RF Exposure Considerations for the Axis Communication AB Axis M3044-WV, AXIS M3045-WV and AXIS Companion Dome WV (Network Video Camera)

FCC ID: PNB-AXISM3045-WV

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 Network Video Camera cover 2402 - 2480MHz BT, LE BT + 2412 - 2462MHz WLAN and 5180 - 5240MHz WLAN operation.

Simultaneous transmission is not supported by the Axis Network Video Camera.

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 WLAN and BT/ BT LE 2.4GHz band:

WLAN and BT/ LE BT do not transmit simultaneously, so worst case power is applied:

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_{max} = 19.0dBm (79.43mW)

G = 0.6dBi (x1.15)

R = 20cm

Calculation:

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

$S = 79.43 \times 1.15/(12.56 \times (20)^2)$

$S = 91.2/5026$

S = 0.018 mW/cm^2

For WLAN 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 = 15.0dBm (31.62mW)

G = 4.4dBi (x2.754)

R = 20cm

Calculation:

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

$S = 31.62 \times 2.754/(12.56 \times (20)^2)$

$S = 87.09/5026$

S = 0.017 mW/cm^2

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

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.

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