

OPERATIONS MANUAL

MiniLink® Wireless Ethernet System



IMPORTANT SAFETY INSTRUCTION

For your protection, please read and observe all safety instructions before operating this system and keep this sheet and any additional instructions for future reference.

INSTALLATION & USE

OBSERVE WARNINGS: All warnings in the operating instructions should be carefully followed.

WATER AND MOISTURE: The Wireless Ethernet Modules used in this system are weatherproof provided they are installed correctly. The Power Injection Modules used in this system are NOT weatherproof. None of the modules in this system are waterproof and should never be submerged. Severe electrical shock, personal injury or damage to the equipment may result.

POWER SOURCE: Connect the equipment to a power source only of the type described on the operating instructions or as marked on the equipment.

ATTACHMENTS: Use only MicroTek supplied or recommended Power Injection Modules, Power Supplies, CAT5 Cables and weather seals and plugs.

WHEN NOT IN USE: Unplug the power if the equipment is left unattended or unused for long periods of time or during lightning storms

REPLACEMENT PARTS: When replacement parts are required, use only replacement parts specified by MicroTek Electronics, Inc. Unauthorized substitutions may result in damage to the system and will void the warranty.

FCC-Required Information Federal Communications Commission Radio Frequency Interference Statement for Class A Digital Devices

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio frequencies. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This equipment is designed to be professionally installed exclusively for fixed point-to-point applications. These products must be controlled due to radio frequency power output levels emitted with special consideration given to antenna placement as it relates to human exposure. Compliance is the responsibility of the installer and user.

Radio Frequency Interface Statement

This equipment has been tested and found to comply with the limits for an intentional radiator, pursuant to Part 15, Subpart C of the FCC Rules. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause interference to radio communications. The limits are designed to provide reasonable protection against such interference in a residential situation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna of the affected radio or television.
- Increase the separation between the equipment and the affected receiver.
- Connect the equipment and the affected receiver to power outlets on separate circuits.
- Consult the dealer or an experienced radio/TV technician for help.

Shielded cables must be used with this unit to ensure compliance with Class A FCC limits. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the users authority to operate the equipment. Changes or modifications not expressly approved by MicroTek could void the users authority to operate the equipment.

FCC Output Power Restrictions

The FCC does not require licensing to implement this device. License-free operation in the industrial, scientific, and medical band is documented in FCC Rules Part 15.247. It is the responsibility of the individuals designing and implementing the radio system to assure compliance with any pertinent FCC Rules and Regulations. This device must be professionally installed.

Exposure to Radio Frequency Fields

The Minilink 5.8WES is designed to operate at 5.8 GHz with up to 20 Watts EIRP maximum transmit power. This level of RF energy is above the Maximum Permissible Exposure (MPE) levels specified in FCC OET65:97-01. The following precautions must be taken during installation of this equipment:

- The installed antenna must not be located in a manner that allows exposure of the general population to the direct beam path of the antenna at a distance less than 1 Meter. Installation on towers, masts, or rooftops not accessible to the general population is recommended; or
- Mount the antenna in a manner that prevents any personnel from entering the area within 1 Meter from the front of the antenna.
- It is recommended that the installer place radio frequency hazard warnings signs on the barrier that prevents access to the antenna.
- During installation and alignment of the antenna, do not stand in front of the antenna assembly.
- During installation and alignment of the antenna, do not handle or touch the front of the antenna.

These simple precautions must be taken to prevent general population and installation personnel from exposure to RF energy in excess of specified MPE levels.

Industry Canada Restrictions

This device is in compliance with the applicable sections of the Industry Canada RSS-210 Spectrum Management and Telecommunications Radio Standard Specification that governs Low Power License-Exempt Radiocommunication Devices. Specifically, the output EIRP of this device relative to antenna gain is factory set to ensure compliance with section 6.2.2(q1)(iv)(g).

In addition, it is noted for all users that high power radars are allocated as primary users (meaning they have priority) of the 5250-5350 MHz and 5650-5850 MHz frequency bands and these radars could cause interference and/or damage to LELAN devices such as are covered by this manual.

