

ACRONYM LIST

#D	# dimensions
AFRL	Air Force Research Laboratories
ANSI	American National Standards Institute
API	Application Programming Interface
ARD	Autonomous Rendezvous and Docking
ASCII	American Standard Code for Information Interchange
CDIO	Conceive, Design, Implement, Operate
CDR	Critical Design Review
CLK	Hardware timer driven HWI
COTS	Commercial Off The Shelf
CRC	Cyclic Redundancy Codes (Checksum)
CSA	Canadian Space Agency
DARPA	Defense Advanced Research Projects Agency
DLS	Dynamic Load Sensors experiment
DoD	Department of Defense
DOE	Design of Experiments
DOF	Degree of Freedom
DR2000	RFM Monolithics transceiver module
DSP	Digital Signal Processor
DSP/BIOS	Texas Instruments Real-time Operating System Kernel
DSS	Distributed Satellite System
ESA	European Space Agency
FDIR	Fault Detection, Identification, and Recovery
FLASH	Type of electrically erasable programmable read only memory (EEPROM)
FPGA	Field Programmable Gate Array
GFLOPS	Giga FLOPS (Billion Floating Point Operations Per Second)
GIPS	Giga (Billion) Instructions Per Second
GNC	Guidance, Navigation, and Control
GPS	Global Positioning System
GSP	Guest Scientist Program
GUI	Graphical User Interface
HWI	Hardware Interrupt
IDE	Integrated Development Environment
IMU	Inertial Measurement Unit
IR	Infrared
ISS	International Space Station
JPL	Jet Propulsion Laboratory
JSC	Johnson Spaceflight Center
KC-135	NASA's reduced gravity airplane
LEO	Low Earth Orbit

LIB	Larger is Best
MACE	Middeck Active Control Experiment
MBX	Mailbox data transfer construct
MCU	Micro-Controller Unit
MFLOPS	Million Floating Point Operations Per Second
MIT	Massachusetts Institute of Technology
MLE	Middeck Locker Equivalent
MODE	Middeck 0-gravity Dynamics Experiment
MOSR	Mars Orbit Sample Return
MSFC	Marshall Space Flight Center
NASA	National Aeronautics and Space Administration
NASDA	Japanese National Space Development Agency
NGO	Non-Governmental Organization
NIB	Nominal is Better
NMP	New Millennium Program
NRC	National Research Council
PADS	Position and Attitude Determination System (Metrology system)
PC	Personal Computer
PIP	Pipe data transfer construct
PIC	Microchip PIC line of micro controllers
PRD	Periodic SWI
PSI	Payload Systems Inc.
RAM	Random Access Memory
RF	Radio Frequency (wireless communications)
RGA	Reduced gravity airplane
RGO	Reduced gravity office at NASA JSC
RGP	Reduced gravity program
RSA	Russian Space Agency
RTOS	Real-Time Operating System
RX	Receive / Receiver
SCAR	Special Committee for Antarctic Research
SCS	SPHERES Core Services software layer
SEM	Semaphore synchronization construct
SIB	Smaller is Best
SMT375	Sundance Multiprocessor Technologies DSP board model 375
SOH	State of Health
SPECS	Sub-millimeter Probe of the Evolution of Cosmic Structures
SPHERES	Synchronized Position Hold Engage Re-orient Experimental Satellites
SSC	Station Support Computer (ISS)
SSL	Space Systems Laboratory
SSP	Space Shuttle Program
STG	Satellite-to-ground
STL	Satellite-to-laptop
STP	DoD Space Technology Programs Office
STS	Satellite-to-satellite

STS-#	Space Shuttle Mission #
SWI	Software Interrupt
TDMA	Time Division Multiple Access
TPF	Terrestrial Planet Finder
TRL	Technology Readiness Level
TSK	Background Task (periodic or aperiodic)
TX	Transmit / Transmitter
US	Ultrasound
UART	Universal Asynchronous Receiver Transmitter

NOTATION

°	degree
°C	degrees Celsius
°F	degrees Fahrenheit
A	Ampere
b	bit
B	byte (8 bits)
cm	centimeter
deg	degree
F	Farad
ft	feet
g	gravity constant (9.8m/s ²)
h	hour
Hz	frequency in hertz (1/s)
in	inch
kbps	kilo bits per second
kg	kilogram (mass)
Mbps	mega bits per second
MBps	mega bytes per second
μ-g	microgravity
μg	micro-g: one millionth of the gravity constant (9.8m/s ² x 10 ⁻⁶)
μs	microsecond
Ω	Ohm
m	meter
min	minute
mo	month
ml	milliliters
mg	milli-g: one thousand of the gravity constant (9.8m/s ² x 10 ⁻³)
ms	millisecond
N	Newton
nm	nanometer
psi	pounds per square inch
rad	radian
s	second
V	Volt
y	year
W	Watt