



JLINK

The JLink allows the GNSS rover capturing of RTK quality data points where cell phone cover is poor. It provides a robust solution linking the field GNSS equipment to VRS network, where no cell phone cover is available.

Jlink enables to surveyors to capture data points up to 13 km from where the nearest cell phone coverage is available. JLink contains 1 W UHF (VHF) Radio Transceiver with built-in quad band 2.5G GSM/GPRS/EDGE module. It access VRS network using TCP/IP protocols and high-speed EDGE interface. It takes incoming data from the network, modulates it with GMSK, FSK, PSK or most spectrum efficient QAM modulation and transmits it at RF power output levels from 10 dBm up to 30 dBm operating in UHF frequency band (406 to 470 MHz), or in VHF frequency band (138-174 MHz) optional. The JLink is also capable of receiving RF signal from remote UHF (VHF) transmitter, and the data could be send over the cellular network using built-in 2.5G GSM/ GPRS/ EDGE module if such operation mode is selected.

The unit's user settings can be changed through the GREIS interface or through ModemVU. The system built-in diagnostic features provide the information required to monitor and maintain user's communications link. The output transmit power, receive signal strength (RSSI), antenna/feed line condition, and data decode performance will be transmitted online without application interruption.

Embedded GPS L1 functionality allows using JLink as standalone wireless network RTK field access point.

The JLink includes TriPad (two LEDs, ON/OFF and function button), GSM/GPRS/EDGE module, UHF (VHF) modem, Ethernet capability, USB, Bluetooth, and rechargeable batteries.

Two external power inputs secure the power system redundancy and eliminate system failure. The on-board power supply on JLink receiver accepts any voltage from +10 to +30 volts and delivers clean filtered voltage where needed. This eliminates the risk of power contamination (ripples) that can be created when clean power is generated elsewhere and delivered to the board via cables.

Description

Total 216 channels: all-in-view (GPS L1, Galileo E1, GLONASS L1) integrated receiver, rugged aluminum housing complete with TriPad interface

Tracking Specification

Tracking Channels	GPS L1, Galileo E1, GLONASS L1
Signals Tracked	L1 C/A and P Code & Carrier
Cold Start	<35 seconds
Warm Start	<5 seconds
Reacquisition	<1 second

Radio Specifications

GSM/GPRS Module	Internal GSM/GPRS/EDGE quad-band module, GPRS Class 10
UHF Radio Modem	Internal 1 Watt 406-470 MHz radio transceiver, up to 38.4 kbps
VHF Radio Modem (optional)	Internal 1 Watt 138-174 MHz radio transceiver, up to 38.4 kbps

Power Specification

Battery	Two internal Li-Ion batteries (7.4 V, 4.4 Ah each) with internal charger
Operating Time	Up to 15 hours
External power input	2, 1 - primary, 1 - secondary port(s)
Input Voltage	+10 to +30 volts

Antennas Specifications

GNSS Antenna	External
UHF (VHF) Antenna	External
GSM Antenna	External
Bluetooth Antenna	External

I/O

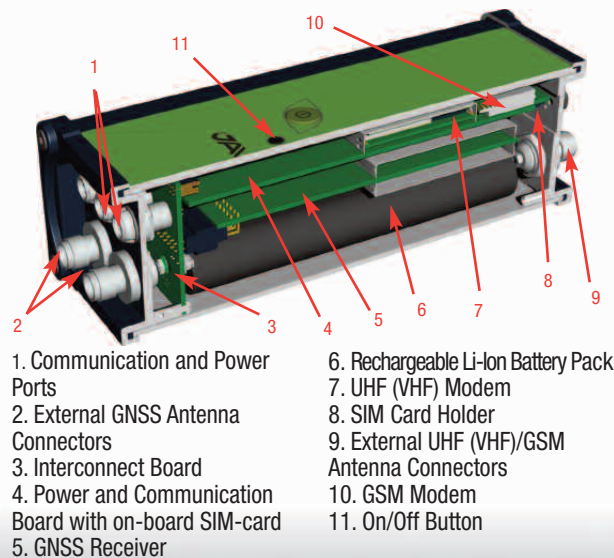
External Power port	2 ports
Communication Ports	2x serial (RS232) up to 460.8 kbps High speed RS422 serial port (up to 460.8 Kbps) High speed USB 2.0 device port (480 Mbps) Full-duplex 10BASE-T/100BASE-TX Ethernet port Bluetooth V2.0+EDR Class 2 supporting SPP Slave and Master Profiles

