

VALIANT 153M

GB-GRAM/-M Interface Card

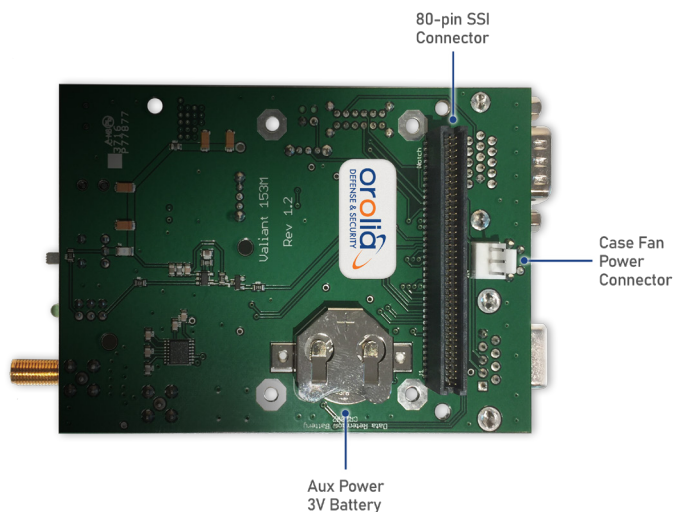
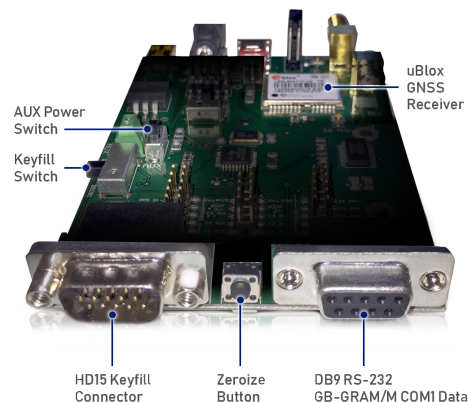
What is Valiant 153M?

Valiant 153M is a robust breakout and interface board specifically designed for easy integration, testing, and operation of GB-GRAM and GB-GRAM-M (GB-GRAM/M) receivers. These receivers, critical for secure and assured military navigation, typically have their communication ports consolidated onto a single connector, which complicates direct access.

Valiant 153M solves this challenge by providing convenient and direct breakout access to all receiver functions through onboard connectors and headers. Users can easily interface with GB-GRAM/M receivers via standard DB9 connectors for RS-232 serial communication or through a USB mini connection, enabling straightforward integration into test setups, lab environments, or operational platforms without the complexity or cost of custom board designs.

Additionally, Safran Federal Systems' RxStudio software seamlessly interfaces with the Valiant 153M, enabling users to quickly evaluate receiver performance parameters such as C/No, satellites tracked, position (LLA), time, signal assurance, and operational frequency. This simplifies the verification and diagnostic processes, accelerating deployment and reducing engineering efforts

Safran Federal Systems is the trusted Resilient PNT mission partner to U.S. government and defense organizations, from the lab to the field.



Specifications

Compatibility

- Valiant 153M

RF In

- Valiant 153M

Three High LEDs

- Valiant 153M

Barrel Power

- Valiant 153M

Size, Weight, Power, and Temp

- Valiant 153M

USB Communication

- Valiant 153M

Keyfill Connector

- DS101 Keyfill Protocol
- DS102 Keyfill Protocol

GB-GRAM/M RF

- Connects to Input of GB-GRAM/M

GB-GRAM/M Data with Logic Level (Interface)

- COM1: RS-232 (DB9)
- COM1: CMOS (10-pin Header)
- COM2: USB (USB Mini)
- COM2: CMOS (10-pin Header)
- COM3: CMOS (10-pin Header)
- BDDP: CMOS (10-pin Header)

GB-GRAM/M Pulse Per Second Outputs

- COM1, COM2, COM3, and BDDP

GB-GRAM/M Auxiliary Power with Switch

- On-board 3V CR2032 Backup Battery
- Auxiliary Power Connector for Higher Power

GB-GRAM/M Power Switch (POF)

- On/Off Switch for the GB-GRAM/M

Auxiliary GB-GRAM/M Interfaces

- Keying Pins
- PPS Input
- TOD Output
- Successful Keyfill

The screenshot shows the RxStudio software interface. The top section displays 'Controller Status' with various parameters including Position LLA, Position ECEF, Position Accuracy, Velocity Accuracy, Clock, and Pulse. Below this is a table with columns: SV, Code, Hbh, Track State, Chn, Used, Az, Elv, Freq, Assurance, PR Reads, PR Range, Doppler, Phase, and Trk Time. The table lists 18 SVs with their respective parameters.

SV	Code	Hbh	Track State	Chn	Used	Az	Elv	Freq	Assurance	PR Reads	PR Range	Doppler	Phase	Trk Time
01	CA	0	CodeAndCarrie	42	True	148	74	L1	NA	32.38	NaN	NaN	NaN	NaN
15	CA	0	CodeAndCarrie	47	True	190	48	L1	NA	0.37	NaN	NaN	NaN	NaN
31	CA	0	CodeAndCarrie	46	True	51	50	L1	NA	0.58	NaN	NaN	NaN	NaN
29	CA	0	CodeAndCarrie	46	True	63	16	L1	NA	0.29	NaN	NaN	NaN	NaN
22	CA	0	CodeAndCarrie	46	True	242	46	L1	NA	0.64	NaN	NaN	NaN	NaN
13	CA	0	CodeAndCarrie	45	True	273	46	L1	NA	0.81	NaN	NaN	NaN	NaN
78	CA	0	CodeAndCarrie	45	True	217	48	L1	NA	3.21	NaN	NaN	NaN	NaN
79	CA	0	CodeAndCarrie	44	True	26	48	L1	NA	-4.92	NaN	NaN	NaN	NaN
14	CA	0	CodeAndCarrie	43	True	114	43	L1	NA	0.61	NaN	NaN	NaN	NaN
80	CA	0	CodeAndCarrie	42	True	268	55	L1	NA	-2.55	NaN	NaN	NaN	NaN
23	CA	0	CodeAndCarrie	42	True	308	29	L1	NA	0.01	NaN	NaN	NaN	NaN
88	CA	0	CodeAndCarrie	42	True	186	63	L1	NA	0.33	NaN	NaN	NaN	NaN
12	CA	0	CodeAndCarrie	40	True	123	19	L1	NA	0.01	NaN	NaN	NaN	NaN
70	CA	0	CodeAndCarrie	39	False	241	12	L1	NA	-12.17	NaN	NaN	NaN	NaN
88	CA	0	CodeAndCarrie	37	True	47	9	L1	NA	-16.30	NaN	NaN	NaN	NaN
81	CA	0	CodeAndCarrie	36	False	54	4	L1	NA	-8.67	NaN	NaN	NaN	NaN
169	CA	0	CodeAndCarrie	34	True	161	14	L1	NA	3.03	NaN	NaN	NaN	NaN

Optional RxStudio software suite

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