



Physical characteristics

Dimensions	Length 100mm, Width 63 mm, Height 29 mm	
Weight	105 grams	
Material	Nylon black 6/6	
Environmental sealing	IP67	
Drop specification	1m to concrete floor	
Storage temperature	-40 to 90 °C	
Operating temperature	-40 to 85 °C	
Relative humidity	max 90% at 40 °C	
MTBF	26280 h	
Burn in cycle	60 °C/1h, -15 °C/1h	

Electrical characteristics

Supply power	10-30V	
Electrical isolated	No	
Power consumption	12V supply	24V Supply
Running, no external load	60 mA	30 mA
Running, 300 mA load on external 5V	220 mA CAN/RS232 drivers ON	110 mA CAN/RS232 drivers ON
Running, 300 mA load on external 3V3	180 mA	90 mA
Sleepmode, wake on CAN	24 mA	12 mA
Sleepmode, wake on timer	16 mA CAN/RS232 drivers OFF	8 mA CAN/RS232 drivers OFF
Deep Sleep Mode (wake on RTC)	0.35 mA	0.35 mA
Processor	MC912XE100	

CANbus characteristics

Baudrate	10 - 1000 kbps
Protocols	Layer 2 / J1939
Hardware protocol	CAN A/B
Default Device address	240
CANdiode listen only	Configurable

J1708 characteristics

Baud rate	9600 bps
Protocols	J1587 / J1922 / proprietary

K-line characteristics

Baud rate	1200 - 20000 bps
Protocols	DCF configurable ISO 9141 (Fakra) / ISO 9141-2 (OBDII / CARB) ISO 14230-2 (KWP 2000) ISO 142305 (Swedish)
Initialisation	Slow / fast
Message timing	Configurable, with extended response time

RS232 characteristics

Default baudrate	600 to 230400 bps, default 19200 bps
Protocols	Configurable: ASCII based protocols Vidiwave direct mode: Binary
Hardware control	NONE or CTS/DTR
RS232 format	Datalength 7/8, Stopbit: None/1/2, Parity None/Odd/Even
Checksum support	HDLC/PPP, CCIT

SFD port characteristics

SFD supply	4.75 - 5.25V
SFD load	100mA per SFD, 400 mA max all SFD's
Default baudrate	9600
Default communication	UART
Optional communication SFD port #1/#2	CAN (CMOS level)

Device connector types

Universal 12-pole connector	12-pole male
RS232 connector	D-sub 9-pin female
SFD connector	4-pole male



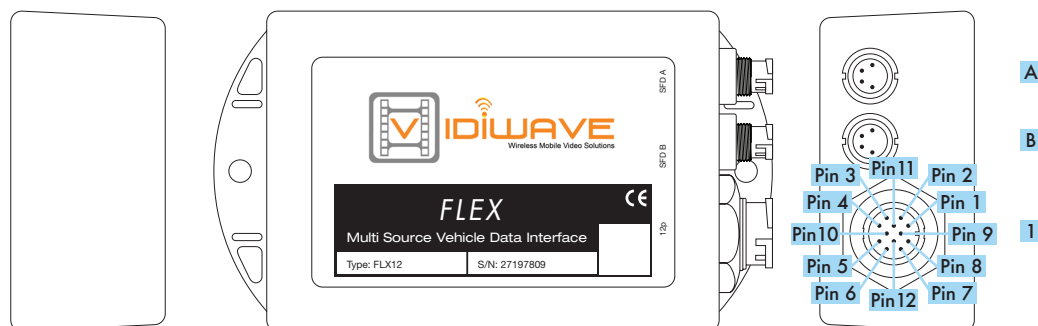
Configuration capacity

Message capacity	
CAN messages J1939 (PGN)	510
CAN messages Layer 2	510
CANbus Data Fields (SPN)	1024
Serial messages	1020
J1708 messages	510
K-Line messages	510
Memory capacity	
Device Configuration file size (DCF)	64 - 256K
Constants	255
Variants	1020 / 5120 bytes
Stored Variants	255 / 900 bytes
Function capacity	
Real Time Clock/TC	1
Conversion	32
Average MA	30
Average RC	24
Delta	200
Calculation	510
Compare	255
Crossing	200
Timers (ms)	32
Timers (s)/stored	4
Convert 123-ABC	255
Convert ABC-123	255
String process	255
String compare	255

Conformity

IEC 60721-3-5	Min	Typ	Max.
· Climatic conditions	5K1	5K2	5K3
· Biological conditions	5B1	5B1	5B1
· Chemically active substances	5C1	5C1	5C2
· Mechanically active substances	5S1	5S2	5S2
· Contaminating fluids	5F1	5F1	5F1
· Mechanical conditions	5M1	5M1	5M2
72/245/EEC	The automotive directive for electronic equipment which can be build in road vehicles		
ISO 11452-2 1995	Radiated immunity, 200Mhz ... 1000Mhz, 1kHz, 80% modulation, 30V/m		
ISO 11452-4 1995	Bulk current Injection, 20 ...200MHz, 1kHz, 80% modulation, 60mA, rms		
ISO 11898	CAN for high-speed communication		
SAE J1939	Recommended practice for a serial control and communications vehicle network		
ISO 7637	Electrical disturbance by conduction and coupling		
CISPR 25 chapter 13	Emission measurement, Horizontal & Vertical, 30MHz.. 1 GHz		

