

4W KA/K XCVR RX QUAD BAND

Fully Integrated with Gilat VSATs
and Ka Antenna Series

4W PN: AN8053

MODULE SPECIFICATION SHEET





The model presented hereunder is approved for operation with Gilat SE-IIc VSATs and Antennas.

This XCVR is of high quality & performance, offering the optimal cost-effective solution for the VSAT industry market.

The 4W outdoor Transceiver include feed, polarizer and up/down Tx and Rx converters

The Tx path receives S Band signals (1.4- 2.4GHz) from modem's Tx port and converts them into Ka band (29-30GHz).

The Rx path receives K band signals (17.7-20.2GHz), converts into L Band frequencies (950- 2150MHz) and passes to Rx modem port.

The Transmit and Receive Ka/K are in circular polarization.

The Transceiver utilizes an internal PLL local Oscillators for both receive and transmit channels.

The Tx LO is synchronized using an external 10MHz reference (Provided by the modem)

(In the absence of 10MHz, Tx chain will be muted)

The Rx LO is synchronized using an internal reference.

The Transceiver requires:

At Tx coax port - 10MHz, DC power and S Band signals

At Rx coax port – 13V/18V DC power, 22KHz tone and L Band signals.

To operate Rx chain, DC injection to Tx port must be applied

The Transceiver is installed on the boom arm of a dish antenna.

Rx Sub Band Selection Table:

Rx RF Band In[GHz]	L.O[GHz]	DC	22KHz Tone
17.7-18.9	16.75	13V	Muted
18.3-19.5	17.35	13V	Applied
18.6-19.8	17.65	18V	Applied
19-20.2	18.05	18V	Muted





PHYSICAL/ELECTRICAL INTERFACES

Tx Input Signals via 75-Ohm F-Type connector

- DC power
- IF S Band
- 10MHz (External reference)

Output Rx Signals via 75-Ohm F-Type connector:

- DC power
- IF L Band
- 22KHz tone

TX SPECIFICATION

IF Input Frequency Band1400-2400MHz

RF Output Frequency Band29-30GHz

Local Oscillator frequency 27.6GHz

Local Oscillator Phase Noise (RMS 100H to 1MHz) 2° max. Over all conditions

Local Oscillator Reference frequency 10MHz

Output Saturated power4W / 36dBm typical (at CW Mode)

Output Linear power 3.2W / 35dBm typical

Output Linear power 3W / 34.7dBm over temperature range

- Output Linear power is defined at modulated signal mode 1Msps, QPSK, 20% Roll Off
- ACPR at Output Linear power -21dBc typical

Linear Gain 56 ± 4dB versus all condition

Gain flatness full band 4dB typical

Gain flatness 36MHz1.2dB typical

Output spurious level According EN 301 459, EN 301 360 and FCC 47
CFR Part 15/25 Subpart B Class B
for antennas up to 50dBi 1.2m



RX SPECIFICATION

RF Input Frequency Range	17.7-20.2GHz (utilized by four bands)
IF Output Frequency Band	.950-2150MHz for all 4 sub bands
Local Oscillator frequency	16.75/17.35/17.65/18.05GHz
Local Oscillator Phase Noise (RMS 100H to 1MHz)	2.2° max. Over all conditions
Local Oscillator Reference.	Internal
LO uncertainty	±25ppm max
Output power P1dB	0dBm min
Linear Gain	.55±5dB versus all condition
Gain flatness full band	5dB typical
Gain flatness 36MHz	1dB typical
Noise Figure (25°C)	1.5dB typical
Image rejection	30dB typical

COMMON FEED PORT (K/K)

XPD Tx.	25dB typical
XPD Rx.	23dB typical
Feed F/D	0.8
Polarization	.Tx/Rx circular (Tx counter to Rx)

DC CHARACTERISTICS

Input Voltage Range at Tx IF connector.	13-48V
Input Voltage Range at Rx IF connector	.13/18V
Tx Power consumption.	.35W typical

ENVIRONMENTAL

Temperature operational range	-40 to 60°C
Moisture/humidity protection	.IP67



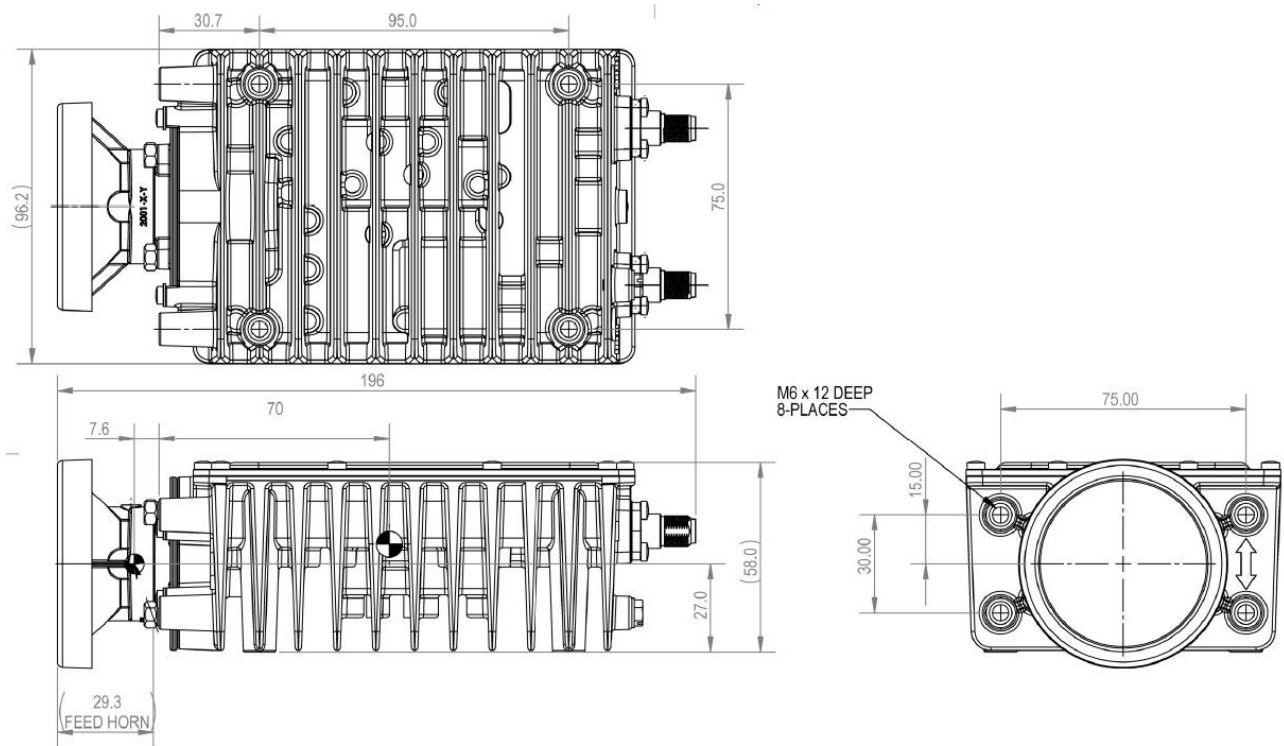
COAX INSTALLATION LENGTH

Max Installation length vary per VSAT type, Power Supply and Cable type

MECHANICAL CHARACTERISTICS

Max dimensions (including connectors and feed horn), 196 (L) x 96.2 (W) x 63 (H) mm

Weight, 1.4Kg



Specifications are subject to change without notice



MODULE SPECIFICATION SHEET

GILAT SATELLITE NETWORKS
www.gilat.com

