

Date: 2009-01-16  
Federal Communications Commission  
Authorization and Evaluation Division  
Equipment Authorization Branch  
7435 Oakland Mills Road  
Columbia, MD 21046

FCC ID: M82-PWS-8101M  
Contact person: Lily.huang  
E-mail: lily.huang@advantech.com.tw

## **Subject: Request for Limited Module Approval.**

To whom may it concern :

We have the following attestation to the eight requirements described by FCC public notice DA00-1407 "Part 15 Unlicensed Modular Transmitter Approval".

### **1. RF shielding.**

The model PWS-8101M Series (FCC ID: **M82-PWS-8101M**) has its own RF shielding. The shielding is made by metal and completely added to RF part during our manufacturing. It is not easily removed module.

Please see exhibition external photos of this module.

### **2. Excessive data rates or over modulation.**

The module circuit buffers all modulation and control of the transmitter.

The control of the transmitter is via data commands and software instructions contained within the module.

The transmitter is tested with the module operated at the maximum power. Data commands are reduced the power of transmitter but do not influence the modulation contents.

### **3. Power supply regulation.**

The module has its own power supply regulator to insure compliance with part 15 requirements regardless of the quality or level of external DC supplying the module from the end product.

The regulator operates within the  $+3.3Vdc \pm 5\%$ .

### **4. Antenna and unique coupler requirements to antenna connector.**

The antenna is an integral type and there is no antenna connector for end product.

Please find "Antenna Specification of *Embedded Antenna*" for detail.

(1) No modification of antenna will be allowed.

(2) The end product must be certified by FCC, if customer will use the other antenna.

**Advantech Co., Ltd**  
**1, Alley 20, Lane 26, Rueiguang Rd, Neihu District, Taipei, Taiwan**

**5. Stand--alone configuration.**

The modular transmitter has been performed the testing as a stand alone and then confirmed the compliance. Please refer to the test report number W6D20812-9514-C-1.

**6. Label with own FCC ID number and exterior label.**

The module is labeled with own FCC ID number. Please see exhibition label sample for the FCC ID of this module. The label made by polyester sheet is affixed to the module by a high-strength adhesive.

Since the FCC ID number will not be visible when the module is installed inside the end product, there are instructions give to the OEM how to label the end product. Please refer to the "User Manual".

**7. Compliant with any specific rule or operating requirements.**

The module as manufactured is completely controlled by the onboard processor. There are no influences to the operation of the transmitter the end can induce that will operate the module outside of scope of the regulations. The necessary explanation for user to be complied with this requirement is contained on the manual.

**8. RF exposure requirements.**

To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Sincerely yours,

---

Date: 2009-01-16

Signature 

Name: Lily Huang

Title: Supervisor

Company: Advantech Co., Ltd