CANgine Light

GEN

Product description

CANgineLight is the recent advancement of the highly popular CANgine 1, whose 8-bit controller is slightly outdated by now. Equipped with a modern 32-bit cortex-M0 microcontroller, the performance of CANgineLight takes another order of magnitude than its precursor. As it is clocked internally with 48 MHz, plenty of power reserves for further firmware extensions are readily available.
The variation presented in this datasheet is called CANgineLight-Generic. As the successor of CANgine No. 1, CANgineLight-Generic is completely compatible and can be used as a direct replacement for CANgine No. 1. Needless to say, the new generation has some significant firmware improvements like support for a bitrate of 230,4 kbit/s. Due to this increase and the much higher performance CANgineLight-Generic provides the triple data throughput than CANgine No. 1.

Technical specifications	
Microcontroller	ARM Cortex-M0 48 MHz internal Clock Full CAN 2.0B interface
CAN transceiver	ISO 11898-2 (high speed) compliant
CAN bitrate	10k, 20k, 50k, 100k, 125k, 250k, 500k, 800k, 1M
RS232 baudrates	2.400 to 230.400 bit/s
CAN connector	D-Sub 9 male
RS232 connector	D-Sub 9 female
Display	LED RUN (green) and LED ERR (red)
Power supply	7 - 30 VDC
Supply current	~ 20 mA / 12 V
Operating temperature	-40 bis 85 °C
Size	70 x 42 x 21 mm³
Weight	34 g

CANgineLight-Generic is a small CAN-RS232 converter. It offers the possibility to connect every device with a serial interface to the CAN-bus. By using ASCII strings as in- and output format, CANgineLight is completely platform-independent, eliminating the necessity for specific software or drivers.

CANgineLight is the newest addition to the CANgine family. You benefit from modern hardware combined with high-tech expertise from more than 10 years experience in CAN-RS232 converter-development.
With a few commands the CAN controller can be initialized and CAN frames can be sent to and received from the bus. Every incoming CAN frame can immediately be passed to serial link or entered in a receive buffer with 63 entrys according to the user selected operation mode. CANgine-Generic CAN message filters can be set to process simultaneously CAN 2.0A messages (with 11 bit identifiers) and CAN 2.0B messages (with 29 bit identifiers) or to only process CAN 2.0A or 2.0B messages.
Power supply is provided via CAN connector. Status LEDs show state of CAN controller and internal errors like buffer overflows.

Sophisticated CAN message filtering allows to adapt the throughput to the baud rate of the serial link. Running the serial link with 230,4 kbit/s CANgine-generic can process up to 800 CAN frames per second (extended frame with 8 data byte) or 950 CAN frames per second (standard frame with 8 data byte).

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Command Overview

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

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For further information about the whole CANgine product family or downloading the manual of CANgine Generic see

www.CANgine.com