Usage of this device is permitted for industrial purposes only and can not be just in situations in which human lives depend upon the operation of the device.
~~This device is not restricted for export to any country of the world.~~



A 4-pole SFD connector

B 4-pole SFD connector

1 Universal 12-pole connector

Pin	Function	Color
Pin 1	V+	BN
Pin 2	Gnd	BK
Pin 3	CAN1-H	WH
Pin 4	CAN1-L	BU
Pin 5	K-line 1	OG
Pin 6	K-Line 2	YE
Pin 7	J1708-	GR
Pin 8	J1708+	RD
Pin 9	CAN2-H	YE
Pin 10	CAN2-L	GR
Pin 11	TXD (pin 2)	RS232
Pin 12	RXD (pin 3)	RS232

Colour code of electric cables

BK	Black	Zwart	Schwarz	Noir	Negro	Nero	Чернота
BN	Brown	Bruin	Braun	Brun	Marrón	Marrone	коричневый
BU	Blue	Blauw	Blau	Bleu	Azul	Blu	Голубо
GR	Green	Groen	Grün	Vert	Verde	Verde	зеленый цвет
GY	Grey	Grijs	Grau	Gris	Gris	Grigio	серо
RD	Red	Rood	Rot	Rouge	Rojo	Rosso	красно
WH	White	Wit	Weiss	Blanc	Blanco	Bianco	белый
YE	Yellow	Geel	Gelb	Jaune	Amarillo	Giallo	желтый цвет

LED status

 Device active. CANbus data is being acknowledged.

 Device active. But no acknowledgement of CANdata (check CANbus, Check CANbus termination).

 Device is in interface mode:
• The device is uploading a DCF to itself or to another device
• The device is downloading a DCF to itself or to another device
• The device is monitoring the CANbus

 Booter mode: (Perform firmware upload with the "Uploader").

 Device is not active or operational conflict:
• In correct CANbus speed (check speed with iConfigure program)
• No DCF loaded or DCF corrupt (reload DCF with iConfigure)



IDIWAVE
Wireless Mobile Video Solutions

Ordercode: FLX12

Device: **FLEX**

Universal 12-Pole connector
Pin Function

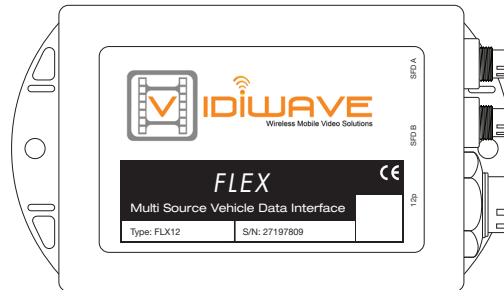
1	V+
2	Gnd
3	CAN1-H
4	CAN1-L
5	K-line 1
6	K-line 2
7	J1708-
8	J1708+
9	CAN2-H
10	CAN2-L
11	RS232 TXD (pin 2)
12	RS232 RXD (pin 3)

BK Black	BN Brown
Zwart	Bruin
Schwarz	Braun
Noir	Brun
Negro	Marrón
Nero	Marrone
Чернота	коричневый

BU Blue	GR Green
Blauw	Groen
Blau	Grün
Bleu	Vert
Azul	Verde
Blu	Verde
Голубо	зеленый цвет

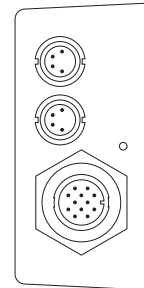
OG Orange	RD Red
Oranje	Rood
Orange	Rot
Orange	Rouge
Anaranjado	Rojo
Alaranjado	Rosso
померанцово	красно

WH White	YE Yellow
Wit	Geel
Weiss	Gelb
Blanc	Jaune
Blanco	Amarillo
Bianco	Giallo
белый	желтый цвет

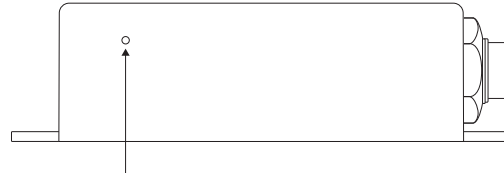


2 x SFD port

For DatacliQ cables
or special function
devices



12-Pole connector



Waterproof pressure compensation membrane

Usage of this equipment is permitted for industrial purposes only. It must not be used in situations in which human lives depend upon the operation of this equipment.

FLX12P001

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