

# Device Networking Access



RoHS compliant

## Industrial Wireless Serial Device Server

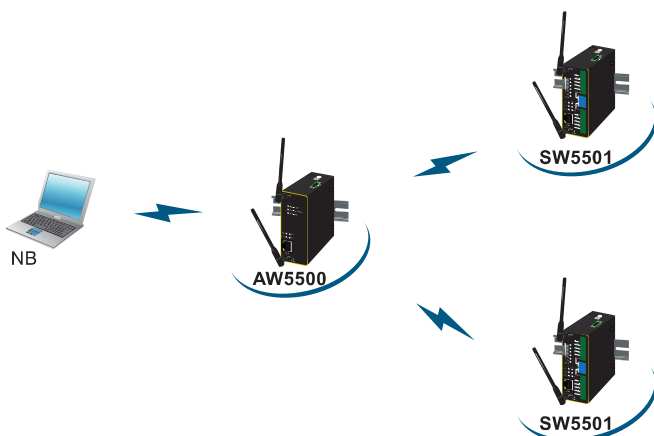
■ ■ SW550X Series

- Designed for 802.11a/b/g/n networks
- Embedded PCB coating protection
- Web server/Utility configuration
- Upgrade via Serial Manager or Web server
- 5 GHz frequency support to reduce interference on 2.4 GHz with other wireless devices
- FCC (United States), ETSI (Europe), and NCC (Taiwan) certified wireless equipment

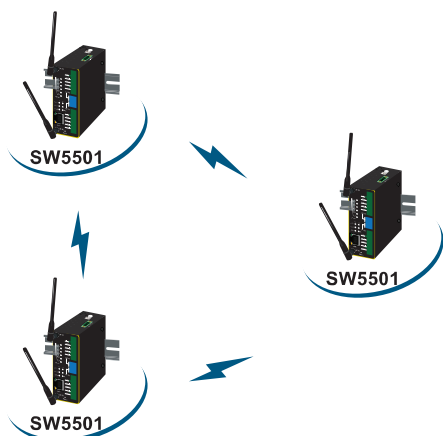
The SW550X Series is our latest addition to our Industrial Wireless products; its small size but powerful architecture makes it a perfect choice for industrial/manufacturing needs in which size is a decisive factor. It rewards our customers with superb connectivity withstanding all the harshness in your environment of choice. Among its many characteristics, we could mention:

- 5 GHz frequency support to reduce interference on 2.4 GHz with other wireless devices.
- Dual antenna design that offers better wireless coverage and reduces wireless blind spots.

### Infrastructure Mode



### Adhoc Mode



| Specifications                 |  |
|--------------------------------|--|
| <b>Network Interface</b>       |  |
| Connector                      | RJ-45  |
| Speed                          | IEEE802.3ab 10/100/1000Mbps  |
| <b>Serial Interface</b>        |  |
| Connector                      | D-Sub9 RS-232/422/485 software selectable<br>5.08mm TB5 RS-232/422/485 software selectable (TB models)<br>5.08mm TB5 RS-422/485 software selectable (Sis models) |
| Ports                          | SW5501: 1 Port, SW5502: 2 Ports  |
| Baud Rate                      | 110~921600Kbps   |
| Parity                         | None, Odd, Even, Space, Mark   |
| Data Bits                      | 5,6,7,8  |
| Stop Bits                      | 1,2  |
| Flow Control                   | None, Xon/Xoff, RTS/CTS  |
| <b>Power Characteristics</b>   |  |
| Input Voltage                  | 9VDC-48VDC   |
| Input Current(9VDC)            | 0.65A  |
| Power Consumption              | Approx. 5.85W (max)  |
| Reverse Polarity Protection    | Yes  |
| Connection                     | 5.08mm 3-pin Lockable Terminal Block   |
| <b>Mechanicals</b>             |  |
| Dimensions(W X H x D)          | 47 mm x 110 mm x 90mm  |
| Installation                   | DIN Rail, Wall Mount (optional)  |
| Reset Button                   | Yes  |
| Weight                         | 500g   |
| <b>Environmental Limits</b>    |  |
| Operating Temperature          | -10°C ~ 60°C (14°F ~ 140°F)  |
| Storage Temperature            | -40°C ~ 85°C (-40°F ~ 185°F)   |
| Ambient Relative Humidity      | 5 ~ 95% RH, (non-condensing)   |
| <b>Software</b>                |  |
| Protocols                      | IPv4, ICMP, TCP, UDP, DHCP Client, SNMP, SMTP, HTTP, DNS, NTP, RADIUS, RFC2217, WPS  |
| Wireless Security              | WEP, WPA, WPA2, TKIP, AES, 802.1x  |
| Configuration                  | Atop Device Management Utility, Web UI   |
| Virtual COM                    | Windows / Linux redirection software   |
| <b>Link Modes</b>              |  |
| TCP Server                     | 4 connections, Virtual COM, or Reverse Telnet  |
| TCP Client                     | Dual destinations or Virtual COM   |
| UDP                            | Up to 4 ranges of IPs  |
| <b>Warranty</b>                | 5 years  |
| <b>Regulatory Requirements</b> |  |
| EMC                            | EN 301489-1 V2.2.0, EN301489-17 V3.2.0, FCC 15B (Class A), CNS 13438   |
| Radio                          | FCC 15C 15.247, FCC 15E 15.407, EN 301893 V2.1.1, EN 300328 V2.1.1, NCC LP00002  |
| EMF                            | EN 62311: 2008, EN 50385: 2002   |

