

# Duo-G2

For operation manuals and other technical documents please see links below.

To update your receiver now (and frequently later) please visit our website and download the latest firmware.

Here are links to the Duo-G2 firmware, documentation, and utilities:

- Duo-G2 OEM Board Newest Firmware Version

<http://www.javad.com/jgnss/support/update.html>

- Firmware Loader (Firmware Loading Software) free

<http://www.javad.com/jgnss/products/software/firmwareloader.html>

- Duo-G2 OEM Board Datasheet

[http://www.javad.com/downloads/javadgnss/sheets/Duo-G2\\_Data\\_Sheet.pdf](http://www.javad.com/downloads/javadgnss/sheets/Duo-G2_Data_Sheet.pdf)

- Duo-G2 OEM Board Physical Specifications

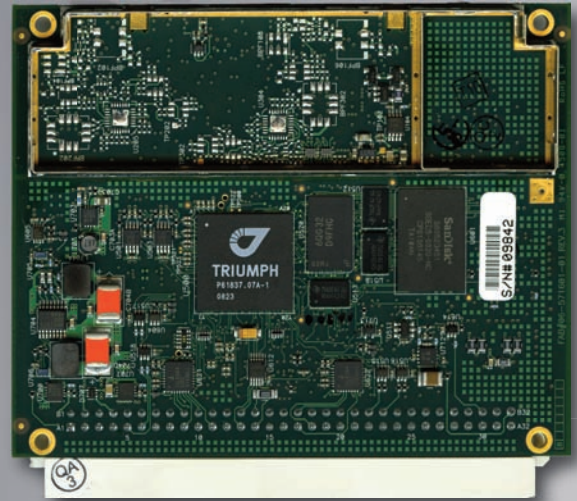
[http://www.javad.com/downloads/javadgnss/sheets/Duo-G2D\\_DRW.pdf](http://www.javad.com/downloads/javadgnss/sheets/Duo-G2D_DRW.pdf)

- TriVU (Windows GUI Configuration Utility) free

<http://www.javad.com/jgnss/products/software/trivu.html>

- GREIS (GNSS Receiver External Interface Specification)

[http://www.javad.com/downloads/javadgnss/manuals/GREIS/GREIS\\_Reference\\_Guide.pdf](http://www.javad.com/downloads/javadgnss/manuals/GREIS/GREIS_Reference_Guide.pdf)



## Option Authorization File

JAVAD GNSS issues an Option Authorization File (OAF) to enable the specific options that customer's purchase.

An OAF allows customers to customize and configure the Duo-G2 OEM Board according to particular needs, thus only purchasing those options needed.

Typically, all Duo-G2 OEM Board receivers ship with a temporary OAF that allows the receiver to be used for a predetermined period of time (typically 60 days). When the receiver is purchased, a new OAF activates purchased options permanently. Receiver options remain intact when clearing the NVRAM or resetting the receiver.

For a complete list of available options and details, consult your dealer, or visit the JAVAD GNSS website

<http://www.javad.com/jgnss/products/options/index.html>

To load new OAF to receiver use the TriVU software (see link above).



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[www.javad.com](http://www.javad.com)

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# Duo-G2

## Support Inquiries

Ask us questions and view our answers from over 20 highly qualified specialists (including Javad himself). It is much better than e-mails, or phone calls.

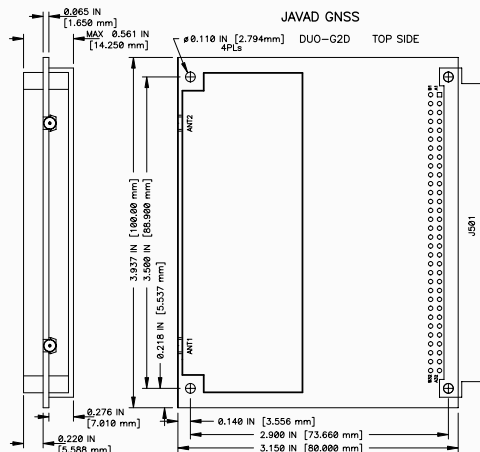
In order to address customer support inquiries in a timely and effective manner; JAVAD GNSS has created a powerful online question utility. To take advantage of this utility, please log into your JAVAD GNSS account and select **QUESTIONS** from the drop down menu.

The questions utility may also be reached by following this link,

<http://www.javad.com/cgi-bin/jgnss/cgi?Action=DrawQuestionManager&initFormCurrentSavez=on>

When the JAVAD GNSS support team posts a response to your inquiry, an email containing this response is sent to the email address you have registered in your profile.

