

EUROPE★STAR 1

The first of the Europe★Star satellites, Europe★Star 1, brings *Powerful Connections* for creating innovative satellite service solutions. Its unique combination of advantages and opportunities are characterized through *The Power of Five*:

- *Power* - unparalleled power through class leading technology
- *Coverage* - five major growth regions: Europe, Southern Africa, the Middle East, the Indian subcontinent and South East Asia
- *Connectivity* - within and between all five regions
- *Flexibility* - via an on-board switching matrix offering transponder-by-transponder connectivity
- *Applications* - ideally suited to enable IP multicasting, VSAT networks, direct access Internet and digital video broadcasting



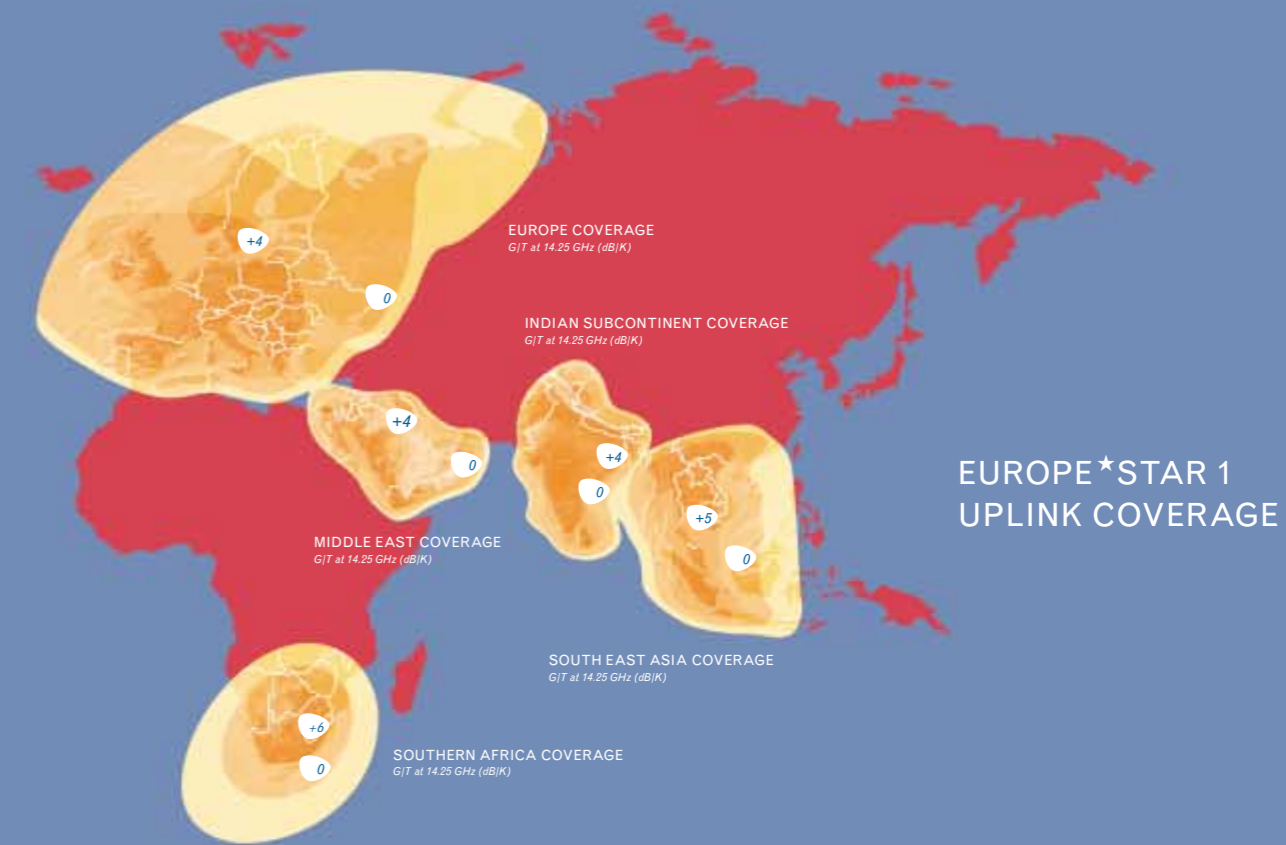


EUROPE*STAR 1

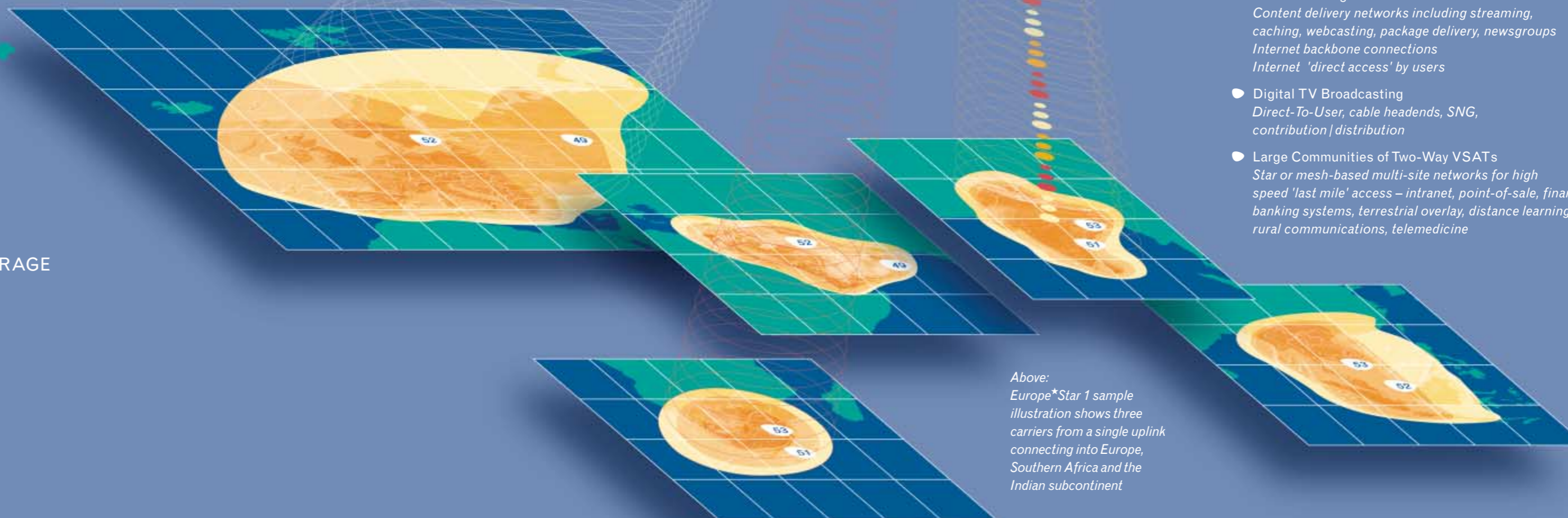
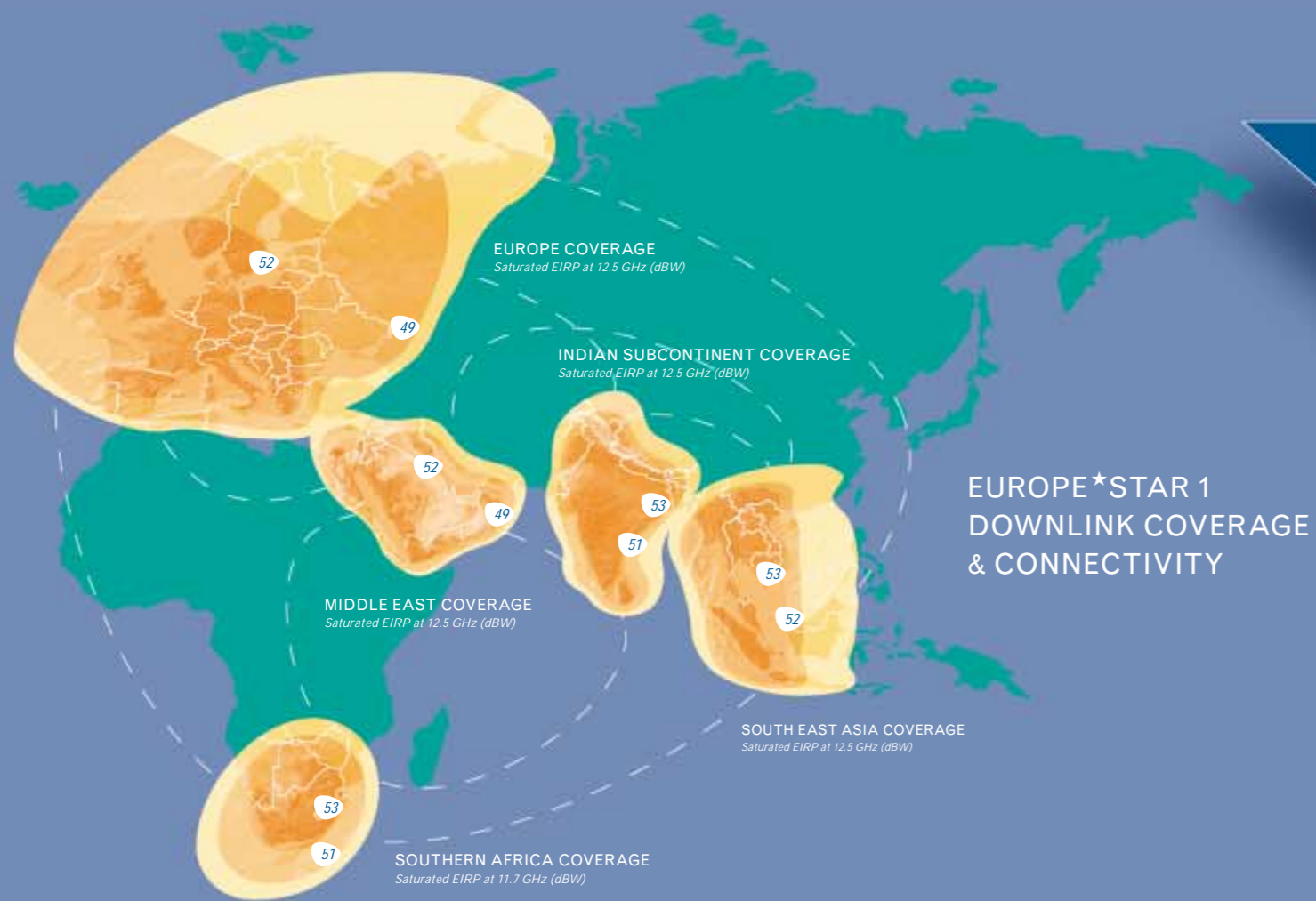
The Europe*Star 1 satellite establishes a new formula for success by combining the high power and elevation angles of regional direct broadcast satellites, with the reach and intercontinental connectivity previously associated with C-band communications satellites. Europe*Star 1 provides coverage within and between Europe, Southern Africa, the Middle East, the Indian subcontinent and South East Asia.