INDEX

SECTION	PAGE #
IMPORTANT SAFETY INSTRUCTIONS, FCC NOTICE ----- (i)	
RADIO FREQUENCY EXPOSURE, INDUSTRY CANADA ----- (ii)	
QUICK START GUIDE -----	2
PRE-INSTALLATION REMINDER, RETURN POLICY -----	3
WEM DESCRIPTION -----	4
FRONT, REAR & SIDE VIEWS -----	4 - 5
PIM DESCRIPTION -----	5
TOP, RIGHT & LEFT SIDE VIEWS -----	5
WES CONNECTION DIAGRAM -----	6
WEM INSTALLATION & OPERATION -----	6 - 7
SELECT CHANNEL, POLARITY SELECT & MOUNT WEM -----	6
CONFIGURE CABLE, CONNECT WEM & ESTABLISH LINK -----	7
ADVANCED OPERATION -----	7 - 11
WEB BROWSER INTERFACE -----	7
INFORMATION -----	8
STATIONS -----	8
WIRELESS -----	8 - 9
SECURITY -----	9 - 10
ADMINISTRATION -----	10 - 11
WEM SPECIFICATIONS -----	12 - 13
TROUBLE SHOOTING -----	14
WARRANTY -----	15

QUICK START GUIDE

MicroTek Electronics, Inc. recommends that all equipment be bench tested before being installed onsite. This test will ensure the equipment is functioning properly.

WIRELESS ETHERNET MODULE (WEM) SETUP

1. Remove the WEMs from box, select frequency via the rotary switch at the side of the unit. (Factory set to channel 1) The channels of each set of WEMs must be matched for the WEMs to communicate with each other.
2. Mount the first WEM at the desired location. Position WEM for desired polarity using rear label arrow as a reference. The polarity on the WEMs must match for proper operation.
3. Point the WEM as accurately as possible to the point where the second matched WEM will be mounted.
4. Remove the Power Injection Modules (PIMs) from the box and determine where they will be located for each WEM. The total distance between a WEM and connected Ethernet device cannot exceed 300 feet. The PIMs can be located anywhere along the 300 feet of CAT5 cable. Connect standard CAT5 straight through cable to the “Ethernet Out” port on each PIM and WEM. The “Ethernet In” port on each PIM should be connected to its respective Ethernet device.
5. Connect the included power supplies to the “Power In” port on the PIMs and plug the transformers into a standard 110VAC outlet. If the Ethernet devices on each end are connected, powered up and aimed correctly, the “Link Activity”, “Power” and “Signal Level” LEDs will illuminate. If the Ethernet device is not connected the “Power” LED and “Signal Level” LEDs only will illuminate. If the “Signal Level” LED is flashing, the WEMs are communicating but at slower rate than 20 Mbps. The flash rate indicates the throughput rate. Reposition the modules to achieve the best throughput rate.

Note: If a dish is used with the system, assemble the dish and mount the WEM in the dish as described in the dish installation instructions. Position the dish with WEM and connect the CAT5 cable as described above.

Trouble Shooting: If the signal level indicator is not fully lit, video does not appear on the screen or you are having other operational difficulties, please visit the trouble shooting section on page 14 of the operations manual or contact MicroTek toll free at (888) 366-4276 for technical assistance.

PRE-INSTALLATION REMINDERS

The information on the Quick Start Guide is intended for ease of use and application, the following reminders will help to ensure your satisfaction with MicroTek products and service.

1. Read through this manual before bench testing and installation
2. Perform a bench test incorporating all components of the application
3. Install your MiniLink Wireless Ethernet System
4. Toll-free technical assistance is available Monday through Friday (8-5pm PST) at 888-366-4276

MICROTEK ELECTRONICS RETURN POLICY

All MicroTek Electronics equipment comes with a 2-year limited warranty for repair or replacement (see the last page for warranty information). In addition to the 2-year warranty, all products can be returned within the first thirty days for credit. Products may be returned within 30-days of shipment provided the products are in like new condition and in the original packaging. Contact your MicroTek Electronics dealer or distributor to obtain an authorization to return the merchandise for credit.

Return authorizations for repair can be sent directly to Microtek Electronics with a valid RA number. Call our technical assistance line to obtain an RA number for repair.

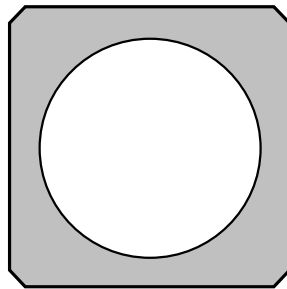
MINILINK WIRELESS ETHERNET SYSTEM (WES)

The MiniLink WES is a plug and play CAT5/Ethernet cable replacement device. It operates in the 5.3 and 5.8 GHz U-NII bands on 8 non-overlapping channels. The WES system enables a wide variety of IP cameras, DVRs, encoders/decoders and web servers to be used across wireless line-of-sight links in ranges of 2500 feet to 30 miles. The system operates independent of any network it may be connected to.

