RF Exposure Considerations for the Axis Communication AB Axis Companion Recorder (Network Video Recorder)

FCC ID: PNB-AXISS2108

The FCC requires that the calculated MPE for mobile equipment to be equal to or less than a given limit dependent on frequency at a distance of 20 cm from a device to the body of a user.

The transmitters in the Axis Companion Recorder cover 2412 -2462MHz WLAN and 5150 -5250MHz WLAN operation.

Simultaneous transmission is not supported by the Axis Companion Recorder.

The following FCC Rule Parts and procedures are applicable:

Part 1.1310 – Radiofrequency radiation exposure limits

Part 2.1091 – Radiofrequency radiation exposure evaluation: mobile devices

KDB447498 D01 v06
Mobile and Portable Devices RF Exposure Procedures and Equipment Authorisation Policies

MPE calculation

$$S = EIRP/(4 \pi R^2)$$

Where S = Power density

EIRP = P x G

P = Maximum transmitter power

G = Antenna gain

R = distance to the centre of radiation of the antenna

Axis Communications AB *Address* :Emdalavägen 14, SE-223 69 Lund, Sweden *Phone* +46 46 272 18 00 *Fax* +46 46 13 61 30
info@axis.com http://www.axis.com/ *Vat.No.* SE556253-614301

For 2.4GHz band:

Values S = 1.0 mW/cm^2 for General population uncontrolled exposure
(FCC Part 1.1310, Table 1(B) Radiofrequency radiation exposure limits)

S = 1.0mW/cm^2

P = 16.0dBm (39.8mW)

G = 3.0dBi (x2.0)

R = 20cm

Calculation:

$S = PG/4 \pi R^2$

$S = 39.8 \times 2.00/(12.56 \times (20)^2)$

$S = 79.6/5026$

$S = 0.0158$ mW/cm^2

For 5.2GHz band:

Values S = 1.0 mW/cm^2 for General population uncontrolled exposure
(FCC Part 1.1310, Table 1(B) Radiofrequency radiation exposure limits)

S = 1.0mW/cm^2

P = 16.0dBm (39.8mW)

G = 3.8dBi (x2.4)

R = 20cm

Calculation:

$S = PG/4 \pi R^2$

$S = 39.8 \times 2.4/(12.56 \times (20)^2)$

$S = 95.5/5026$

$S = 0.0190$ mW/cm^2

Conclusion

This confirms compliance to the required FCC Part 1.1310 Radio frequency radiation exposure limit of 1.0mW/cm^2 at 20cm operation and, hence, meets the requirements of FCC rule part 2.1091(c) and KDB447498 D01 v06, section 7.1.