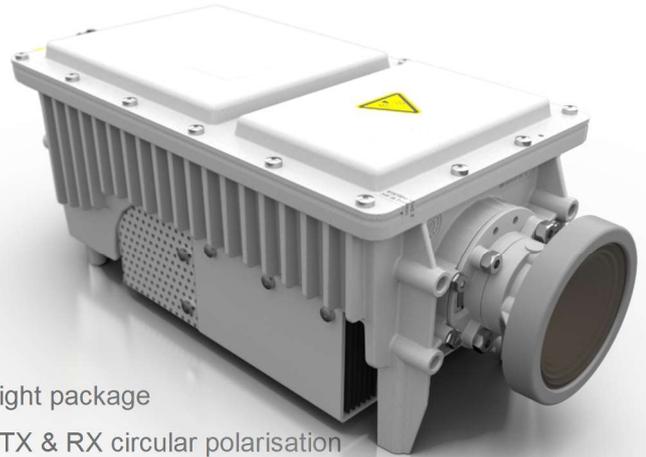


## XRJ3XFX9

# 5/10/12/20/25W Mil-Ka band Transceivers

### Overview

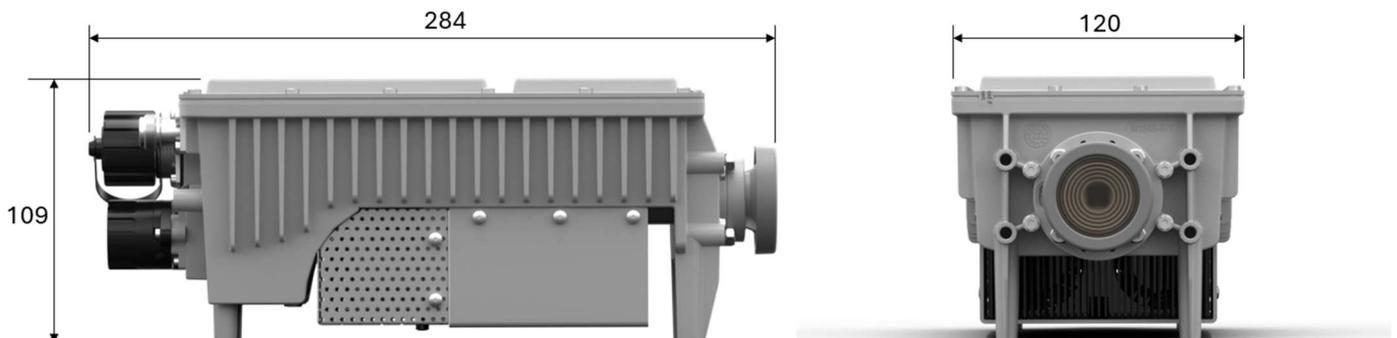
The Global Invacom XRJ transceiver is a breakthrough in cutting edge Ka-Band VSAT engineering. A GEO/ MEO/LEO compatible, ruggedised IP-67 sealed enclosure integrates a BUC, LNB, and TRF in a single unit. The Transceiver is designed to operate in all MilGov networks, compliant with MIL-STD/STANAG specifications. Production units are 100% tested with a rigorous process to ensure reliable maintenance-free operation for >10 years. Available in Linear power\* options of 5, 10, 20 and 25W.



### Product Features

- BUC, LNB, OMT and TRF integrated into compact lightweight package
- Integrated polarizer allowing Manual Polarity Switching of TX & RX circular polarisation
- MilGov Ka-band coverage Single or Multi sub-band transmit/receive options
- 5W/10W/20W/25W linear power\* output variants available
- Compatible with all Global Skyware antennas
- PLL LNB with external or internal (4ppm) REF
- L/S-Band (1400-2400MHz TX) IF Modem interface with 10 MHz reference
- Durable IP-67 rated enclosure
- MIL-STD 810H/461G/188-164C compliant
- Optional Monitoring & control via Open BMIP / SNMP protocols
- Optional RF gain control and output power detection

### Mechanical Drawings





## Specifications

### FEED AND POLARISER

PARAMETER	MIN	TYPICAL	MAX	UNIT	NOTE
FEED AND POLARISER SUBSYSTEM		Integrated			Matched to Global Skyware antennas
POLARISATION		RHCP/LHCP			Field configurable, RX/TX orthogonal
XPD	25			dB	Mil-STD 188-164C Compliant

### TX SUBSYSTEM (BUC)

PARAMETER	MIN	TYPICAL	MAX	UNIT	NOTE
IF INPUT FREQUENCY RANGE	1400		2400	MHz	
RF OUTPUT FREQUENCY RANGE	28.25		31	GHz	1, 2 or 4 sub-bands
LOCAL OSCILLATOR FREQUENCY	26.85		28.6	GHz	Up to 4 LO's. Controlled via M&C interface
LOCAL OSCILLATOR INTEGRATED PHASE NOISE			2	deg	Mil-STD 188-164C, IESS 308/309 Compliant
LOCAL OSCILLATOR REFERENCE FREQUENCY		10		MHz	
SSG STABILITY (24 HOURS)			0.25	dB-p-p	
IF INPUT IMPEDANCE		50		Ohm	N-Type
CONVERSION GAIN	5W/10W	68/71		dB	
(ATTENUATOR AT ODB)	20W/25W	74/74		dB	
RF OUTPUT SPURIOUS LEVEL		According to ETSI EN301 459/360 74 and FCC 47 CFR 15/25 AB			Mil-STD 188-164C Compliant
TX OUTPUT POWER $P_{lin}^*$	5W/10W	36/40		dBm	
MINIMUM	20W/25W	43/43.8		dBm	
GROUP DELAY VARIATION					
OVER 100MHz BW			1	ns	
OVER 250MHz BW			2.5	ns	

\*  $P_{lin}$  is defined as the power at which an ACPR of 25 dBc is achieved with a 1Msym/s QPSK modulated carrier with  $\alpha = 0.2$

### RX SUBSYSTEM (BUC)

PARAMETER	MIN	TYPICAL	MAX	UNIT	NOTE
RF INPUT FREQUENCY	19.2		21.4	GHz	1, 2 or 4 sub-bands
IF OUTPUT FREQUENCY RANGE	950		2150	MHz	
LOCAL OSCILLATOR FREQUENCY	18.25		19.25	GHz	Tone and voltage or via M&C interface
LOCAL OSCILLATOR FREQUENCY TOLERANCE			± 4	ppm	internal reference
LOCAL OSCILLATOR INTEGRATED PHASE NOISE			2	deg	Mil-STD 188-164C, IESS 308/309 Compliant
TOTAL TRANSCEIVER NOISE FIGURE @ 25°C		1.5	1.7	dB	at the Feed Port (including TRF/OMT)
CONVERSION GAIN	50	56	60	dB	
IMAGE BAND REJECTION	40			dB	
GAIN STABILITY			5	dB	Over full temp range
IF OUTPUT IMPEDANCE		50		Ohm	N-Type

### GENERAL

PARAMETER	MIN	TYPICAL	MAX	UNIT	NOTE
OPERATING TEMPERATURE	-40		+60	°C	
MOISTURE/ HUMIDITY PROTECTION					IP67
WEIGHT		3		kg	XCVR + Feed
SUPPLY VOLTAGE	15		48	V	Positive polarity only
DC POWER CONSUMPTION	10W Total Rx & Tx		120	W	At $P_{lin}$
	20W Total Rx & Tx		230	W	At $P_{lin}$
M&C					OpenBMIP, SNMPv3

Compliance with RED, MIL-STD 810H, 1674C, 461G