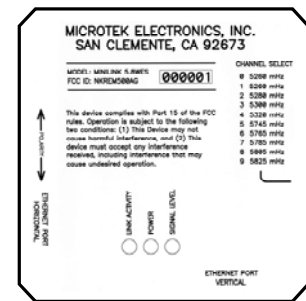
MINILINK WIRELESS ETHERNET MODULE (WEM)

WEM DESCRIPTION

A. FRONT VIEW

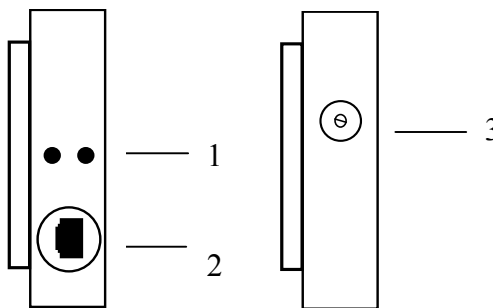


B. REAR VIEW



1. LINK ACTIVITY LED
Indicates link activity between connected Ethernet device and WEM.
2. POWER LED
Indicates the WEM has power.
3. SIGNAL LEVEL LED
Indicates the signal level between 2 WEMs.
4. HORIZONTAL ETHERNET PORT
Standard RJ-45 connector
5. CHANNEL SELECT
Rotary switch for channel selection

C. SIDE VIEW



1. MOUNTING HOLES
 $\frac{1}{4}$ - 20 mounting holes - each WEM has 2 sets of $\frac{1}{4}$ - 20 mounting holes 90 degrees opposed to each other for horizontal and vertical polarity selection

WEM DESCRIPTION (cont'd)

2. ETHERNET PORT

Standard RJ-45 connector – each WEM has 2 ports 90 degrees opposed to each other for horizontal and vertical polarity selection.

3. ROTARY CHANNEL SELECT SWITCH

Shows switch settings for channels 0 – 9. **Note: Channels 0, 1 and 2 are the same frequency.*

POWER INJECTION MODULE (PIM)

Note: The Power Injector Modules are not weatherproof units and must be protected from moisture.

PIM DESCRIPTION

A. TOP VIEW

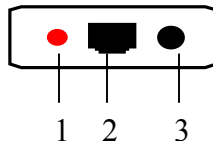


1. ETHERNET IN – Connect to Ethernet device

2. POWER IN – 12-20 VDC Center Positive

3. ETHERNET OUT – Connect to WEM

B. RIGHT SIDE VIEW

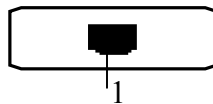


1. POWER LED – Lit when power is on

2. ETHERNET OUT – Connect to WEM

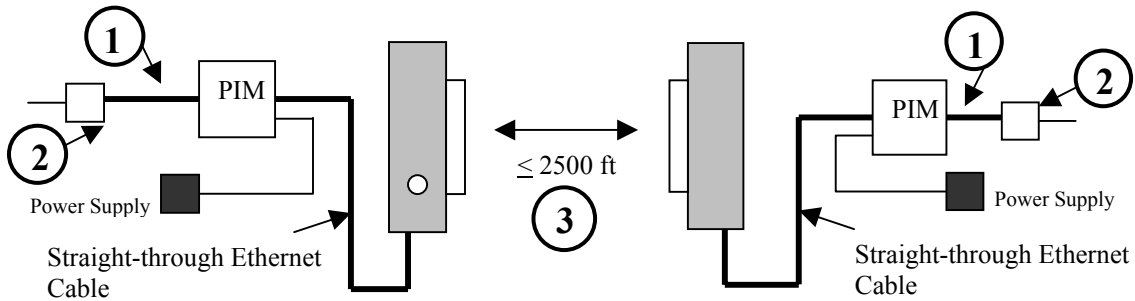
3. POWER IN – Connect to Power Supply

C. LEFT SIDE VIEW



1. ETHERNET IN – Connect to Ethernet device

WES CONNECTION DIAGRAM



1. If an Ethernet device that is in use has a crossover function, then you may require a crossover cable (connected to the “Ethernet In” RJ45 Ethernet port) otherwise a straight-through cable would be used.
2. Encoder/Decoder (or other Ethernet device) with Coax connected to the Camera/DVR if used with Encoder/Decoder.
3. When installed, there must be clear wide-open line-of-sight up to 2500 feet with the 2500 foot system, up to 4 miles with the 2 or 4 mile system, and up to 30 miles with the 30 mile system.