Environmental Specifications

Enclosure	Aluminum extrusion, waterproof IP 67
Operating Temperature	-30 ° C to +55° C (with batteries)/-40° C to +80° C (without batteries)
Storage Temperature	-20° C to +45° C (with batteries) /-45° C to +85° C (without batteries)
Humidity	95% non-condensing
Dimensions	W: 132 mm x H: 61 mm x D: 190 mm
Weight	1270 g

Compliance

Parameter	Specification
FCC	FCC Part 90
Industry Canada	RSS-210
ETSI	ETSI EN 300 113-2, ETSI EN 301 489-1, ETSI EN 301 489-5, ETSI EN 300 220-1



General Radio Specifications

Component	Details
Transmitter Output Power	+10... +30 dBm in 1 dB step / 50 Ω
Carrier Frequency Stability	+1 dB / -2 dB

Radio Transceiver Specifications

Component	Details
Frequency Range	406-470 (EU) 406.1 - 470 MHz (USA) 406-430;450-470 (Canada) 138-174 MHz
Channel Spacing	25/12.5/6.25 kHz (USA, Canada) 25/20/12.5 kHz (ETSI EN 300 113) 20/12.5 kHz (ETSI EN 300 220)
Carrier Frequency Stability	±1 ppm
Modulation	GMSK/DBPSK/DQPSK/D8PSK/D16QAM
Communication Mode	Half duplex, simplex

Radio Receiver Specifications

Component	Details
Receiver Sensitivity for DBPSK (BER 1x 10 ⁻⁴)	-113 dBm for 25 kHz Channel Spacing -113 dBm for 20 kHz Channel Spacing -114 dBm for 12.5 kHz Channel Spacing -114 dBm for 6.25 kHz Channel Spacing
Receiver Sensitivity for DQPSK (BER 1x 10 ⁻⁴)	-110 dBm for 25 kHz Channel Spacing -110 dBm for 20 kHz Channel Spacing -111 dBm for 12.5 kHz Channel Spacing -111 dBm for 6.25 kHz Channel Spacing
Receiver Dynamic Range	-119 to -10 dBm

Modem Specification

Component	Details
Data Speed of Serial Interface	9600 - 115200 bps
Data Rate of Radio Interface (25 kHz Channel Spacing)	9600 bps – DBPSK/GMSK 19200 bps – DQPSK 28800 bps – D8PSK 38400 bps – D16QAM
Data Rate Radio Interface (12.5 kHz Channel Spacing)	4800 bps – DBPSK/GMSK 9600 bps – DQPSK 14400 bps – D8PSK 19200 bps – D16QAM
Data Rate Radio Interface (6.25 kHz Channel Spacing)	2400 bps – DBPSK 4800 bps – DQPSK 7200 bps – D8PSK 9600 bps – D16QAM
Forward Error Correction (FEC)	Reed-Solomon Error Correction
Data scrambling	Yes

G24 GSM Module Specification

Component	Details
Operating Systems	Quad band: 850/900/1800/1900 MHz
Tx power	850/900 MHz – Class 4 (2 Watt) / 1800/1900 MHz – Class 1 (1 Watt)
Typical RX sensitivity	-106dBm (4dB margin on top of spec)
GPRS	Multi-slot class 10 (4 down; 2 up; 5 Total), Max BR 85.6 Kbps, Class B GSM 07.10 multiplexing protocol Coding scheme CS1-CS4, Embedded TCP/IP and UDP/IP protocol stack, Embedded FTP, Embedded SMTP/POP3 – e-mail, SSL – Secure Connection
EDGE	Multi-slot class 10 (4 Down; 2 Up; 5 Total), Max BR Downlink 236.8 Kbps (Over RS232), Coding Scheme MCS1-MCS9
CSD	Max BR 14.4 Kbps
SMS	MO/MT Text and PDU modes , Cell broadcast
One serial port	Data and Command port
Connectors	RF SMA
Regulatory and Approvals	FCC, IC, CCC, FTA, PTCRB, R&TTE, GCF, EMC, QS9000 manufacturing, RoHS/WEEE

Specifications are subject to change without notice.



JAVAD GNSS

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