



Customer Information

New Generation Antenna Family Enhanced Side-Lobe Suppression (ESLS) and Extended Down-Tilt Range

Kathrein are pleased to announce deployment of a new generation of dual-polarized “Enhanced Sidelobe Suppression” (ESLS) antennas with extended down-tilt range. The scheduled product launch for the first types will be during 3rd quarter 2007.

Why should operators consider implementation of ESLS antennas?

The vertical radiation characteristic consists not only of a main beam but also of unavoidable side-lobes. If antennas are electrically tilted downwards to a certain angle, the upper side-lobes may start to point towards the horizon and thereby possibly create interference of adjacent cells. The ESLS antennas are designed to avoid these interferences not only for the first side-lobe but also within the 0°-20° sector above the horizon independent from the adjusted down-tilt angle.

ESLS antennas are especially advantageous for optimisation of 3G mobile networks. The extended down-tilt range (+ 50% in comparison to the standard antennas) and the Enhanced Side-Lobe Suppression helps to avoid interference of adjacent cells, especially as the cells become smaller due to increased down-tilt. These improvements may also ease site approval procedures at the relevant public authorities.

The following table gives an overview with **preliminary** data on the forthcoming ESLS antennas:

Type No.	XPol F-Panel		XXPol F-Panel	
	800 10504	800 10505	800 10510	800 10511
Frequency range	1710 – 2200 MHz	1710 – 2200 MHz	1710 – 2200 MHz	1710 – 2200 MHz
Polarization	+45°/-45°	+45°/-45°	+45°/-45°; +45°/-45°	+45°/-45°; +45°/-45°
Gain	2 x 18 dBi	2 x 19 dBi	4 x 18 dBi	4 x 19 dBi
Half-power beam width	Horizontal: 65° Vertical: 7.5°	Horizontal: 65° Vertical: 5°	Horizontal: 65°/65° Vertical: 7.5°/7.5°	Horizontal: 65°/65° Vertical: 5°/5°
Intermodulation IM3	> 153 dBc	> 153 dBc	> 153 dBc	> 153 dBc
Electrical tilt	0°-15°	0°-10°	0°-15°	0°-10°
Sidelobe suppression - for 1 st sidelobe above main beam	~ 24.5 dB (avg.)	~ 25.0 dB (avg.)	~ 23.5 dB (avg.)	~ 22.5 dB (avg.)
- within 0°-20° sector above horizon	~ 20.0 dB (avg.)	~ 20.0 dB (avg.)	~ 20.0 dB (avg.)	~ 19.5 dB (avg.)