WEM INSTALLATION & OPERATION

A. SELECT CHANNEL

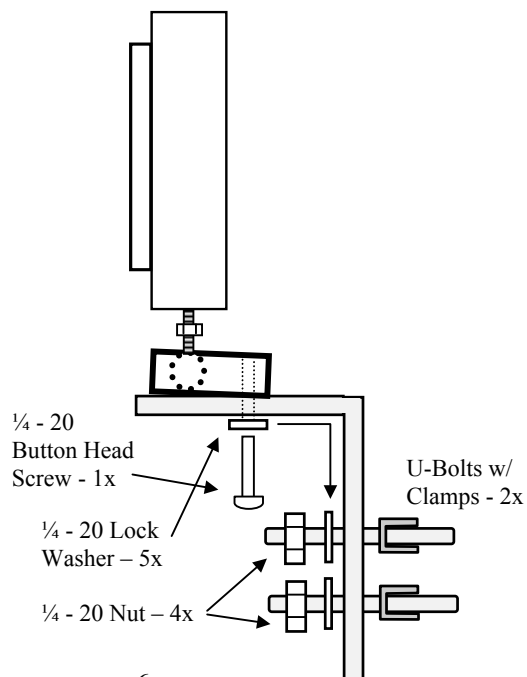
Locate and remove the $\frac{1}{2}$ inch diameter plug at the side of the WEM. Select the channel the system will operate on. Each WEM pair must share the same channel to communicate properly. Replace the $\frac{1}{2}$ inch diameter plug after the channel has been selected.

B. SELECT POLARITY

Determine if vertical or horizontal polarity will be used. Each WEM is shipped ready to install in the vertical polarity position. If horizontal polarity is desired, locate and remove the $\frac{3}{4}$ inch plug in the horizontal Ethernet port and insert it in the vertical Ethernet port.

C. MOUNT WEM

Mount the WEM with the included wall/pole mount bracket and hardware. Connect the mounting block with ball adjustment to mounting bracket with the $\frac{1}{4}$ - 20 button head screw. Connect the WEM to the mounting block using the $\frac{1}{4}$ -20 mounting holes in the WEM. Position the WEM and point it in the desired direction. Tighten the jam nut against the bottom of the WEM case to lock it in position.



WEM INSTALLATION & OPERATION (cont'd)

D. CONFIGURE CABLE

Determine the length of CAT5 cable that will be needed and where the PIM will be located. The total cable length from the WEM to the Ethernet device cannot exceed 300 feet, however, the PIM can be located anywhere along the 300 feet of cable. The PIM is not weather proof and must be placed indoors or in an environmental enclosure. On the WEM end, feed the CAT5 cable through the supplied weatherproof connector. Slide the supplied black cable jacket over the cable. Crimp an RJ45 CAT5 connector on the end of the cable and configure as a straight-through cable.

E. CONNECT WEM

Connect the cable to the WEM. Slide the cable jacket up to the base of the connector. Slide the weatherproof connector over the cable jacket and screw it into the WEM and tighten. Tighten the clamping nut until the CAT5 cable is sealed in the connector. Check the WEM positioning and make sure the Power and Link Activity LEDs are on. The Link Activity indicator, amber LED, will only illuminate if an Ethernet source device is connected and powered up, and the red LED will verify power is being sent over the Ethernet cable.

F. ESTABLISH LINK

Follow above steps, A through E, for both ends of the link to be established. After both ends have been installed and powered up, the green Signal Level LED will illuminate. A solid green LED indicates the WEMs are communicating at the maximum throughput standard rate of 20 Mbps. If the green LED is flashing, the WEMs are communicating at a level less than 20 Mbps. If this occurs, realign the WEMs to achieve the maximum throughput.

NOTE: Maximum throughput requires a line-of-sight transmission path between the WEMs and no 5 GHz interference. In some cases, depending on the physical and RF environment, a useable throughput rate may not be possible. Contact MicroTek for more information – 888-366-4276 or info@microtekelectronics.com.

ADVANCED OPERATION

WEB BROWSER INTERFACE

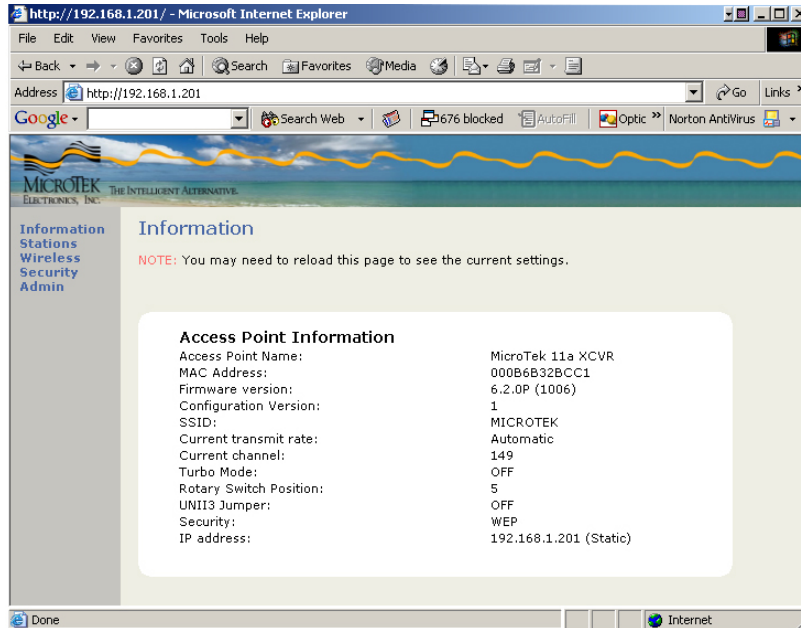
Each WEM has a web browser interface to access the advanced setup functions. If changing advanced settings, be sure to connect and power the WEMs individually. The default IP addresses for each set of WEMs are 192.168.1.200 and 192.168.1.201. To access this interface, connect the WEM to the Ethernet port on a computer, launch the browser and type in the default IP address 192.168.1.200. If this IP address does not grant access, use default IP address 192.168.1.201. The configuration of the computer used to access the WEM may need to be changed depending on its IP settings. The IP address of the computer should be changed to 192.168.1.xxx. The xxx setting can be any address 2 – 254 excluding 200 and 201. The Subnet mask should be 255.255.255.0. If you have any questions or concerns about changing these settings, please contact your network administrator. The default user name for each WEM is admin and the password is admin. Please note if you save parameters while connected to default IP address 192.168.1.201 the address will increment by 1 digit (i.e.192.168.1.202, .203, etc.).

