

Gen II Fiber Optic CAN Bridge



DG TECHNOLOGIES
Vehicle Network Solutions

Fiber optic converters that electrically isolate signals from the vehicle bus using common bridge and satellite modules interconnected with fiber optic cable for EMI and EMC testing.

Differentiation

Interchangeable bridge and satellite modules with built-in functionality for:

- High and Low Speed CAN
- Single Wire CAN
- CAN FD

Benefits

- Transmits signals between a Device Under Test (DUT) and monitoring equipment
- Provides optical isolation of vehicle networks during EMI/EMC testing
- Compatible with all CAN protocols
- Quick and easy set up with user friendly controls
- Only requires two fibers between bridge and satellite module
- Exceeds or meets automotive EMC testing specifications (see back side)
 - Radiated emissions • Bulk current Injection • Radiated susceptibility
- Rechargeable batteries provide 12 hours of operating time before requiring recharge

Key Features/Protocols Supported

High Speed CAN with CAN FD Support

- High speed CAN to 1 M bps
- ISO 11898 physical layer
- Terminating resistor options via rotary switch
 - None
 - 120 Ohm
 - Split 120 ohm
 - ISO15765 AC termination

CAN FD Support

- Supports the new high speed CAN standard from Bosch
- High speed CAN arbitration phase to 1 M bps



Kit Components:

- (2) Fiber Optic CAN modules
- (2) 10 meter Fiber Optic Cables (optional 20 meter cables available)
- 12 volt Power Supply
- Durable Carry Case
- Quick Start Guide & User Manual CD

Single Wire CAN Support

- Normal and High speed modes
- With or without tool termination resistor
- Fully compliant to GMW3089 V2.4 and J2411 Single Wire CAN specification for Class B in-vehicle communications
- Accurate pass-thru of High Voltage Wakeup signals at Normal bus speeds



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The radiated susceptibility of our hardware is to 600 V/meter, reverb and 100 dB (uA), B.C.I.

Meets Bulk Current Injection Specifications:

Requirement levels for the Immunity to electromagnetic fields for components and subsystems measured using the CBCI and DBCI method

Frequency Range (MHz)	Level 1 (dBμA)	Level 2 (dBμA)	Method	Modulation
1...15	64...100	70...106	DBCI	CW, AM 80%
15...30	100	106	DBCI	CW, AM 80%
30...400	100...89	106...95	CBCI	CW, AM 80%

Note: For intentional AM receivers, audio deviations due to AM 80% modulation may be disregarded.

Meets Radiated Susceptibility Specifications:

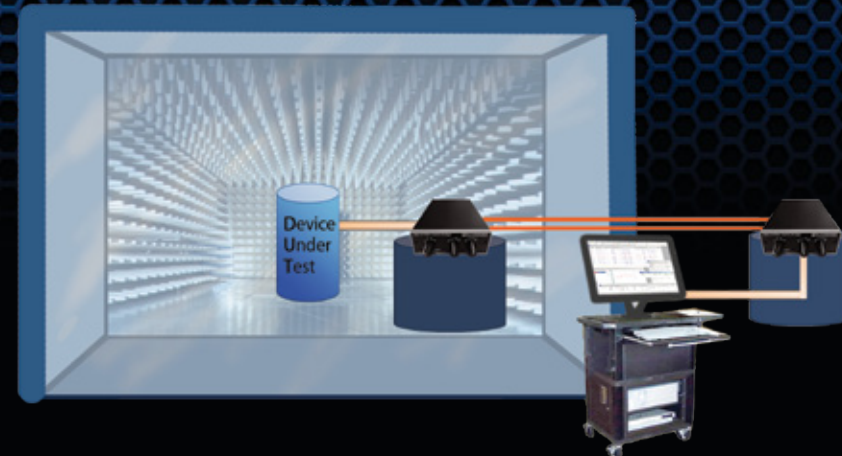
DUT functions may only deviate above the levels according to the table below

Requirement levels for the Immunity to electromagnetic fields for component and subsystems measured in the anechoic chamber

Frequency (MHz)	Level 1 (V/m)	Level 2 (V/m)	Modulation
400...1000	50	100	CW, AM 80%
800...2000	50	70	CW, PM PRR=217 Hz, PD=0.57 ms (Note 2)
1200...1400	(Note 1)	600	Radar pulse packets PRR=300 Hz, PD=3 μs, with only 50 pulses output every 1 s (Note 2)

Note 1: Only Momentary, resettable deviations are allowed up to and including Level 2

Note 2: Pulsed field strength requirements are peak V/m (maximum RMS) levels



Hardware Specifications:

Physical: 6.5" x 4.125" x 1.5"

Weight: 12.6 oz

Operating Range: -10 to 80°C

Electrical: 8-18 VDC, Nominal Currents

Meets Radiated Emission Specifications:

ID Number	Region	RF Service (User Band) (MHz)	Frequency Range (MHz)	Conditions	Non-Spark Limit (dBμ V/M)
G1	Global	Medium Wave /AM	0.53 to 1.71	RBW 9/10 kHz, Step Size ≤ 5 kHz, Time/Step ≥ 50 ms	30 PK (24 AV)
Na1	GMNA	TexDoT (46.68 to 47.34)	45.2 to 47.8		20 PK + 12 AV
EU1	GME, GMH	4 Meter (66 to 87.2)	65.2 to 88.1		20 PK + 12 AV
JA1	Japan	FM I (76-90)	75.2 to 90.9		20 PK + 12 AV
G2	Global	FM II (87.5 to 108)	86.6 to 109.1		20 PK + 12 AV
G3	Global	2 Meter (142-175)	140.6 to 176.3		20 PK + 12 AV
G4	GME, GMH	DAB (174.1 to 240)	172.4 to 242.4		20 PK + 12 AV
G5	Global	RFA/TPMS I	310 to 320		20 PK
G6	Global	RFA/TPMS II	429 to 439	25 PK	
G8	Global	GPS	1567 to 1574 and 1576 to 1583		50 to 10 and 10 to 50 AV