|                | Item  |                      |                      |   |
|----------------|-------|----------------------|----------------------|---|
| IEC 61000-4-2  | ESD   | Contact Discharge    | ±8KV                 | 4 |
|                |       | Air Discharge        | ±15KV                | 4 |
| IEC 61000-4-3  | RS    | Radiated(Enclosure)  | 10(V/m)              | 3 |
| IEC 61000-4-4  | EFT   | AC Power Port        | ±2.0 KV              | 3 |
|                |       | LAN Port             | ±2.0 KV              | 4 |
|                |       | COM Port             | ±2.0 KV              | 4 |
| IEC 61000-4-5  | Surge | AC Power Port        | Line-to-Line±1.0 KV  | 3 |
|                |       | AC Power Port        | Line-to-Earth±2.0 KV | 3 |
|                |       | LAN Port             | Line-to-Earth±2.0 KV | 3 |
|                |       | COM Port             | Line-to-Earth±2.0 KV | 3 |
| IEC 61000-4-6  | CS    | Conducted(Enclosure) | 10 V rms             | 3 |
| IEC 61000-4-8  | PFMF  | (Enclosure)          | 10(A/m)              | 3 |
| IEC 61000-4-11 | DIP   | AC Power Port        | -                    | - |

|                                 |  |   |  |   |
|---------------------------------|--|---|--|---|
| <b>Safety</b>                   | UL60950-1/CB, EN60950-1, CNS 14336   |   |  |   |
| <b>Shock</b>                    | IEC 60068-2-27   |   |  |   |
| <b>Freefall</b>                 | IEC 60068-2-32   |   |  |   |
| <b>Vibration</b>                | IEC 60068-2-6  |   |  |   |
| <b>MTBF</b>                     | 22 years (MIL-HDBK-217F)   |   |  |   |
| <b>RoHS</b>                     | Yes  |   |  |   |
| <b>Wireless Characteristics</b> |  |   |  |   |
| <b>Wireless PCI-e Module</b>    | Atheros AR9382   |   |  |   |
| <b>Tx / Rx</b>                  | 2T2R MIMO (2x2 with MCS 0-15)  |   |  |   |
| <b>Standard Conformance</b>     | 802.11a, 802.11b, 802.11g, and 802.11n   |   |  |   |
| <b>Operating Frequency</b>      |  |   |  |   |
|                                 | 2.4Ghz   | 5Ghz  |  |   |
| <b>United States (FCC)</b>      | 2412-2462(20Mhz)/2422-2452(40Mhz)  | 5180-5240, 5745-5825(20Mhz)/5190-5230, 5755-5795(40Mhz) |  |   |
| <b>Europe (ETSI)</b>            | 2412-2472(20Mhz)/2422-2462(40Mhz)  | 5180-5240(20Mhz)/5190-5230(40Mhz)                       |  |   |