WARNING: IF YOU CHANGE THE USER NAME AND/OR PASSWORD, YOU WILL NEED TO KEEP A RECORD OF YOUR CHANGES IN A SAFE PLACE. IF THE USER NAME AND/OR PASSWORD IS FORGOTTEN OR MISPLACED, THE WEM MUST BE RETURNED TO MICROTEK TO BE RESET.

WEB BROWSER INTERFACE (cont'd)

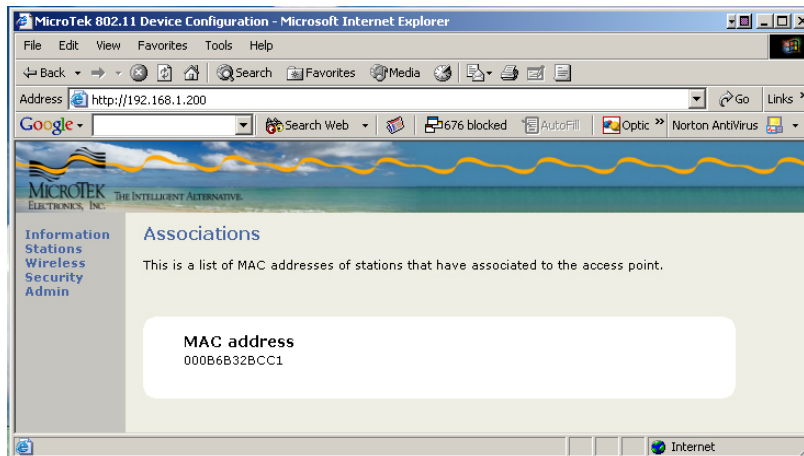
A. INFORMATION

The information page provides the details of how the WEM is configured.



1. STATIONS

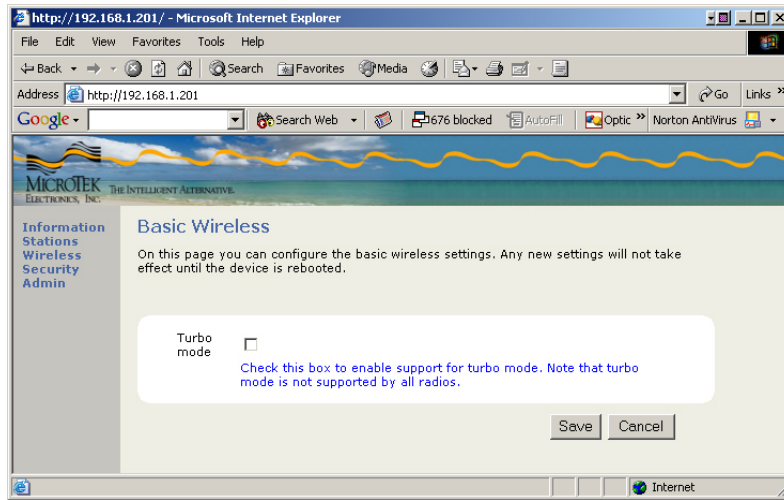
The Stations page shows the MAC address of the paired WEM the WEM being accessed is connected to.



