

## Acronyms and Abbreviations

<b>A/D</b>	analog-to-digital converter
<b>BBA</b>	baseband assembly
<b>BC</b>	baseband combining
<b>BPSK</b>	binary phase-shift keying
<b>BWG</b>	beam waveguide (DSN antenna)
<b>CA</b>	carrier arraying
<b>CA/BC</b>	carrier arraying with baseband combining
<b>CA/SA/BC</b>	carrier arraying with sideband aiding and baseband combining
<b>CA/SSC</b>	carrier arraying with symbol-stream combining
<b>C-band</b>	4 GHz
<b>CPM</b>	continuous phase modulation
<b>CSC</b>	complex-symbol combining
<b>CSCA</b>	complex-symbol combining with aiding
<b>CSIRO</b>	Commonwealth Scientific and Industrial Research Organization
<b>D/A</b>	digital-to-analog converter
<b>dB</b>	decibel
<b>dB-Hz</b>	decibel in one-hertz bandwidth
<b>delta DOR</b>	delta differential one-way ranging

<b>DESCANSO</b>	Deep Space Communications and Navigation Systems Center of Excellence
<b>DSN</b>	Deep Space Network
<b>DSS</b>	Deep Space Station
<b>DTTL</b>	data-transition tracking loop
<b>EIRP</b>	equivalent isotropic radiative power
<b>FFT</b>	fast Fourier transform
<b>FPGA</b>	field programmable gate array
<b>FSC</b>	full-spectrum combining Full Spectrum Combiner
<b>FSPA</b>	Full Spectrum Processing Array
<b>FSPS</b>	Full Spectrum Processing Subsystem
<b>FSR</b>	Full Spectrum Receiver
<b>GHz</b>	gigahertz
<b>GPS</b>	Global Positioning System
<b>G/T</b>	gain divided by temperature
<b>HEF</b>	high-efficiency (DSN antenna)
<b>HEMT</b>	high electron mobility transistor
<b>Hz</b>	hertz
<b>I</b>	in phase
<b>IF</b>	intermediate frequency
<b>IQ</b>	in phase/quadrature phase
<b>JPL</b>	Jet Propulsion Laboratory
<b>K</b>	kelvin
<b>Ka-band</b>	32 GHz
<b>kHz</b>	kilohertz
<b>kb/s</b>	kilobits per second
<b>ksym/s</b>	kilosymbols per second
<b>Ku-band</b>	13 GHz
<b>LNA</b>	low-noise amplifier
<b>Mb/s</b>	megabits per second
<b>MER</b>	Mars Exploration Rover
<b>MHz</b>	megahertz

<b>mHz</b>	millihertz
<b>MMIC</b>	monolithic microwave integrated circuit
<b>Msym</b>	megasymbol
<b>Msym/s</b>	megasymbols per second
<b>NASA</b>	National Aeronautics and Space Administration
<b>NRZ</b>	nonreturn to zero
<b>pdf</b>	probability density function
<b>PLL</b>	phase-locked loop
<b>Q</b>	quadrature phase
<b>QPSK</b>	quadrature phase-shift keying
<b>RF</b>	radio frequency
<b>RFI</b>	radio frequency interference
<b>rms</b>	root-mean-square
<b>RTC</b>	real-time combiner
<b>s</b>	second
<b>SA</b>	sideband aiding
<b>S-band</b>	2.3 GHz
<b>SER</b>	symbol-error rate
<b>SKA</b>	Square Kilometer Array
<b>SNR</b>	signal-to-noise ratio
<b>s/s</b>	symbols per second
<b>SSC</b>	symbol-stream combining
<b>STD</b>	standard (DSN antenna)
<b>sym</b>	symbol
<b>VLA</b>	Very Large Array
<b>VLBI</b>	very long baseline interferometry
<b>W</b>	watt
<b>X-band</b>	8.4 GHz