Description	I/O	Signal Name	Pin #	Pin #	Signal Name	I/O	Description
Power Ground		PGND	A1	B1	PGND		Power Ground
+4.5 to +40 VDC Power Input	I	PWR_IN	A2	B2	PWR_IN	I	+4.5 to +40 VDC Power Input
Factory use only, must be left open		FUO	A3	B3	COMMSW#	I	Active Low Command Input (FN Button) *1
Reserved		-	A4	B4	KA_PWR	I	Keep-Alive Power input for Real-Time Clock (+4.5 to +40 VDC, 10µA typ)
External LED Control *2	O	LED2_RED	A5	B5	LED1_RED	O	External LED Control *2
External LED Control *2	O	LED2_GRN	A6	B6	LED1_GRN	O	External LED Control *2
Signal Ground		GND	A7	B7	USB_PWR	I	USB port Power Input line
USB port D- line	I/O	USB_D-	A8	B8	USB_D+	I/O	USB port D+ line
Serial port A TXD line	O	TXDA	A9	B9	CTSA	I	Serial port A CTS line
Serial port A RXD line	I	RXDA	A10	B10	RTSA	O	Serial port A RTS line
Serial port C TXD line	O	TXDC	A11	B11	CTSC	I	Serial port C CTS line
Serial port C RXD line	I	RXDC	A12	B12	RTSC	O	Serial port C RTS line
RS-422 port TXD+ line	O	TXDD+	A13	B13	TXDD-	O	RS-422 port TXD- line
RS-422 port RXD+ line	I	RXDD+	A14	B14	RXDD-	I	RS-422 port RXD- line
Signal Ground		GND	A15	B15	-		Reserved
Reserved		-	A16	B16	-		Reserved
Serial port B TXD line	O	TXDB	A17	B17	CTSB	I	Serial port B CTS line
Serial port B RXD line	I	RXDB	A18	B18	RTSB	O	Serial port B RTS line
CAN1 port CAN-H line	I/O	CAN1H	A19	B19	CAN1L	I/O	CAN1 port CAN-L line
CAN2 port CAN-H line	I/O	CAN2H	A20	B20	CAN2L	I/O	CAN2 port CAN-L line
Factory use only, must be left open		FUO	A21	B21	-		Reserved
Signal Ground		GND	A22	B22	1PPSA	O	1 Pulse Per Second output A *3
Signal Ground		GND	A23	B23	1PPSB	O	1 Pulse Per Second output B *3
Signal Ground		GND	A24	B24	EVENTA	I	Event input A *4
Signal Ground		GND	A25	B25	EVENTB	I	Event input B *4
Configurable Logic-Level I/O 1 line	I/O	GPIO0	A26	B26	GPIO1	I/O	Configurable Logic-Level I/O 1 line
Configurable Logic-Level I/O 2 line	I/O	GPIO2	A27	B27	GPIO3	I/O	Configurable Logic-Level I/O 3 line
Signal Ground		GND	A28	B28	RESET_IN#	I	Active Low Reset input *5
Ethernet port TX+ line	O	LAN_TX+	A29	B29	LAN_TX-	O	Ethernet port TX- line
Signal Ground		GND	A30	B30	LAN_LED	O	Ethernet port control for external LED
Ethernet port RX+ line	I	LAN_RX+	A31	B31	LAN_RX-	I	Ethernet port RX- line
Active Low input for ON/OFF switch *7	I	ONOFFSW#	A32	B32	IRIG_OUT	O	IRIG port output line *6



\*1. Active Low input from the FN button of the MinPad. Must be left open if not used.  
 \*2. LED1\_GRN and LED1\_RED are used to control the STAT LED of the MinPad. LED2\_GRN and LED2\_RED are equivalent to the REC LED of the MinPad. The output is a +3.3V driver in series with 100 Ohm resistor for each LED. LEDs should be used with common cathode.  
 \*3. Voh>1.8V at 50 Ohm load.  
 \*4. Internal pull-up 5 kOhm to +3.3V  
 \*5. Connect to ground to activate. Internal pull-up

2 kOhm to +3.3V.  
 \*6. AM sine-wave signal; 2.1Vp-p (Mark), 0.7Vp-p (Space).  
 \*7. Active Low input which is equivalent to ON/OFF button of the MinPad. The pin must be connected to GND permanently if the board is required to turn on automatically any time external power is applied to pins A2 and B2.

## Read this First