Ethernet/CAN-Gateway for Mobile Applications

Special Features

- Based on 32 bit microcontroller Samsung S3C4530A
- Integrated power management (power off for all peripherals possible)
- Switchable TCP/IP interface (i.e. wake up for WLAN)
- 6 CAN channels with SJA1000
- Available with 4 high speed (82C251) and 2 low speed transceivers TJA1054
- Available with 6 high speed (TJA1041) transceivers
- Support of CAN protocol 2.0A and 2.0B
- Serial interfaces (i.e. connection of GSM modem)
- Custom applications possible

Description

EtherCAN MC is designed for mobile analysis of CAN systems. It is suited for use in systems where more than one CAN has to be tracked (i.e. automotive applications).

Further features of EtherCAN MC are the integrated power management, an ethernet and a serial interface.

The power management allows low power consumption, when all peripherals of the CPU are in sleep mode or are powered down. Nevertheless a wake up CAN message will not be lost.

A WLAN adapter may be connected to the ethernet interface and a GSM modem to the serial interface (RS232). The device has a 32bit microcontroller (ARM7 core), embedded Linux operating system and 6 CAN channels equipped with NXP SJA1000 CAN controller. Two versions are available. One is equipped with 4 high speed transceivers (82C251) and 2 low speed transceivers (TJA1054) and the other is equipped with 6 high speed transceivers TJA1041.

An application development kit for creation of custom applications is included.

Technical Data

Layout and Connection

The 6 CAN channels, as well as other I/O signals and the power supply are connected via a D-Sub 25. The following table shows the connection scheme:

Pin	Name	Function
1, 13, 22	GND	Ground
2, 14	CAN_L 0, CAN_H 0	CAN channel 0
3, 15	CAN_L 1, CAN_H 1	CAN channel 1
4, 16	CAN_L 2, CAN_H 2	CAN channel 2
5, 17	CAN_L 3, CAN_H 3	CAN channel 3
18, 19	CAN_L 4, CAN_H 4	CAN channel 4
20, 21	CAN_L 5, CAN_H 5	CAN channel 5
6, 7	RTL 4, RTH 4	Termination resistor terminal CAN channel 4 (nur H4/L2)
8, 9	RTL 5, RTH 5	Termination resistor terminal CAN channel 5 (nur H4/L2)
10	+5V_EXTERN	Output +5V/600mA (switchable)
12	WAKE_EXTERN	Input (+12V DC) for external wake up signal
24	DO_HS	Digital output, „high side" switch
25	Vcc	Power supply

The RS232 connector scheme is shown in the following table

Pin	Name	Function
2	RxD	Receive data line
3	TxD	Transmit data line
5	GND	Ground

Nominal Values

Parameter	Minimal	Typical	Maximal	Unit
Supply voltage	8	12	30	V
Current consumption operating (at 12V)	-	170	-	mA
Current consumption sleep (at 12V)	-	15	-	mA

All values, unless otherwise specified, refer to an environmental temperature of 20°C.

Scope of Delivery

• EtherCAN MC/H4L2 or EtherCAN MC/H6
• Application Development Kit