| <b>Taiwan (NCC)</b>             | 2412-2462(20Mhz)/2422-2452(40Mhz)  | 5280-5320, 5745-5825(20Mhz)/5310, 5755-5795(40Mhz)      |  |   |
| <b>Data Rate</b>                |  |   |  |   |
| <b>802.11a</b>                  | 6, 9, 12, 18, 24, 36, 48, 54Mbps   |   |  |   |
| <b>802.11b</b>                  | 1, 2, 5.5 and 11Mbps   |   |  |   |
| <b>802.11g</b>                  | 6, 9, 12, 18, 24, 36, 48, 54Mbps   |   |  |   |
| <b>802.11n</b>                  | 20MHz bandwidth:<br>1Nss: 65Mbps @ 800GI, 72.2Mbps @ 400GI (Max.) / 2Nss: 130Mbps @ 800GI, 144.4Mbps @ 400GI (Max.)<br>40MHz bandwidth:<br>1Nss: 135Mbps @ 800GI, 150Mbps @ 400GI (Max.) / 2Nss: 270Mbps @ 800GI, 300Mbps @ 400GI (Max.) |   |  |   |
| <b>Antenna (5GHz)</b>           |  |   |  |   |
| <b>Gain</b>                     | 5 dBi  |   |  |   |
| <b>Connector</b>                | Dual SMA(R) Female   |   |  |   |
| <b>Output Power (5GHz)</b>      |  |   |  |   |
| <b>802.11a</b>                  | +15dBm @ 6, 9, 12, 18, 24Mbps / +15dBm @ 36Mbps / +14dBm @ 48Mbps / +12dBm @ 54Mbps  |   |  |   |
| <b>802.11n 5GHz/HT20</b>        | +15dBm @ MCS 0/8<br>+15dBm @ MCS 2/10  | +15dBm @ MCS 4/12<br>+9 - 12dBm @ MCS 6/14              | +15dBm @ MCS 1/9<br>+15dBm @ MCS 3/11      | +11 - 14dBm @ MCS 5/13<br>+7 - 10dBm @ MCS 7/15 |
| <b>802.11n 5GHz/HT40</b>        | +14dBm @ MCS 0/8<br>+14dBm @ MCS 4/12  | +14dBm @ MCS 1/9<br>+10 - 13dBm @ MCS 5/13              | +14dBm @ MCS 2/10<br>+8 - 11dBm @ MCS 6/14 | +14dBm @ MCS 3/11<br>+6 - 9dBm @ MCS 7/15       |
| <b>Antenna (2.4GHz)</b>         |  |   |  |   |
| <b>Gain</b>                     | 3 dBi  |   |  |   |
| <b>Connector</b>                | Dual SMA(R) Female   |   |  |   |
| <b>Output Power (2.4GHz)</b>    |  |   |  |   |
| <b>802.11b</b>                  | +14dBm   |   |  |   |
| <b>802.11g</b>                  | +17dBm @ 6, 9, 12, 18, 24Mbps / +17dBm @ 36Mbps / +16dBm @ 48Mbps / +16dBm @ 54Mbps  |   |  |   |
| <b>802.11n 2.4GHz/HT20</b>      | +16dBm @ MCS 0/8<br>+16dBm @ MCS 2/10  | +16dBm @ MCS 4/12<br>+16dBm @ MCS 6/14                  | +16dBm @ MCS 1/9<br>+16dBm @ MCS 3/11      | +16dBm @ MCS 5/13<br>+15dBm @ MCS 7/15          |
| <b>802.11n 2.4GHz/HT40</b>      | +15dBm @ MCS 0/8<br>+15dBm @ MCS 2/10  | +15dBm @ MCS 4/12<br>+15dBm @ MCS 6/14                  | +15dBm @ MCS 1/9<br>+15dBm @ MCS 3/11      | +15dBm @ MCS 5/13<br>+14dBm @ MCS 7/15          |

