CANgine

BT No.1

Product Brief

CANgineBT No.1 is a smart Bluetooth to CAN converter for use with any Bluetooth equipped device. CANgineBT No.1 speaks ASCII code, so controlling the device is easy. No special drivers are needed and with a few commands the CAN controller can be initialised (baud rate and filter mask) and CAN frames can be sent to the bus or received from the bus. Every incoming CAN frame can immediately be passed to the serial link, so no status polling is required if not needed.

CANgineBT No.1 can simultaneously process (receive and transmit) CAN 2.0A frames (with 11 bit identifiers) and CAN 2.0B frames (with 29 bit identifiers). Message filters can be set in a way that only 2.0A or only 2.0B frames are received.

CANgineBT No.1 is a small device (only 84 x 36 x 20 mm^3) which is powered via two pins of the 9 pin D-Sub CAN connector. These pins are recommended by CiA (CAN in Automation) as optional power supply lines. The Bluetooth antenna is integrated in the case.

The wireless Bluetooth connection uses the serial port profile (SPP) to build a transparent communication link between CANgineBT No.1 and the host device. After powering CANgineBT No.1 the device appears in the Bluetooth neighbourhood and accepts incoming calls. Any Bluetooth equipped device can establish a link and to communicate via SPP with CANgineBT No.1.

Technical Data	
Internal Microcontroller	40 MHz internal clock Full CAN 2.0B interface
Bluetooth Class 1	~100m range in open air
Bluetooth antenna	internal
Bluetooth Profile	SPP (serial port protocol)
CAN	V2.0A and/or V2.0B 9 pin male D-Sub connector
CAN Baudrates	10 kBit/s to 1 MBit/s according to CiA recommendations
Power supply	7 to 30 VDC / 50 mA (typ.) via CAN connector
Operating temperature	-20 .. +70 °C
Size	84,4 x 35,6 x 20,2 mm^3 3.321 x 1.4 x 0.794$inch^3$
Weight	46 g

ESS Embedded Systems Solutions GmbH ■ Industriestrasse 15 ■ D-76829 Landau ■ Germany

Phone: (49) 6341 3487-0 ■ Fax: (49) 6341 3487-29 ■ info@essolutions.de ■ www.essolutions.de
www.CANgine.com

CANgine BT No.1

Command Overview

A[CR]	Poll receive buffer for all received CAN frames
C[CR]	Close CAN channel
F[CR]	Send error information
mxxxxxxxx[CR]	Set acceptance mask register
Mxxxxxxxx[CR]	Set acceptance register
O[CR]	Open CAN channel
P[CR]	Poll one received CAN frame
Sn[CR]	Set CAN baudrate
saabcde[CR]	Set CAN baudrate via controller register
tiiildd..[CR]	Send a standard CAN frame
Tiiiiiiiildd..[CR]	Send an extended CAN frame
V[CR]	Send version information
X[CR]	Send CAN frame counter
Zn[CR]	Set or reset continuous CAN frame polling

Customized Solutions

ESS developed the hardware and firmware of the CANgine family products on a modular base and new developments are added continuously. Customer specific versions can thus be made at reasonable costs. Due to the performance resources left in the microcontroller core there is enough power to add additional custom specific firmware tasks.

ESS Embedded Systems Solutions
Industriestr. 15
D-76829 Landau
Phone: (49) 6341/3487-0
Fax : (49) 6341/3487-29
www.ESSolutions.de

For more information about the whole CANgine product family or downloading the manual of CANgineBT No.1 see

www.CANgine.com