Important Information for OEM Integrators

The 5792 SHoW DMX Neo Radio Module has been designed for use by OEM users in their own host equipment. The following information is provided to help guide the OEM integrator to implement the 5792 SHoW DMX Neo Radio Module in host designs in a way that meets FCC requirements. The following instructions include marking and labeling information, acceptable antenna requirements, information that must be included in the OEM Integrator's product user's manual, and other instructions.

Regulatory Module Integration Instructions

This module has been granted modular approval for mobile applications. OEM integrators for host products may use the module in their final products without additional FCC / IC (Industry Canada) certification if they meet the following conditions. Otherwise, additional FCC / IC approvals must be obtained.

- The host product with the module installed must be evaluated for simultaneous transmission requirements.

- The users manual for the host product must clearly indicate the operating requirements and conditions that must be observed to ensure compliance with current FCC / IC RF exposure guidelines.

- To comply with FCC / IC regulations limiting both maximum RF output power and human exposure to RF radiation, the maximum antenna gain including cable loss in a mobile-only exposure condition must not exceed the limits as described in the following section on approved antennas:

5792 Approved Antennas

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (E.I.R.P.) is not more than that permitted for successful communication.
This device has been designed to operate with the antennas listed below.

The model: 5792 can be configured with any one of the approved antennas listed below for fixed, point-to point one server and one client configuration. When the model: 5792 is configured for point-to-multipoint one server and multiple clients' configuration (client's talk to server only one at a time), client's can use any of the approved antennas listed below and the server can use any of the approved antennas listed below with the exception of the 14dBi antenna.

Manufacturer	Model	Type	Connector	Gain
Nearson	S151AH-2450S	Omni whip	SMA plug reverse polarity	5dBi
Nearson	S141AH-2450	Omni whip	SMA plug reverse polarity	2dBi
Nearson	S131AH-2450	Omni whip	SMA plug reverse polarity	2dBi
Nearson	DG102N-2.4/5.25	Omni whip	SMA plug reverse polarity via provided Antenna Cable	5dBi
Centurion	WCP2400-MMCX4	Omni whip	MMCX jack on 4" coax pigtail	2.5dBi
Maxrad	MP24008XFPT	Panel	SMA plug reverse polarity via	8dBi

			provided Antenna Cable	
Maxrad	MYP24010PT	Yagi	SMA plug reverse polarity via provided Antenna Cable	10dBi
Maxrad	MYP24014PT	Yagi	SMA plug reverse polarity via provided Antenna Cable	14dBi

- A label must be affixed to the outside of the host product with the following statements:

This device contains FCCID: VU65792
This equipment contains equipment certified under ICID: 7480A5792

The final host / module combination may also need to be evaluated against the FCC Part 15B criteria for unintentional radiators in order to be properly authorized for operation as a Part 15 digital device.

If the final host / module combination is intended for use as a portable device (see classifications below) the host manufacturer is responsible for separate approvals for the SAR requirements from FCC Part 2.1093 and RSS-102.

Device Classifications

Since host devices vary widely with design features and configurations module integrators shall follow the guidelines below regarding device classification and simultaneous transmission, and seek guidance from their preferred regulatory test lab to determine how regulatory guidelines will impact the device compliance. Proactive management of the regulatory process will minimize unexpected schedule delays and costs due to unplanned testing activities.

The module integrator must determine the minimum distance required between their host device and the user's body. The FCC provides device classification definitions to assist in making the correct determination. Note that these classifications are guidelines only; strict adherence to a device classification may not satisfy the regulatory requirement as near-body device design details may vary widely. Your preferred test lab will be able to assist in determining the appropriate device category for your host product and if a KDB or PBA must be submitted to the FCC.

Note, the module you are using has been granted modular approval for mobile applications. Portable applications may require further RF exposure (SAR) evaluations. It is also likely that the host / module combination will need to undergo testing for FCC Part 15 regardless of the device classification. Your preferred test lab will be able to assist in determining the exact tests which are required on the host / module combination.

FCC Definitions

Portable: (§2.1093) — A portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is / are within 20 centimeters of the body of the user.

Mobile: (§2.1091) (b) — A mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons. Per §2.1091d(d)(4) In some cases (for example, modular or desktop transmitters), the potential conditions of use of a device may not allow easy classification of that device as either Mobile or Portable. In these cases, applicants are responsible for determining minimum distances for compliance for the intended use and installation of the device based on evaluation of either specific absorption rate (SAR), field strength, or power density, whichever is most appropriate.

Simultaneous Transmission Evaluation

This module has **not** been evaluated or approved for simultaneous transmission as it is impossible to determine the exact multi-transmission scenario that a host manufacturer may choose. Any simultaneous transmission condition established through module integration into a host product **must** be evaluated per the requirements in KDB447498D01(8) and KDB616217D01,D03 (for laptop, notebook, netbook, and tablet applications).

These requirements include, but are not limited to:

- Transmitters and modules certified for mobile or portable exposure conditions can be incorporated in mobile host devices without further testing or certification when:

- The closest separation among all simultaneous transmitting antennas is $\geq$20 cm,

Or

- Antenna separation distance and MPE compliance requirements for **ALL** simultaneous transmitting antennas have been specified in the application filing of at least one of the certified transmitters within the host device. In addition, when transmitters certified for portable use are incorporated in a mobile host device, the antenna(s) must be $\geq$5 cm from all other simultaneous transmitting antennas.

- All antennas in the final product must be at least 20 cm from users and nearby persons.

OEM Instruction Manual Content

Consistent with §2.909(a), the following text must be included within the user's manual or operator instruction guide for the final commercial product *(OEM-specific content is displayed in italics.)*

Operating Requirements and Conditions:

The design of *(Product Name)* complies with U.S. Federal Communications Commission (FCC) guidelines respecting safety levels of radio frequency (RF) exposure for *(OEM manufacturer to insert device classification: Mobile or Portable)* devices.

FCC ID:

This product contains FCCID: VU65792

Note: In the case where the Host / Module combination has been re-certified the FCCID shall appear in the product manual as follows:

FCCID: *(Include Standalone FCC ID)*

Mobile Device RF Exposure Statement (If Applicable):

RF Exposure - This device is only authorized for use in a mobile application. At least 20 cm of separation distance between the *(Product Name)* device and the user's body must be maintained at all times.

Portable Device RF Exposure Statement:

RF Exposure - This device has been tested for compliance with FCC RF exposure limits in a portable configuration. At least *(Insert Required Separation Distance from RF Exposure Evaluation)* cm of separation distance between the *(Product Name)* device and the user's body must be maintained at all times. This device must not be used with any other antenna or transmitter that has not been approved to operate in conjunction with this device.

Caution Statement for Modifications:

CAUTION: Any changes or modifications not expressly approved by City Theatrical, Inc. could void the user's authority to operate the equipment.

FCC Part 15 Statement (Only Include if FCC Part 15 is Required on the End Product):

Note: This equipment has been tested and found to comply with the limits for a *(OEM to insert device type: Class A or Class B)* digital device, pursuant to Part 15 of the FCC Rules. *(OEM must follow Part 15 guidelines (§15.105 and §15.19) to determine additional statements required in this section for their device class)*