

# ISO 11898-4:2004-08 (E)

## Road vehicles - Controller area network (CAN) - Part 4: Time-triggered communication

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
1	Scope .....	1
2	Normative references .....	1
3	Terms and definitions .....	1
4	Abbreviated terms .....	6
5	Basic concepts of time-triggered CAN .....	6
5.1	General conventions .....	6
5.2	General principle of protocol .....	8
5.3	Reference message .....	10
6	Timing and synchronisation features .....	12
6.1	Levels 1 and 2 .....	12
6.2	Generation of local time .....	12
6.3	Cycle_Time parameter .....	14
6.4	Synchronisation in Level 2 .....	14
6.5	Global time in Level 2 (local time + local offset) .....	14
6.6	External clock synchronisation .....	15
7	Sending and receiving .....	15
7.1	General .....	15
7.2	Transmission of messages .....	15
7.3	Reception of messages .....	17
7.4	Transmission of reference messages .....	17
8	Initialisation and fault tolerance of time masters .....	18
8.1	General .....	18
8.2	Initialisation procedure .....	19
8.3	Failure of current time master .....	20
8.4	Shutdown .....	20
9	Failure handling .....	21
9.1	General .....	21
9.2	Message status count .....	22
9.3	Interrupt_Status_Vector .....	22
9.4	Master state .....	23
10	Visible interfaces .....	25
10.1	Configuration interfaces .....	25
10.2	Application interfaces .....	28
10.3	Optional interfaces .....	30
Bibliography .....		32