With an all Ku-band payload delivering over 52 dBW into all five footprints, Europe*Star 1 is uniquely positioned to deliver broadband services into small dishes throughout some of the most commercially and culturally significant trading regions in the Eastern hemisphere.

The system offers flexible beam switching between the five uplink and downlink footprints, with transponder-by-transponder connectivity enabling *Powerful Connections* both within and between each region.



THE POWER OF FIVE: POWER, COVERAGE, CONNECTIVITY, FLEXIBILITY, APPLICATIONS



Above: Europe*Star 1 sample illustration shows three carriers from a single uplink connecting into Europe, Southern Africa and the Indian subcontinent

ENABLING THESE APPLICATIONS:

- IP Multicasting and Internet
Content delivery networks including streaming, caching, webcasting, package delivery, newsgroups
Internet backbone connections
Internet 'direct access' by users
- Digital TV Broadcasting
Direct-To-User, cable headends, SNG, contribution | distribution
- Large Communities of Two-Way VSATs
Star or mesh-based multi-site networks for high speed 'last mile' access – intranet, point-of-sale, finance | banking systems, terrestrial overlay, distance learning, rural communications, telemedicine

FOR THESE CUSTOMERS:

- Broadcasters
- Service Providers to the Internet Community
- Application Service Providers
- Content Owner / Providers
- Network Operators
- Teleport Operators
- Capacity Resellers

COVERAGE & CONNECTIVITY

EUROPE COVERAGE

8-9 transponders

Elevation angles 45° - 10°

Albania, Algeria, Austria, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Moldova, Monaco, Morocco, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tunisia, Turkey, Ukraine, United Kingdom, Yugoslavia

SOUTHERN AFRICA COVERAGE

6 transponders

Elevation angles 60° - 40°

Botswana, Lesotho, Mozambique, Namibia, South Africa, Zimbabwe

MIDDLE EAST COVERAGE

3-4 transponders

Elevation angles 75° - 45°

Bahrain, Cyprus, Egypt, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Saudi Arabia, United Arab Emirates, Yemen

INDIAN SUBCONTINENT COVERAGE

8 transponders

Elevation angles 55° - 35°

Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka

SOUTH EAST ASIA COVERAGE

4 transponders

Elevation angles 30° - 10°

Burma, Cambodia, China, Hong Kong, Indonesia, Laos, Malaysia, Singapore, Thailand, Vietnam

Note - Countries listed are either under total or partial coverage

EUROPE*STAR 1 SATELLITE PARAMETERS

Description	Multi-region geostationery satellite system
Orbital position	45° East
Payload	30 x 36 MHz transponders, onboard switching matrix, transponder-by-transponder connectivity
Uplink/downlink footprints	Europe, Southern Africa, Middle East, Indian subcontinent, South East Asia
Downlink EIRP	≥ 52 dBW for all coverage regions
Uplink G/T	≥ +4 dB/K for all coverage regions
Frequencies	Ku-band Downlink 11.45 - 11.7 / 12.5 - 12.75 GHz Uplink 14.0 - 14.5 GHz Beacon 11.697 / 11.6975 GHz Vertical
Polarisation	Orthogonal linear (V/H)
SFD at 0 dB attn, G/T=0	-92 dBW/m ² for all coverage regions
Channel attenuator range	20 dB
Transponder config. mode	Fixed Gain Mode (FGM) / Automatic Level Control (ALC)
Station-keeping	0.05°
Design lifetime	> 15 years
Constructors	Alcatel Space Industries - prime contractor, payload & ground segment Space Systems / Loral - FS1300 bus, LEOP
Launch vehicle	Ariane 44LP
Launch mass (aboard Ariane)	4,150 kg
Dry mass (without fuel)	1,729 kg
Span	2 x 9.72 m solar panels deployed in a cross configuration
Electrical power	12 kW (9.9 kW EOL)
Power amplifiers	140 W TWTA
Amplifier redundancy	41 : 30
LNA redundancy	8 : 5
Downconverter redundancy	12 : 8

EUROPE*STAR LIMITED

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