

Certification Exhibit

**FCC ID: S85-DAS2400
IC: 10899A-DAS2400**

**FCC Rule Part: 15.247
IC Radio Standards Specification: RSS-210**

ACS Project Number: 14-0393

**Manufacturer: Channel D Solutions, Inc.
Model: DAS2400**

RF Exposure

General Information:

Applicant: Channel D Solutions, Inc.
 Device Category: Mobile
 Environment: General Population/Uncontrolled Exposure

Technical Information:

Antenna Type / Gain: Channel D Solutions part number 479980, 2 dBi omnidirectional
 Channel D Solutions part number 385564, 3 dBi omnidirectional
 Max Directional Gain: $3 \text{ dBi} + 10 \cdot \log(8) = 12 \text{ dBi}$
 Maximum Transmitter Conducted Power: 17.55 dBm, 56.84 mW
 Maximum System EIRP: 29.55 dBm, 901.57 mW
 Exposure Conditions: Greater than 20 centimeters

Note: The directional gain was calculated based on FCC KDB 662911 D01 Multiple Transmitter Output v01r02 as worst case, assuming (8) correlated outputs. However, in a normal operating configuration the antennas cannot be installed such that the patterns overlap. As worst case, even though not achievable for system operation, the directional gain calculation and maximum EIRP calculation were based on collocated correlated transmissions.

MPE Calculation

The Power Density (mW/cm^2) is calculated as follows:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = power density (in appropriate units, e.g. mW/cm^2)

P = power input to the antenna (in appropriate units, e.g., mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

MPE Calculator for Mobile Equipment							
Limits for General Population/Uncontrolled Exposure*							
Transmit Frequency (MHz)	Radio Power (dBm)	Power Density Limit (mW/cm^2)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm^2)
2480.0256	17.55	1.00	56.89	12	15.849	20	0.179

Installation Guidelines

The installation manual should contain text similar to the following advising how to install the equipment to maintain compliance with the FCC RF exposure requirements:

RF Exposure

In accordance with FCC requirements of human exposure to radio frequency fields, the radiating element shall be installed such that a minimum separation distance of 20 centimeters will be maintained.

Conclusion

This device complies with the MPE requirements by providing adequate separation between the device, any radiating structure and the general population.