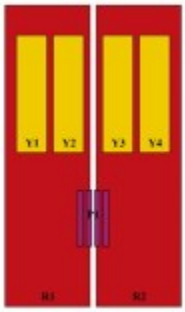
FFV4Q4-65D-R7-BG

20-port sector antenna, 4x 617-894, 8x 1695-2690 MHz 65° HPBW and 8x 2500-4000 MHz, Beamformer, 7x RET

- All Internal RET actuators are connected in "Cascaded SRET" configuration
- Cluster connectors for the TDD beam-forming array at 2500-4000MHz
- 1695-2690MHz Ports Support additional 8T8R Beamforming capability by integrating calibration networks

Array Layout



Array ID	Frequency (MHz)	RF Connector	RET (SRET)	AISG No.	RET UID
R1	617-894	1 - 2	1	AISG1	CPxxxxxxxxxxxxxxxR1
R2	617-894	3 - 4	2	AISG1	CPxxxxxxxxxxxxxxxR2
Y1	1695-2690	5 - 6	3	AISG1	CPxxxxxxxxxxxxxxxY1
Y2	1695-2690	7 - 8	4	AISG1	CPxxxxxxxxxxxxxxxY2
Y3	1695-2690	9 - 10	5	AISG1	CPxxxxxxxxxxxxxxxY3
Y4	1695-2690	11 - 12	6	AISG1	CPxxxxxxxxxxxxxxxY4
P1	2500-4000	13 - 20	7	AISG1	CPxxxxxxxxxxxxxxxP1

(Sizes of colored boxes are not true depictions of array sizes)

Port Configuration

FFV4Q4-65D-R7-BG

Electrical Specifications

	R1,R2	R1,R2	Y1-Y4	Y1-Y4	Y1-Y4
Frequency Band, MHz	**617–698**	**698–894**	**1695–1920**	**1920–2200**	**2490–2690**
RF Port	1,2,3,4	1,2,3,4	5-12	5-12	5-12
Gain, dBi	15.5	16.6	16.9	17.9	18
Beamwidth, Horizontal, degrees	72	62	70	67	56
Beamwidth, Vertical, degrees	9.1	7.7	6.8	6.1	5
Beam Tilt, degrees	2–12	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	15	17	17	15	18
Front-to-Back Ratio at 180°, dB	28	31	32	35	31
Coupling level, Amp, Antenna port to Cal port, dB			26	26	26
Coupling level, max Amp Δ, Antenna port to Cal port, dB			±2	±2	±2

Coupler, max Amp Δ, Antenna port to Cal port, dB			0.9	0.9	0.9
Coupler, max Phase Δ, Antenna port to Cal port, degrees			7	7	7
CPR at Boresight, dB	17	17	22	23	19
Isolation, Cross Polarization, dB	25	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25	25
Isolation, Co-polarization, dB			25	25	25
VSWR | Return loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150
Input Power per Port at 50°C, maximum, watts	250	250	150	150	150

Electrical Specifications, Service Beam

Frequency Band, MHz	**1695–1920**	**1920–2200**	**2490–2690**
Steered 0° Gain, dBi	22.2	23.3	23.4
Steered 0° Beamwidth, Horizontal, degrees	18	16	12
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	34	36	31
Steered 0° Horizontal Sidelobe, dB	12	12	13

Electrical Specifications, Soft Split

Frequency Band, MHz	**1695–1920**	**1920–2200**	**2490–2690**
Gain, dBi	20.6	21.5	20.9
Beamwidth, Horizontal, degrees	22	20	16
Front-to-Back Total Power at 180° ± 30°, dB	32	34	31

Electrical Specifications

	P1	**P1**	**P1**	**P1**
Frequency Band, MHz	**2500–2690**	**3100–3300**	**3300–3800**	**3700–4000**
RF Port	13-20	13-20	13-20	13-20
Gain, dBi	16.6	16.9	16.9	16.3
Beamwidth, Horizontal, degrees	84	67	60	64

Beamwidth, Vertical, degrees	5.8	5.8	5.7	6
Beam Tilt, degrees	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	16	16	16	15
Front-to-Back Ratio at 180°, dB	33	32	29	27
Coupling level, Amp, Antenna port to Cal port, dB	26	26	26	26
Coupling level, max Amp Δ, Antenna port to Cal port, dB	±2	±2	±2	±2
Coupler, max Amp Δ, Antenna port to Cal port, dB	0.9	0.9	0.9	0.9
Coupler, max Phase Δ, Antenna port to Cal port, degrees	7	7	7	7
CPR at Boresight, dB	16	15	14	13
Isolation, Cross Polarization, dB	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25
Isolation, Co-polarization, dB	18	18	18	18
VSWR | Return loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-140	-140	-140	-140
Input Power per Port at 50°C, maximum, watts	80	80	80	80

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	**2500–2690**	**3100–3300**	**3300–3800**	**3700–4000**
Gain, dBi	18.8	17.4	17.1	16.6
Beamwidth, Horizontal at 3 dB, degrees	65	65	65	65
Beamwidth, Horizontal at 10 dB, degrees	106	115	108	105
Beamwidth, Vertical, degrees	5.9	5.7	5.6	5.8
Front-to-Back Total Power at 180° ± 30°, dB	30	27	24	22
USLS (First Lobe), dB	17	17	18	17

Electrical Specifications, Envelope Pattern

Frequency Band, MHz	**2500–2690**	**3100–3300**	**3300–3800**	**3700–4000**
Gain, dBi	21.2	21.6	21.4	21.1

Beamwidth, Horizontal at 10 dB, degrees	118	132	120	121
Front-to-Back Total Power at 180° ± 30°, dB	31	28	26	25
USLS (First Lobe), dB	18	20	18	18

Electrical Specifications, Service Beam

Frequency Band, MHz	**2500–2690**	**3100–3300**	**3300–3800**	**3700–4000**
Steered 0° Gain, dBi	21.2	21.6	21.3	20.9
Steered 0° Beamwidth, Horizontal, degrees	25	19	19	19
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	33	32	28	26
Steered 0° Horizontal Sidelobe, dB	12	13	11	11
Steered 30° Gain, dBi	20.6	19.6	19.7	19.4
Steered 30° Beamwidth, Horizontal, degrees	27	24	21	18
Steered 30° Front-to-Back Total Power at 180° ± 30°, dB	32	26	26	25

Electrical Specifications, Soft Split

Frequency Band, MHz	**2500–2690**
Gain, dBi	20.4
Beamwidth, Horizontal, degrees	30
Front-to-Back Total Power at 180° ± 30°, dB	32

Regulatory Compliance/Certifications

Agency	**Classification**
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
UK-ROHS	Compliant

Included Products

BSAMNT-4	–	Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.
BSAMNT-M4	–	Middle Downtilt Mounting Kit for Long Antennas for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor bracket set.