LUCIX

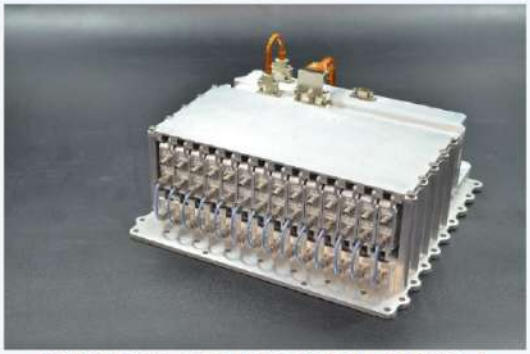
A HEICO COMPANY

NEXUS SOFTWARE-DEFINED RADIOS

Configurable digital radio platforms for demanding space missions



NEXUS-800 | SINGLE-CHANNEL HIGH-BANDWIDTH



NEXUS-3MM | 7 FULL-DUPLEX CHANNELS

2.5 Gbit/s	800 Msps	MULTI-MODE	MULTI-BAND
MAX DATA RATE	MAX SYMBOL RATE	UNIQUE WAVEFORMS ACROSS CHANNELS	S, X AND KA CHANNELS IN ONE RADIO

CONFIGURATION OPTIONS

SINGLE-BAND RADIO

A single-band configuration tailored to the customer's preferred band and mission requirements.

MULTIBAND RADIO

Up to 7 transmit and 7 receive channels across multiple frequencies. Configure the channel and frequency mix to customer preference and mission requirements.

WAVEFORM AND SIGNAL SUPPORT

DVB-S2 includes full standard MODCODs, CCM / VCM / ACM, and Generic Stream Encapsulation. CCSDS support includes CCSDS 401 and related standards, AOS, BPSK, OQPSK, PCM/PM/BIPHASE-L, PCM/PSK, and PN-code ranging with T4B. Custom LunaNet waveforms are supported. Transmit and receive functions are supported.

CAPABILITY SNAPSHOT

PARAMETER	CAPABILITY	PARAMETER	CAPABILITY
Frequency bands	L, S, X, Ku, Ka (configuration dependent)	Data throughput	Up to 2.5 Gbit/s
Frequency adjustment	Dynamic tuning up to a 1 GHz range	Symbol rate	Up to 800 Msps
Modulation	BPSK, QPSK, up to 32AQPSK; PCM/PSK/PM + NRZ-L; PCM/PM/BIPHASE-L	ADC / DAC	Sample rates up to 5 Gsps
Waveforms	DVB-S2 full MODCODs; CCSDS 401 / AOS; custom support	Data interface	10GbE Ethernet
Forward error correction	LDPC, convolutional, and BCH	Timing / ranging	10 MHz and 1PPS; time stamping and ranging
Input voltage	28 V	Mission-life capability	LEO up to 7 years; GEO up to 5 years
Power consumption	50–140 W, configuration dependent	Dimensions	<10 L × 10 W × 5 H in
On-orbit support	Radiation-tolerant bootloader and on-orbit firmware upgrades		