| Receiver Sensitivity |           |                     |                           |                     |           |                     |                           |
|----------------------|-----------|---------------------|---------------------------|---------------------|-----------|---------------------|---------------------------|
|                      | Data Rate | IEEE Spec(1 Rx dBm) | Typical/Maximum( 2Rx dBm) |                     | Data Rate | IEEE Spec(1 Rx dBm) | Typical/Maximum( 2Rx dBm) |
| 802.11a              | 6M        | -82                 | -95/-85                   | 802.11a/n<br>HT40   | MCS0      | -79                 | -92/-82                   |
|                      | 9M        | -81                 | -94/-84                   |                     | MCS1      | -76                 | -90/-79                   |
|                      | 12M       | -79                 | -93/+82                   |                     | MCS2      | -74                 | -87/-77                   |
|                      | 18M       | -77                 | -90/-80                   |                     | MCS3      | -71                 | -84/-74                   |
|                      | 24M       | -74                 | -88/-77                   |                     | MCS4      | -67                 | -80/-70                   |
|                      | 36M       | -70                 | -84/-73                   |                     | MCS5      | -63                 | -76/-66                   |
|                      | 48M       | -66                 | -82/-69                   |                     | MCS6      | -62                 | -74/-65                   |
|                      | 54M       | -65                 | -81/-68                   |                     | MCS7      | -61                 | -72/-64                   |
| 802.11b              | 1M        | not specified       | -98/-85                   | 802.11b/g/n<br>HT20 | MCS0      | -82                 | -95/-85                   |
|                      | 5.5M      | not specified       | -98/-85                   |                     | MCS1      | -79                 | -94/-82                   |
|                      | 11M       | not specified       | -94/-85                   |                     | MCS2      | -77                 | -92/-80                   |
| 802.11g              | 6M        | -82                 | -96/-85                   | 802.11b/g/n<br>HT40 | MCS3      | -74                 | -89/-77                   |
|                      | 9M        | -81                 | -96/-84                   |                     | MCS4      | -70                 | -86/-73                   |
|                      | 12M       | -79                 | -95/-82                   |                     | MCS5      | -66                 | -82/-69                   |
|                      | 18M       | -77                 | -93/-80                   |                     | MCS6      | -65                 | -80/-68                   |
|                      | 24M       | -74                 | -90/-77                   |                     | MCS7      | -64                 | -78/-67                   |
|                      | 36M       | -70                 | -87/-73                   |                     | MCS0      | -79                 | -92/-82                   |
|                      | 48M       | -66                 | -83/-69                   |                     | MCS1      | -76                 | -92/-79                   |
|                      | 54M       | -65                 | -82/-68                   |                     | MCS2      | -74                 | -89/-77                   |
| 802.11a/n<br>HT20    | MCS0      | -82                 | -94/-85                   | 802.11b/g/n<br>HT40 | MCS3      | -71                 | -86/-74                   |
|                      | MCS1      | -79                 | -92/-82                   |                     | MCS4      | -67                 | -83/-70                   |
|                      | MCS2      | -77                 | -90/-80                   |                     | MCS5      | -63                 | -77/-66                   |
|                      | MCS3      | -74                 | -87/-77                   |                     | MCS6      | -62                 | -76/-65                   |
|                      | MCS4      | -70                 | -84/-73                   |                     | MCS7      | -61                 | -75/-64                   |
|                      | MCS5      | -66                 | -79/-69                   |                     |           |                     |                           |
|                      | MCS6      | -65                 | -78/-68                   |                     |           |                     |                           |
|                      | MCS7      | -64                 | -76/-67                   |                     |           |                     |                           |

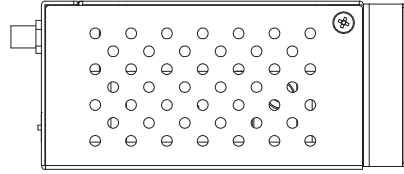
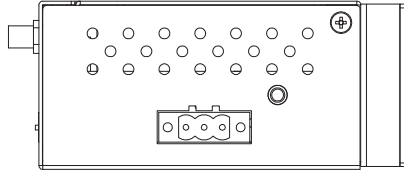
#### Ordering Information

|                   |   |
|-------------------|---|
| <b>SW5501</b>     | P/N:1P1SW550100001G<br>1-port Industrial Wireless Serial Device Server, DB9                       |
| <b>SW5501-Sis</b> | P/N:1P1SW5501SIS01G<br>1-port Industrial Wireless Serial Device Server, TB5 with serial isolation |
| <b>SW5501-TB</b>  | P/N:1P1SW5501TB001G<br>1-port Industrial Wireless Serial Device Server, TB5                       |
| <b>SW5502</b>     | P/N:1P1SW550200001G<br>2-port Industrial Wireless Serial Device Server, DB9                       |
| <b>SW5502-Sis</b> | P/N:1P1SW5502SIS01G<br>2-port Industrial Wireless Serial Device Server, TB5 with serial isolation |
| <b>SW5502-TB</b>  | P/N:1P1SW5502TB001G<br>2-port Industrial Wireless Serial Device Server, TB5                       |