2. WIRELESS

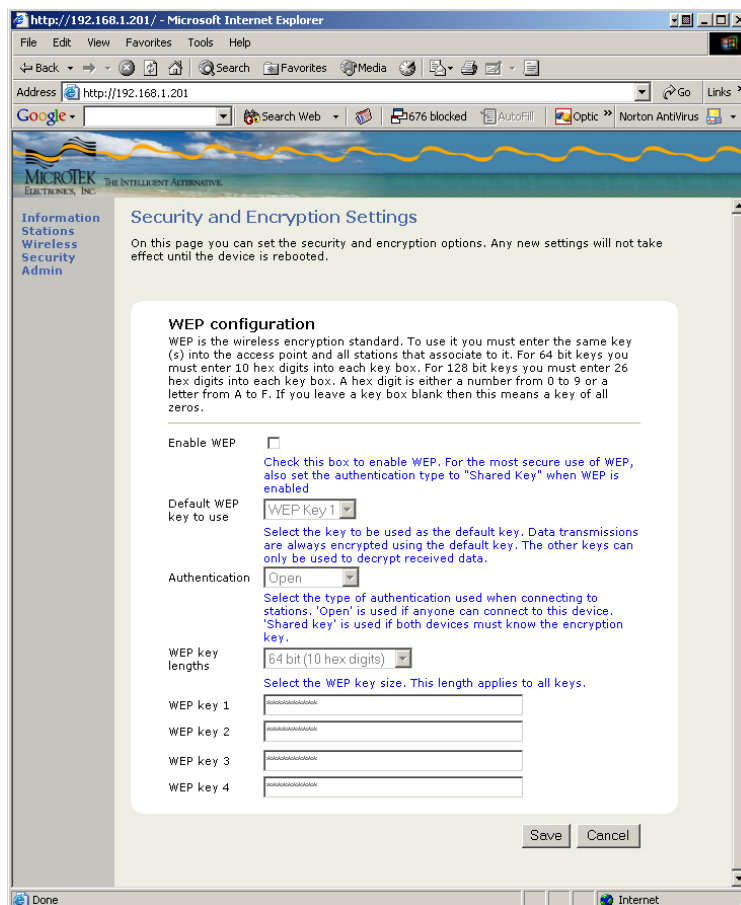
The wireless page is used for enabling turbo mode. The turbo mode combines adjacent channels to provide 40 Mbps of throughput. The channels available in turbo mode are: 3, 6 and 8 only. If another channel is selected, Turbo mode will not be enabled. To enable Turbo mode, click the check box and then click save to update the WEM.

2. WIRELESS (cont'd)



3. SECURITY

The security page is used for enabling WEP encryption and setting the parameters for WEP encryption. Click the “Enable WEP” check box to enable. After this box is checked, the Default WEP key is available, as are: Authentication, WEP key lengths and WEP Key 1-4. After updating the settings as desired, click save to update the WEM. Please note that paired WEMs must have the same settings to operate correctly.



3. SECURITY (cont'd)

A. Default WEP key to use

Default WEP
key to use

WEP Key 1
WEP Key 1
WEP Key 2
WEP Key 3
WEP Key 4

Authentication

B. Authentication

Authentication

Open
Open
Shared Key

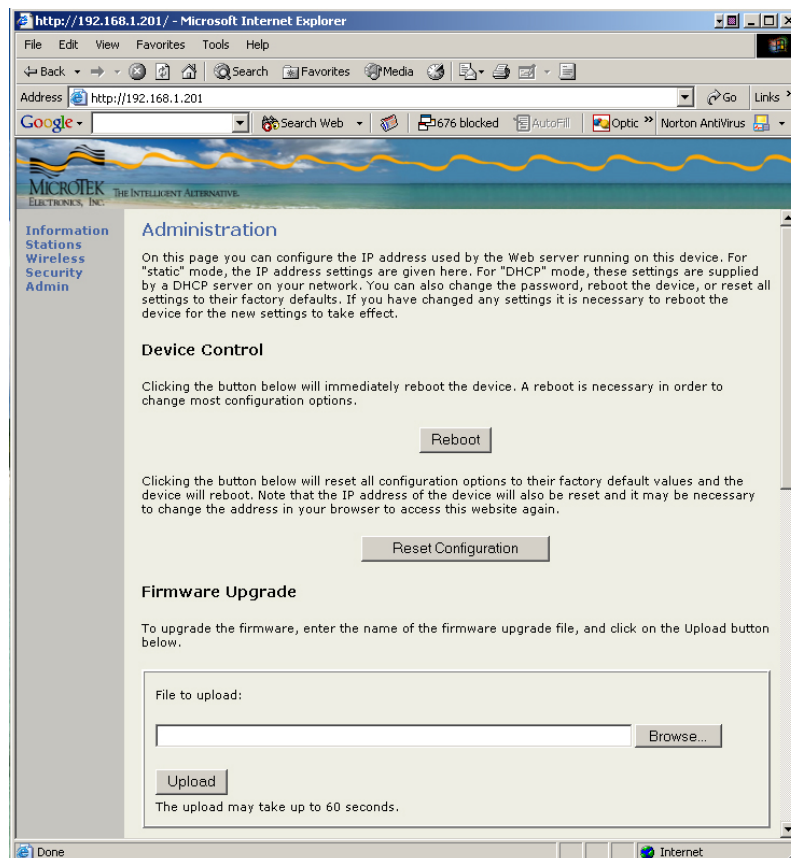
C. WEP key lengths

WEP key
lengths

64 bit (10 hex digits)
64 bit (10 hex digits)
128 bit (26 hex digits)

4. ADMIN

The administration page is used for rebooting the WEM, resetting the default configuration, upgrading firmware and selecting the device name, changing IP settings and changing the user name and password need to access the system.



