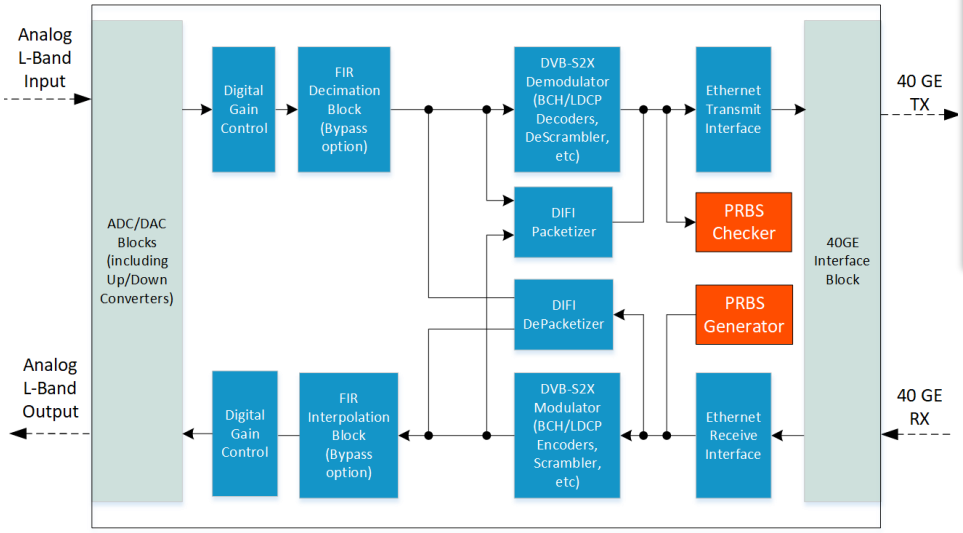
DVB-S2X Modem VPX Card

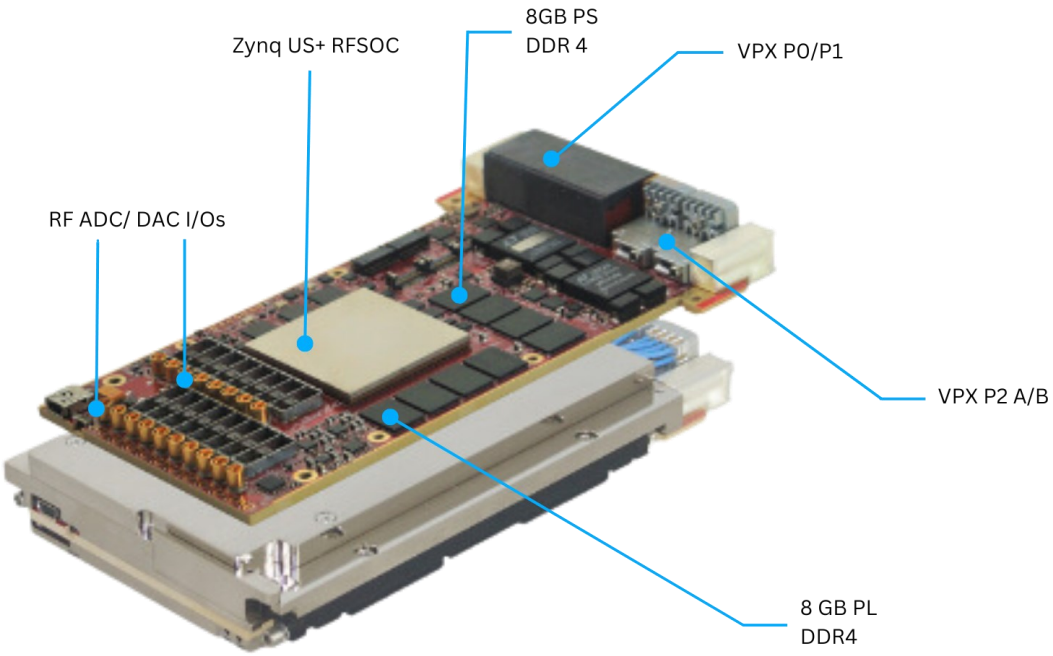
Bascom Hunter's DVB-S2X Modem VPX Card is a SOSA-aligned 3U VPX card that implements a modem for DVB-S2X. Digital data in both directions use the Digital Intermediate Frequency Interoperability (DIFI) v1.2 packet standard over a 40G Ethernet interface. Analog data is tunable over the L-Band frequency range.

This high-performance card supports up to 125MSymbols/sec of data traffic, and is easily configured using a network-accessed GUI or SCPI commands. The modem design uses a Xilinx/AMD RFSOC based on the Abaco VP431 VPX card.

KEY FEATURES

- Xilinx/AMD Zynq UltraScale+ Gen3 RFSOC
- 14-bit ADCs/DACs with 5GSamples/sec sample rate
- Up to 125MSymbols/sec of data throughput in each direction
- Support for DVB-S2/DVB-S2X Normal Frames (64,800 bits) and Short Frames (16,200 bits)
- Supported modulations include QPSK, 8-PSK, 8-APSK, 16-APSK, 32-APSK, 64-APSK, 128-APSK, and 256-APSK
- Digital Data I/O in DIFI (IEEE-ISTO Std 4900-2021) v1.2 packet standard
- Analog Data I/O in L-Band frequency range, tunable
- Nominal Input Power of +10dBm into 50-ohms
- Maximum Input Power of +2dBm (with internal ADC input attenuation)
- Nominal Output Power of -5dBm into 50-ohms





VPX FORM FACTOR

- SOSA-Aligned 3U VPX form factor
- SLT3-PAY-1F1U1S1S1U1U2F1H-14.6.11-x slot profile
- Conduction-cooled, 1”slot pitch
- Backplane Connectivity
- Data Plane: 40G-KR4, 10G-KR
- Control Plane: 1G-KX x2
- Expansion Plane: PCIe Gen 3 x4
- RF I/O: VITA 66.5 P2A/P2B

OPERATING TEMPERATURE

- 0C to 70C (conduction-cooled VPX)

POWER

- ~39W typical (12V @ 3.2A)

RF / L-BAND

Nominal Input Power	+10dBm into 50-ohms
Maximum Input Power	+2dBm (with internal ADC input attenuation)
Nominal Output Power	-5dBm into 50-ohms

DVB-S2X / DVB-S2

Symbol Rate	Up to 125MSymbols/sec in each direction
Frames	Normal (64,800 bits) and Short (16,200 bits)
Modulations / Coding	QPSK, 8-PSK, 8-APSK,16-APSK, 32-APSK, 64-APSK, 128-APSK, and 256-APSK

Bascom Hunter maintains a corporate commitment to quality, with our design and manufacturing operations certified to AS9100D and ISO 9001:2015

Specifications Subject to Change

BASCOM HUNTER

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