

European Communications Office
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Copenhagen Denmark

To the kind attention of Mr. Thomas Weber

Luxembourg, June the 10th 2016

Subject: ESV Declaration – Addendum n. 3

Pursuant to the ESV Declaration for Ku-band services dated January the 24th 2014, Digitaria International SA provides this Addendum n. 3 in order to add the following ESV types which are going to be used into the network:

- **Antenna type KNS Z10**

ESV Antenna

	KNS Z10
Antenna type	KNS Z10
Antenna size	100 cm
Transmit frequency bands	13.75 – 14.50 GHz
Transmit peak gain	41.1 @ 14.50 GHz
Max e.i.r.p. per carrier	50.1 dBW
Min. operating elevation	10°
Pointing accuracy	0.1° RMS

Waveform definition

Number(s) of carriers per ESV	1
Maximum occupied bandwidth(s) per carrier	2 MHz
Modulation	BPSK, QPSK, 8PSK
Multiple access scheme	FDMA, TDMA

- **Antenna type KNS Z12**

ESV Antenna

	KNS Z12
Antenna type	KNS Z12
Antenna size	1.20 m
Transmit frequency bands	13.75 – 14.50 GHz
Transmit peak gain	42.5 @ 14.5 GHz
Max e.i.r.p. per carrier	51.5 dBW
Min. operating elevation	10°
Pointing accuracy	0.1° RMS

Waveform definition

Number(s) of carriers per ESV	1
Maximum occupied bandwidth(s) per carrier	2 MHz
Modulation	BPSK, QPSK, 8PSK
Multiple access scheme	FDMA, TDMA

- **Antenna type INTELLIAN V80**

ESV Antenna

	INTELLIAN V80
Antenna type	INTELLIAN V80
Antenna size	83 cm
Transmit frequency bands	13.75 – 14.50 GHz
Transmit peak gain	40.0 @ 14.50 GHz
Max e.i.r.p. per carrier	49.0 dBW
Min. operating elevation	10°
Pointing accuracy	0.2° RMS

Waveform definition

Number(s) of carriers per ESV	1
Maximum occupied bandwidth(s) per carrier	2 MHz
Modulation	BPSK, QPSK, 8PSK
Multiple access scheme	FDMA, TDMA

• **Antenna type INTELLIAN V100**

ESV Antenna

Antenna type	INTELLIAN V100
Antenna size	103 cm
Transmit frequency bands	13.75 – 14.50 GHz
Transmit peak gain	41.6 @ 14.5 GHz
Max e.i.r.p. per carrier	50.6 dBW
Min. operating elevation	10°
Pointing accuracy	0.2° RMS

Waveform definition

Number(s) of carriers per ESV	1
Maximum occupied bandwidth(s) per carrier	2 MHz
Modulation	BPSK, QPSK, 8PSK
Multiple access scheme	FDMA, TDMA

• **Antenna type SEA TEL 4006**

ESV Antenna

Antenna type	SEA TEL 4006
Antenna size	100 cm
Transmit frequency bands	13.75 – 14.50 GHz
Transmit peak gain	40.0 @ 14.00 GHz

Max e.i.r.p. per carrier	49.0 dBW
Min. operating elevation	10°
Pointing accuracy	0.1° RMS

Waveform definition

Number(s) of carriers per ESV	1
Maximum occupied bandwidth(s) per carrier	2 MHz
Modulation	BPSK, QPSK, 8PSK
Multiple access scheme	FDMA, TDMA

• **Antenna type SEA TEL 4010**

<u>ESV Antenna</u>	SEA TEL 4010
Antenna type	SEA TEL 4010
Antenna size	100 cm
Transmit frequency bands	13.75 – 14.50 GHz
Transmit peak gain	39.90 @ 14.25 GHz
Max e.i.r.p. per carrier	48.9 dBW
Min. operating elevation	10°
Pointing accuracy	0.1° RMS

Waveform definition

Number(s) of carriers per ESV	1
Maximum occupied bandwidth(s) per carrier	2 MHz
Modulation	BPSK, QPSK, 8PSK
Multiple access scheme	FDMA, TDMA

Sincerely,



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