4. ADMIN (cont'd)

http://192.168.1.201/ - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites Media Print

Address http://192.168.1.201 Go Links

Google Search Web 1676 blocked AutoFill Optic Norton AntiVirus

MICROTEK
ELECTRONICS, INC. THE INTELLIGENT ALTERNATIVE

Information
Stations
Wireless
Security
Admin

Device name

Device name

This is the name that the device will use to identify itself to external configuration and IP-address-finding programs. This is not the same as the SSID. It is okay to leave this blank if you are not using these programs.

IP settings

IP Address Mode ☒ Static ☐ DHCP

Select 'DHCP' to get the IP settings from a DHCP server on your network. Select 'Static' to use the IP settings specified on this page.

Default IP address

Type the IP address of your device

Default subnet mask

The subnet mask specifies the network number portion of an IP address. The factory default is 255.255.255.0.

Default gateway

This is the IP address of the gateway that connects you to the internet. The factory default is 192.168.1.1.

Security

User name

This is the user name that you must type when logging in to these web pages.

Administrator password

This is the password that you must type when logging in to these web pages. You must enter the same password into both boxes, for confirmation

Save Cancel

Done Internet

If you have any questions regarding the advanced setup of the MiniLink Wireless Ethernet System, please contact MicroTek's Technical Assistance at 888-366-4276 (Monday through Friday 8-5pm PST) or online at www.microtekelectronics.com

WEM SPECIFICATIONS

RF Modules

RF SECTION

Power Output	250 mW ERP 5.3 GHz @ 2500 feet 400 mW ERP 5.8 GHz @ 2500+ feet
Transmitting Frequency	5.250 – 5.350 GHz (U-NII-2) 5.725 – 5.825 GHz (U-NII-3 / ISM)
Channel Capacity	8 non-overlapping channels 5.3 GHz Band – 5280, 5300, 5320 (5.3 GHz band not available in ML WES-30 system) 5.8 GHz Band - 5745, 5765, 5785, 5805, 5825
Modulation	OFDM
Polarization	Linear, horizontal or vertical
Data Throughput Rate	Up to 20 Mbps - standard mode Up to 40 Mbps – turbo mode (3 channels maximum)
FCC ID:	JRRWES
I.C.:	4887A-WES

MANAGEMENT

Interface	Proprietary, Ethernet 10/100 baseT
Frequency Selection	Rotary switch – channels 1 – 9
User ID/Password	Web browser interface
Turbo Mode	Web browser interface
IP Address	Web browser interface
WEP Encryption	Web browser interface

MECHANICAL

Physical	Environmental, sealed, billet aluminum, powder coated housing with UV stabilized PVC radome
Dimensions	3.6" x 3.6" x 1.75"
Weight	15.2 oz

POWER

Power Requirements	12 - 20 VDC @ 3 W Reverse voltage protected
Power Method	Power-over-Ethernet (POE) via power injector box (midspan standard)
Connector	RJ45 – in and out of power injection box
Cable Specifications	100 Meters (328 Feet) on 24 AWG CAT-5 cable

WEM SPECIFICATIONS (continued)

RF Modules

ENVIRONMENTAL

Humidity	95% non-condensing
Operating Temperature	-20F to +150F

RANGES

Up to 2500 Feet	Integral patch antenna 5.3 & 5.8 GHz modules
Up to 2-Miles	Integral 6 x 6 12-dBi patch antenna – 5.3 GHz module only
Up to 4-Miles	Integral 6 x 6 17-dBi patch antenna – 5.8 GHz module only
Up to 30 Miles	RF module with integral patch antenna mounted in 25 dBi 18” dish on both ends

Power Injection Module

MECHANICAL

Physical	Plastic housing, not weatherproof
Dimensions	2.6” x 2.6” x 1.1”
Weight	2.5 oz
Interface	2 – RJ45 connectors

POWER

Power Requirements	12 VDC 500 mA wall transformer (two supplied)
Indicator	LED - red
Connectors	DC Jack 2.5 mm x 5.5 mm center positive, 2 – RJ45

ENVIRONMENTAL

Humidity	95% non-condensing
Operating Temperature	-20F to +150F

*For product improvement, design and specifications are subject to change without notice.

