Serial J1708/J1939 interface (FTI06003)

Hardware Installation Manual

Publication type:	Hardware Installation Manual
Publication number:	FTI06003
Title:	Serial J1708/J1939 interface
Subject:	
Issue:	1.0
Publication date:	29/04/2010
Total number of pages:	11

Author: E.J. Varkevisser

Table of contents

Figures

NOTICE

This document contains proprietary information.
No part of this document may be photocopied, reproduced or translated into another language without the prior written consent of Free Technics B.V.

References

B&B Electronics website:
http://www.bb-europe.com/?gclid=CMf6kv-ugaECFVKX2AodDVPpDw

B&B Electronics tech support:
http://www.bb-elec.com/technical_library.asp

Introduction

The Installation manual provides instructions for installing and monitoring the J1708/J1939 interface used within FT NavVision®. The chapters and sections are organized in chronological order in which the specific components must be installed and monitored (where applicable).

NOTE

This section provides only a summary of the most important safety requirements and notes, which will be mentioned in the individual sections. To protect your health and prevent damage to the devices, it is essential to read and carefully follow the safety instructions.

About the installation manual

The installation manual contains the following chapters:

- Chapter “Safety instructions” presents warning, caution and note information, which the user should pay attention to.
- Chapter “System configuration” gives an overview of the interface.
- Chapter “Receiving, unpacking and checking” contains instructions on how to receive, unpack or check the interface.
- Chapter “Installation and mounting” contains instructions on how to install and/or mount the interface.
- Chapter “Technical specifications” contains an overview of the main features and technical data.

Abbreviations list

AC	Alternating Current
API	Application Programming Interface
AWG	American Wire Gauge
CAN	Controller Area Network
COM	Communication
CPU	Central Processing Unit
CTS	Clear To Send
DC	Direct Current
DCD	Data Carrier Detect
DIN	Deutsches Institut für Normung
DSR	Data Set Ready
DTR	Data Terminal Ready
EEPROM	Electrically Erasable Programmable Read-only Memory
EMC	Electromagnetic Compatibility
EN	Europese Norm
ESD	Electrostatic Discharge
GND	Ground
ID	Identifier
IEC	International Electrotechnical Commission
IM	Installation Manual
I/O	Input/Output
IP	Ingress Protection / Internet Protocol
LED	Light Emitting Diode
MDIX	Medium-Dependent Interface Crossover
PLC	Programmable Logic Controller
RISC	Reduced Instruction Set Computer
RTC	Real Time Clock
RxD	Received Data
SRAM	Static Random Access Memory
TCP	Transmission Control Protocol
TxD	Transmitted Data

Revision history

Revisions issued since publication.

Issue	Date	Revision	Reason
1.0	April 29, 2010		First release

Safety instructions

The indications NOTE, CAUTION and WARNING have the following significance:

NOTE

An operating procedure, practice or condition etc., which it is essential to emphasize.

CAUTION

An operating procedure, practise or condition etc., which, if not strictly observed, may damage or destroy equipment.

WARNING

An operating procedure, practise or condition etc., which, if not carefully observed may result in personal injury or loss of life.

1. Receiving, unpacking and checking

1.1 Procedure

1. Remove the transport casing

2. Visually inspect the respective parts

3. Check that all items are included in accordance with the delivery documents.

4. Check for transport damages.
   In case of transport damage appropriate action must be taken against the latest carrier and the nearest certified dealer or representative should be informed.

5. Store the part in the original transport package in a dry and dust free place, if the unit is not to be installed immediately. Observe the environmental requirements stated in the specifications

NOTE
Notify your sales representative if any of the above items is missing or damaged.

2. Installation and mounting

2.1 Overview

The B&B Electronics AutoTap™ Model HDV100A3 connects your PC or laptop to the J1708/J1587 and J1939 bus found on most heavy-duty vehicles.
The HDV100A3 solves timing problems encountered when operating in the Windows environment.
An embedded microprocessor handles buffering and timing for the bus, thereby reducing bus collisions. This allows your data to access the bus with a much greater degree of precision than a non-intelligent interface adapter.

NOTE

- *Use only mandatory cabling from Free Technics B.V.*
- *These are special prepared cables that connect to the CAN bus. Without these cables it is most likely that the AutoTap™ will not work*

2.2 Cabling (B&B Electronics)

Accessory cabling is available (see the following B&B cable models below) the HDV100A3 to make connections to the PC or laptop as well as the J1708/J1587 bus.

Cable model	Description
Model D6D15M	DB15 male to Deutsch 6-pin cable 1.0 m)
Model D9D15M	5 male to Deutsch 9-pin cable (1.0 m)
Model 9PAMF6B	DB9 male to DB9 female cable (1.8 m)

Figure 2-1: AutoTap™

3. Technical specifications

Detail	Description
Dimensions	104.1 x 43.2 x 20.3 mm
RS-232 connection	DB9 female, DCE
Bus connection	DB15 female
Pins 6, 7	Ground
Pin 8	Power
Pins 12, 13	CAN low, CAN high
Pins 14, 15	J1708-, J1708+
Operating temperature	-40 to 85 ºC
Input voltage	10 to 42 VDC
Input current @12 VDC	50 mA typical, 134 mA max.