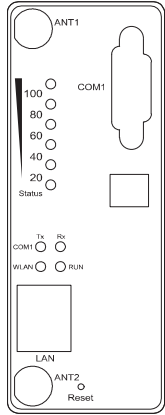
#### Optional Accessories

|                           |   |
|---------------------------|---|
| <b>UN315-1212 (US-Y)</b>  | P/N: 50500151120003G<br>Power Adapter<br>Y-Type power adapter, 100~240VAC input, 1.25A @ 12VDC output, US plug, LV6 |
| <b>UNE315-1212 (EU-Y)</b> | P/N: 50500151120013G<br>Power Adapter<br>Y-Type power adapter, 100~240VAC input, 1.25A @ 12VDC output, EU plug, LV6 |
| <b>UN315-2465 (US)</b>    | P/N: 50500161240002G<br>Y-Type power adapter, 100~240VAC input, 0.65A @ 24VDC output, US plug, LV6                  |
| <b>UNE315-2465 (EU)</b>   | P/N: 50500161240012G<br>Y-Type power adapter, 100~240VAC input, 0.65A @ 24VDC output, EU plug, LV6                  |
| <b>ADP-DB9(F)-TB5</b>     | P/N: 59906231G<br>Female DB9 to Female 3.81 TB5 Converter   |
| <b>WMK-454-Black</b>      | P/N: 7010000000043G<br>Black Aluminum Wall Mount Kit  |

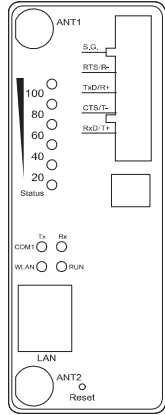
### Top and Bottom View



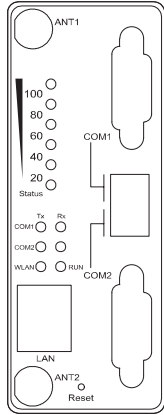
### Front View



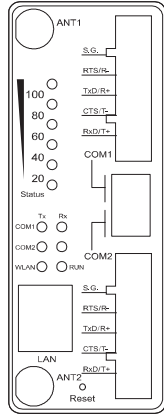
SW5501



SW5501-TB

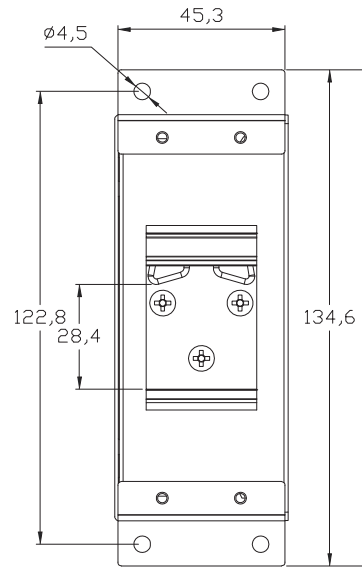


SW5502

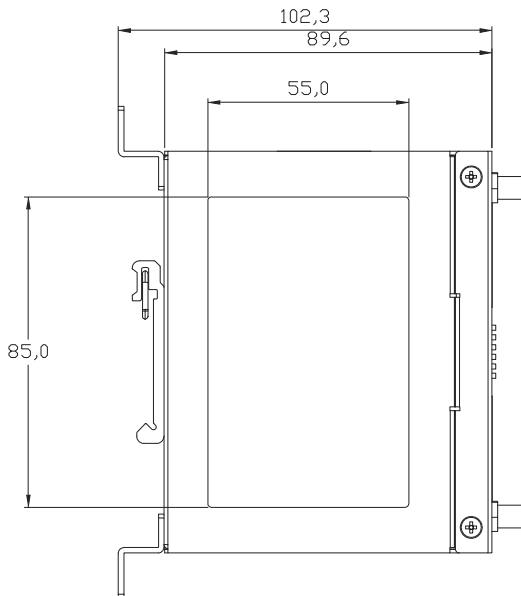


SW5502-TB

### Rear View



### Left Side View



### Right Side View

