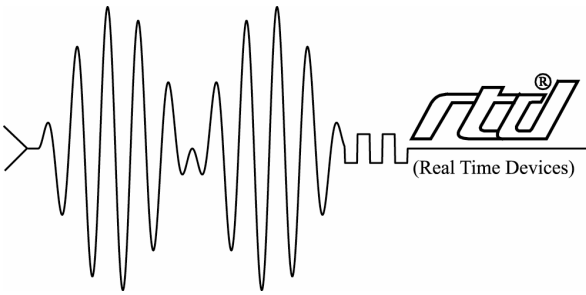
DM6858 Driver for Windows 98/NT4/2000/XP

Version 1.0

User's Manual



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"Accessing the Analog World"®

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Table of Contents

TABLE OF CONTENTS **4**

INTRODUCTION **5**

INSTALLATION **6**

INSTALLATION OF THE DRIVER AND EXAMPLE PROGRAMS UNDER WINDOWS 98/2000/XP 6
INSTALLATION OF THE DRIVER AND EXAMPLE PROGRAMS UNDER WINDOWS NT 6

DRIVER API FUNCTIONS **7**

EXAMPLE PROGRAMS REFERENCE **8**

LIMITED WARRANTY **9**

Introduction

The DM6858 Windows 98/NT4.0/2000/XP driver was designed for programmers who write Windows-based application programs using the RTD's DM6858 board.

There are example programs to demonstrate the board programming and the usage of the driver API. The example programs are written in Microsoft Visual C++ ver. 6.0.

Installation

Installation of the Driver and Example Programs under Windows 98/2000/XP

DM6858HR is not a Plug&Play card, so you must install it manually in order for it to function. To do this you should follow this procedure:
Open Windows Control Panel and double-click on "Add New Hardware". Click "Next". Click "Next" again and Windows will try to detect Plug&Play cards, but DM6858HR will not be detected.
You get a list of detected P&P cards, or if there are no P&P cards to be found there may not be a list displayed at all. Regardless of the number of detected cards you must proceed to manual selection of hardware. To do this (if Windows detected some P&P cards) select "No, the device isn't in the list" and click "Next".
In the following window Windows will ask if you want it to search for your new hardware. Select "No, I want to..." and click "Next".
You will see a list of Hardware types. Scroll down and select "Other Devices" and click "Next".
In the following window press button "Have Disk" in order to determine where from Windows will find drivers and setup information for DM6858HR.
An "Install from disk" -window will pop up. Press "Browse" button.
"Open" -window pops up. Browse to the location where your DM6858HR drivers are located. The driver file is named "Dm6858.inf". Press "OK" when the file has been found.
You will be returned to the "Install from disk" -window. You will see the path of the driver file. Once again, click "OK".
Windows will show you what hardware pieces it will install to your system. "DM6858HR" should be displayed. Click "Next".
Depending on your existing hardware configuration you may get a window in which Windows will let you view I/O settings. If this window is displayed, click "Next".
Finish the installation of DM6858HR by clicking "Finish".
Windows will prompt you to shut down your computer. Turn off your computer and turn it on again. After restarting your DM6858HR will be ready for use!

Installation of the Driver and Example Programs under Windows NT

Locate SetupNT.exe (included in the DM6858HR software package) and run it. Installation program will start and guide you through the rest of the installation process.
WinNT will prompt for computer shutdown after installation. After you have restarted WinNT your DM6858HR card will be ready for use.

Driver API Functions

Driver Initialization

To initialize the DM6858 driver from your application use standard Windows API CreateFile function:

```
HANDLE hDevice=CreateFile("\\\\.\\DM68580", GENERIC_READ |
GENERIC_WRITE, 0,  NULL, OPEN_EXISTING, 0, 0);
```

This routine is used to open board in Win9x/WinMe/Win2000. Last character of the name string defines the zero based board number. The driver was opened succesfully, if hDevice not equal INVALID_HANDLE_VALUE.

This function must be called before any driver function call.

Read Function

This routine is used to read data from the digital inputs. This is a 32-bit word programmable read.

```
HANDLE      hDevice;
ULONG       DigInputValue; // Input value
ULONG       nOutput;

// Send Read command to the driver
DeviceIoControl(hDevice, DM6858_IOCTL_READ,
NULL, 0, &DigInputValue, sizeof(DigInputValue), &nOutput, NULL);
```

Closing the driver

At the end of the application program, the board must be closed with the CloseHandle function:

```
CloseHandle(hDevice);
```

Example Programs Reference

Name	Feature	Remarks
DM6858console	Digital input	Console application
DM6858Test	Digital input	Windowing application
DM6858Setup (NT only)	Device configuration and test	Windowing application

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