

VECTOR

FCC File Number			
FCC Point of Contact	Leann Nguyen		
FCC Date Received		FCC Date Approved	

Applicant FRN 0026456863

Applicant	Name Vector Launch Inc.
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Approved Callsign

Applicant	Date Required	8-Oct-18
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Applicant	File Number
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FCC POC	Name	Leann Nguyen	Title	Engineer	Phone	(202) 418-2482	Email	leann.nguyen@fcc.gov	
FCC POC Agency	Name	Federal Communications Commission Attn: OET - Leann Nguyen and Anthony Serafini			Direct Phone	(888) 225-5322	Fax	(888) 418-0232	
FCC POC Agency	Street	445 12th Street SW		City	Washington	State	DC	Zip Code	20554
Applicant POC1	Name	Christopher Timperio	Title	RF Engineer	Phone	(888) 691-9778 EXT 329	Email	christopher.timperio@vector-launch.com	
Applicant POC2	Name	Matt Baker	Title	Director - Avionics	Phone	(888) 691-9778	Email	matt.baker@vector-launch.com	
Applicant Company	Name	Vector Launch Inc.	Attn:	Radio Licensing	Fax	N/A			
Applicant Address	Street	15261 Connector Lane		City	Huntington Beach	State	CA	Zip Code	92649
Applicant Info	FRN	0026456863		CAGEC	7MLT0	EIN	811784147	DUNS	080264639
Stopbuzz	Number	+1 (888) 691 9778 EXT 330							

License Type	Experimental (STA)	For	Launch Vehicle	Series	Vector-R	Category	Block-1
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Number of Links 2

Link 1	Link 2
Telemetry Downlink Space Telemetering Space Station	Telemetry Downlink Space Telemetering Space Station
S-Band 2360-2390	S-Band 2360-2390
Band Edge (Lower) 2360 MHz	Band Edge (Lower) 2360 MHz
Band Edge (Upper) 2390 MHz	Band Edge (Upper) 2390 MHz
Band 30 MHz	Band 30 MHz
Center Frequency 2370.5 MHz	Center Frequency 2382.5 MHz
Polarization Linear	Linear
Transmit Power 10 W	Transmit Power 10 W
Transmit Power 10 dBW	Transmit Power 10 dBW
Antenna Gain 0 dBi	Antenna Gain 0 dBi
EIRP 10 dBW	EIRP 10 dBW
Data Type Digital	Data Type Digital
Modulation SQPSK	Modulation SQPSK
Data Rate 2000 kbps	Data Rate 10000 kbps
FEC Type LDPC	FEC Type RNRZ-L-15
Bandwidth Multiplier 0.90	Bandwidth Multiplier 0.78
PSD Bandwidth 1794.000	7800.000
Power Spectral Density per 4 kHz -16.5 dBW/4 kHz	Power Spectral Density per 4 kHz -22.9 dBW/4 kHz
Maximum Approach Velocity 7500 m/s	
Maximum Doppler (x 2) 118.606 kHz	Maximum Doppler (x 2) 119.206 kHz
Necessary BW (including Doppler) 1912.606 kHz	Necessary Bandwidth 7918.606 kHz
BW (incl margin) 1920.000 kHz	BW (incl margin) 8000.000 kHz
Necessary Bandwidth (Lower) 2369.540 MHz	Necessary Bandwidth (Lower) 2378.500 MHz
Necessary Bandwidth (Upper) 2371.460 MHz	Necessary Bandwidth (Upper) 2386.500 MHz
Transmitter Manufacturer Quasonix	Transmitter Manufacturer Quasonix
Transmitter Model Number QSX-VSH2-1100	Transmitter Model Number QSX-VSR2-1100

Emission Designator 1M92G1D		Emission Designator 8M00G1D						
Launch Site	Name	Kodiak, AK (PSCA)	Latitude	57.4348987°	Longitude	-152.3417629°	Elevation	30 m
	Inclination (Min)	60°	Inclination (Max)	90°	Altitude (Min)	12 m	Altitude (Max)	200 km
Launch Site	Name		Latitude		Longitude		Elevation	
	Inclination (Min)		Inclination (Max)		Altitude (Min)		Altitude (Max)	
Launch Site	Name		Latitude		Longitude		Elevation	
	Inclination (Min)		Inclination (Max)		Altitude (Min)		Altitude (Max)	

Timeline (Typical)	Time	Event	Downrange	Crossrange	Altitude	Latitude	Longitude
	T+00:00:00	Liftoff	0.00 km	0.00 km	0.012 km	57.4348°	-152.3417°
	T+00:00:41	Max Q	0.94 km	0.37 km	16.10 km	57.4231°	-152.3442°
	T+00:02:07	Main Engine Cut-Off (MECO)	33.24 km	26.15 km	58.63 km	57.0856°	-152.0644°
	T+00:02:11	Stage Separation	36.74 km	29.20 km	63.46 km	57.0479°	-152.0317°
	T+00:05:14	Splashdown / Stage Impact	316.44 km	241.17 km	0.00 km	54.1523°	-149.8374°