TROUBLE SHOOTING

PROBLEM	SUGGESTION
No Link Activity	1. NO POWER – make certain the both WEMs have power and the red Power LED is on. 2. Check the configuration of both WEMs. Each pair must be set to the same address. If you have changed any of the advanced settings, make sure the configuration of both WEMs is the same. 3. Make sure the cable run between the WEM and Ethernet device is no longer than 328 feet. 4. Make sure the cables being used are straight through and all cable connectors are attached properly. 5. If using an Ethernet hub or fast switch, try a crossover cable between the hub and the Power Injector Module.
No Signal Level LED or Flashing Signal Level LED	1. Check line-of-sight of the WEMs. Verify the WEMs are aimed properly. You should have clear, wide-open line of sight between the WEM modules. 2. Change channels; cycle power.
All three solid LEDs but no picture	1. Check video at the camera 2. Check wiring into encoders or decoders 3. Try changing channels; cycle power 4. Hook up one radio directly into a PC or laptop and verify that the IP address is accessible. Check the other radio the same way, then verify that each IP address is accessible over the wireless link into a PC/laptop.
No Green Signal Level LED (When Using the MLWES-30 with two 18” Parabolic Dishes)	1. Verify wide-open line-of-sight 2. Re-angle your dish antenna in a <i>downward</i> angle until both LEDs are solid green. 3. Mount the dishes higher above ground level and/or above any obstruction.

If you have tried the trouble shooting steps above and the system is still not working correctly, please contact MicroTek at 888-366-4276, Monday through Friday, between the hours of 8:00AM and 5:00PM Pacific Time. One of our technicians will work with you to rectify the problem over the phone.

Thank you,
MicroTek Electronics, Inc.

WARRANTY INFORMATION

MICROTEK LIMITED WARRANTY

MicroTek Electronics extends the following LIMITED WARRANTY to the original owner/purchaser of this product:

- 1) If, within two years after date of initial sale, this product, or any part or portion thereof, shall prove upon examination by MICROTEK, to be defective in material or workmanship, MICROTEK will repair or replace such part or portion at MICROTEK's option. The warranty period on the repaired or replaced part or portion of this product shall be limited to the unexpired term of the original warranty. The buyer shall be responsible for all shipping and transportation of the product to MICROTEK for any performance under this warranty.
- 2) Conditions and Exceptions:
 - a) Any accident to this product, any misuse or abuse, alternation, use in modified form, or any attempt to repair this product shall void this warranty. These conditions to the warranty include, but are not limited to, incorrect power connections, physical damage due to mechanical shock, exposure to moisture, and circuit modification.
 - b) SHOULD THIS PRODUCT PROVE DEFECTIVE FOLLOWING PURCHASE, THE BUYER, NOT THE MANUFACTURER, DISTRIBUTOR, OR RETAILER, ASSUMES THE ENTIRE COST OF ALL SERVICING OR REPAIR, EXCEPT AS OTHERWISE PROVIDED BY THE TERMS OF THIS WARRANTY.
 - c) FOR BREACH OF ANY WRITTEN OR IMPLIED WARRANTY ON THIS PRODUCT, THE BUYER IS LIMITED TO THE FOLLOWING DAMAGES. (1) THE COST OF LABOR TO REPAIR OR REPLACE DEFECTIVE PARTS OR PORTIONS OF THIS PRODUCT, AND (2) THE COST OF THE REPAIRED OR REPLACE PARTS OR PORTIONS OF THIS PRODUCT.
 - d) NO OTHER EXPRESSED OR IMPLIED WARRANTIES HAVE BEEN MADE OR WILL BE MADE ON BEHALF OF MICROTEK WITH RESPECT TO THE SALE, REPAIR, INSTALLATION, OPERATION, OR REPLACEMENT OF THIS PRODUCT. MICROTEK DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OF THIS PRODUCT OR ITS FITNESS FOR ANY PURPOSE, AND THE BUYER AGREES THAT THIS PRODUCT IS SOLD "AS IS" AND THAT THE ENTIRE RISK OF QUALITY AND PERFORMANCE OF THIS PRODUCT IS WITH THE BUYER, EXCEPT AS OTHERWISE PROVIDED BY THE TERMS OF THIS WARRANTY.
 - e) Some states/jurisdictions do not allow exclusions or limitations of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.
- 3) Contact your dealer regarding return authorization for out of warranty repairs and any further product information.

MicroTek Electronics, Inc.

25691 Atlantic Ocean Drive, Suite B3, Lake Forest, CA 92630

Information Hotline **888-36-MICRO**

www.microtekelectronics.com