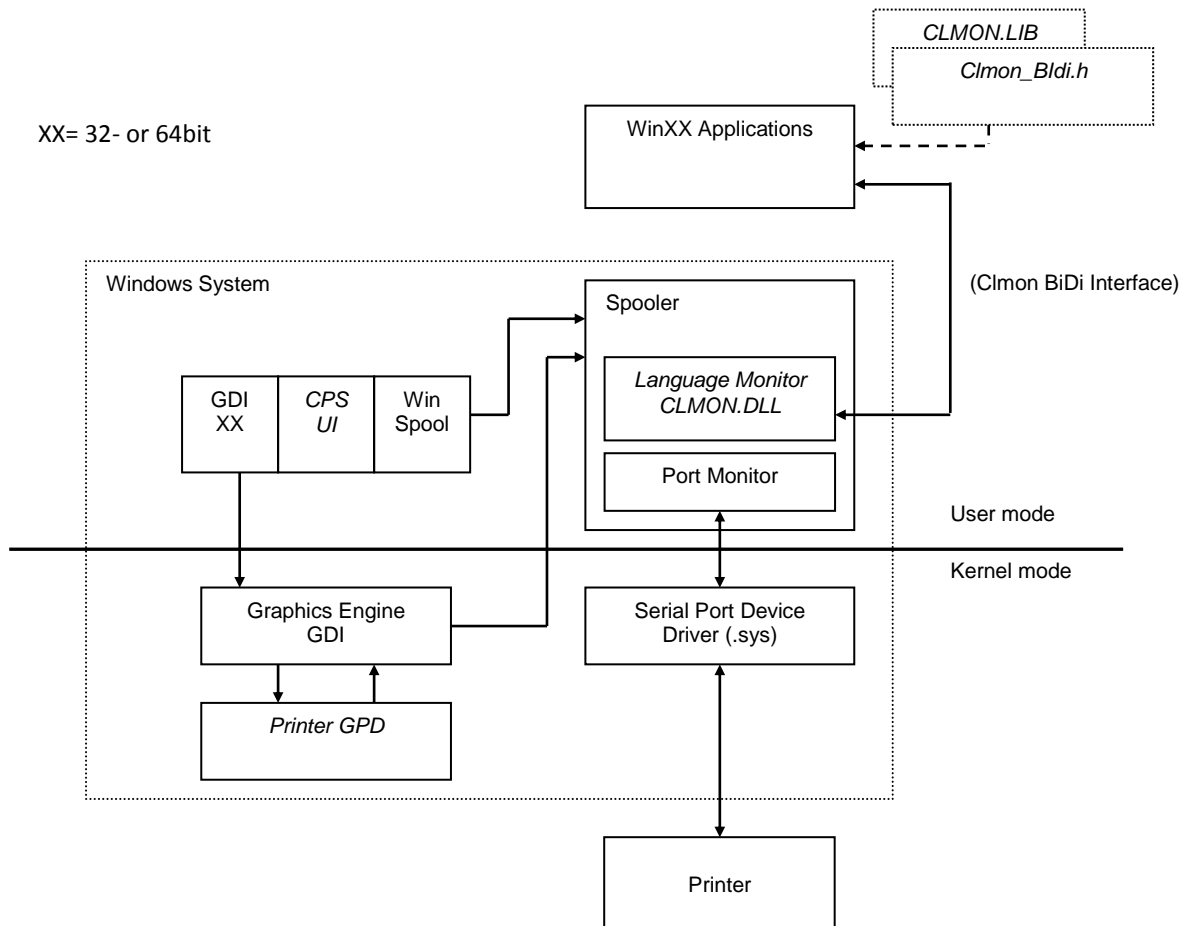# Language Monitor User Manual for THxxx

Updated Jan 31th, 2018

Introduction

This document describes the application interface for the Printer Language Monitor (clmon.dll).
The following figure shows the overall structure of Windows 7, 8.1 and 10, print architecture and the relationship between language monitor and other printer subsystem components.

Library and Header File

An application needs the Clmon_BIDI.h header file included in C/C++ code and CLMON.LIB in link library list in order to use the language monitor interface. The language monitor is installed during the printer driver install.

Language Monitor Send Receive Function

```
BOOL
WINAPI
DieboldNixdorf_SendRecv (
    IN                  LPWSTR  printerName,
    IN                  LPWSTR  portName,
    IN                  DWORD   CommandId
    IN                  LPSTR   lpInBuffer,
    IN                  DWORD   cbInBuffer,
    OUT                 LPSTR   lpOutBuffer,
    IN                  DWORD   cbOutBuffer,
    OUT                 LPDWORD lpcbReturned
);
```

Parameters:

printerName

The printer model name ("THxxx").   e.g. "TH250" for TH250, TH230 Emulation

or "TH210" for TH210-VI, TH210-3, TH210-2 or TH210

portName

The printer port name, i.e. "USB001:", "Com1:".

