID fit to the client You need to set the same SSID It does not communicate in with that of the client. Access Point mode. SSID? Open the configuration tool, and confirm the SSID.

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|--|---|---|
| | Are the encryption keys | You need to set same |
| | appropriately set? | encryption keys. Open the |
| | | configuration tool, and write |
| It does not communicate in | Is the channel set appropriately? | in encryption keys again. In Wireless Bridge mode, you |
| Wireless Bridge mode. | is the channel set appropriately : | need to set the same channel. |
| Wheless Bridge mode. | | Open the configuration tool, |
| | | and confirm the channel. |
| | Was the MAC address properly | You need to set the target |
| | set? | MAC address correctly. Open |
| | | the configuration tool, and |
| | | confirm the MAC address. |
| | Are the encryption keys | You need to set the same |
| | appropriately set? | encryption keys. Open the |
| | | configuration tool, and write |
| | | in encryption keys again. |
| It does not communicate in all | Was the network configuration | Refer to Operating System |
| modes. | of Personal computer set | User's Manual. |
| | properly? | Defende the Oremet's Cont |
| | Does it communicate properly | Refer to the Operating System |
| | when personal computers are connected to each other with | User's manual and configure the networks. |
| | 10BASE-T cross cable? | the networks. |
| | Can Wavit11s make | The distance is too far. |
| | communication when they are | Change the Wavit11 position |
| | installed in the neighborhood? | to enable the communication. |
| The configuration tool does not | What is your operating system? | For configuration tool, you |
| start. | | need Windows95+IE4.01 or |
| Sotting is not foosible with the | Con you find Wavit11a on the | above. |
| Setting is not feasible with the configuration tool. | Can you find Wavit11s on the screen in the top window of | Connect personal computer |
| configuration tool. | configuration tool? | and Wavit11 using 10BASE-T straight cable. |
| | Is the TCP/IP protocol installed | Refer to User's manual of the |
| | to your personal computer? | personal computer to install |
| | to your personal compater. | the TCP/IP protocol to your |
| | | personal computer. |
| | Is the network address of | Open the configuration tool, |
| | Wavit11 IP address the same | and change the IP address so |
| | with that of the personal | as to match the network |
| | computer? | address. |
| Was the unusable IP address | | Open the configuration tool |
| set? | | and perform initialization. |
| | | After initialization, you need |
| | | to set up all configurations |
| I have forgetter the second 1 | | again. |
| I have forgotten the password. | | Open the configuration tool |
| | | and perform the initialization. After initialization, you need |
| | | to set up all configurations |
| | | again. |
| | | ugum. |

13. Specifications

| Item | Specification | |
|---------------------|--|--|
| Frequency | 2,400 -2,483.5MHz | |
| Channel | 11 | |
| Modulation | CCK (Complementary Code Keying) | |
| Interface | 10BASE-T | |
| Data Rate | 11Mbps/5.5Mbps/2Mbps/1Mbps | |
| Receive Sensitivity | -83dBm(11Mbps, FER=8x10 ⁻²) | |
| Output Power | 15dBm | |
| Temperature Range | 0-40 Celsius | |
| Standards | ARIB STD-T66 | |
| | IEEE 802.11b | |
| Supply Voltage | 5.0V | |
| Consumption Current | TX: 600mA | |
| | RX: 330mA | |
| Size | 65(W) x88(D) x 29.9(H) mm, Antenna is excluded | |
| Weight | 110g | |

Range

| Data Rate | Indoor | Outdoor |
|-----------|--------|---------|
| 11Mbps | 30m | 60m |
| 5.5Mbps | 40m | 80m |
| 2Mbps | 50m | 100m |
| 1Mbps | 60m | 120m |

These ranges are estimated from the general environment. For Wavit11 installation, refer to the above and confirm the communication.

Performance

The performance is measured on the application. The performance varies according to PC power, network interface card power, installation environment, wireless network traffic and external noise. On condition that setting is made in the following environment: Ad-Hoc, Windows SE and TCP/IP protocol, the highest performance of the Wavit11 will be given at around 5Mbps.