CommandId

Specifies the command to be sent to printer. This parameter can be one of the following values. See the *Printer Programmer's Guide* for description of each command.

Command
CLMON_GET_PAPER_SENSOR_STATUS
CLMON_GET_CASH_DRAWER_STATUS
CLMON_PRINT_TEST
CLMON_PRINTER_INITIALIZE
CLMON_PRINT_MSG
CLMON_PRINTER_READ

lpInBuffer

Application supplied buffer. Pointer to a character buffer that receives the functions output data. This parameter can be NULL if the operation does not require input.

cbInBuffer

Specifies the size, in characters, of the buffer pointed to by *lpInBuffer*. Max length 1024.

lpOutBuffer

Application supplied buffer. Pointer to a character buffer that receives the functions output data. This parameter can be NULL if the operation does not produce output data.

cbOutBuffer

Specifies the size, in characters, of the buffer pointed to by *lpOutBuffer*.

lpcbReturned

Contains the number of characters returned in *lpOutBuffer*.

Return Values

If the function succeeds, the return value is TRUE, and for commands returning output, *lpcbReturned* contains the number of characters returned in *lpOutBuffer*. Otherwise, the function returns FALSE.

Remarks

If the buffer pointed by *lpOutBuffer* does not have enough space to hold the output, the function returns FALSE. If there is a printing job, the function returns after the printing job finishes. If the printing job takes longer than the predefined timeout value, the function returns FALSE, and error code is set to ERROR_TIMEOUT, or ERROR_ACCESS_DENIED. If *cbInBuffer* is greater than 1024 characters, the function returns FALSE.

CLMON_GET_PAPER_SENSOR_STATUS: *Sends a batch mode status command to the printer. A single byte is returned containing the paper status. See the printer programmer's guide for more information.*

CLMON_GET_CASH_DRAWER_STATUS: *Sends a batch mode status command to the printer. A single byte is returned containing the drawer status. See the printer programmer's guide for more information.*

CLMON_READ_MICR: *Sends commands to trigger a MICR read. The raw bytes read are returned in lpOutBuffer. The number of byte read are returned in lpcbReturned. If the read fails the function returns FALSE. See the printer programmer's guide for more information. (Note: After the MICR read the slip station is active for subsequent printing.)*

CLMON_PRINT_TEST: *Sends the word "Test" to the printer, then sends the batch mode status command. Provided for diagnostic use.*

CLMON_PRINTER_INITIALIZE: *Sends command to initialize the printer.*

CLMON_PRINT_MSG: *Sends the data in the lpOutBuffer to the printer. cbInBuffer contains the number of characters to send. Max 1024.*

CLMON_PRINTER_READ: *Reads data transmitted by the printer. If the function succeeds the data is returned in lpOutBuffer and the number of bytes read is returned in lpcbReturned. If there is no data available, the function times out and returns FALSE.*

Possible Return Codes:

0x00 No errors
0x01 Paper low
0x04 No Paper (if paper low sensor disabled)
0x05 No Paper
0x06 Cover open
0x08 knife error
0x20 Print head temperature out of range
0x40 Print head voltage out of range

Extract from *Printer Programmer's Guide:*

Transmit printer sensor status

Hexadecimal 1B 76

Values:

Bit 7	Not used fixed to 0		
Bit 6	Print Head Voltage	1 = out of range	0 = in range (ok)
Bit 5	Print Head Temperature	1 = out of range	0 = in range (ok)
Bit 4	Not used fixed to 0		
Bit 3	Knife Position	1 = not in home position	0 = in home position (ok)
Bit 2	Receipt Paper *)	1 = out of paper	0 = paper present (ok)
Bit 1	Receipt Cover	1 = cover open	0 = cover closed (ok)
Bit 0	Receipt Low	1 = receipt paper low	0 = receipt paper not low (ok)

```
7 6 5 4 3 2 1 0
0 0 0 0 0 0 0 0   00hex   No Errors
0 0 0 0 0 1 1 0   06hex   Cover Open and Receipt Out of Paper
0 1 0 0 0 0 0 0   40hex   Print Head Voltage Out Of Range
0 0 1 0 0 0 0 0   20hex   Print Head Temperature Out of Range
0 0 0 0 1 0 0 0   08hex   Knife Not In Home Position
0 0 0 0 0 1 0 0   04hex   Receipt Out Of Paper
0 0 0 0 0 0 0 1   01hex   Receipt Paper Low
```

*) if printing is not finished before paper end detected, printer will stop and be **offline**, so no response!