

Installation of Flash for CR1000 and QMP3000

Introduction

This document describes how to install the system software in the QUORION CR1000 and QMP3000 series of cash registers. The system software consists out of 2 parts the Printer Driver (only required for the QMP version with the thermal printer) and the Cash Register Software. In order to be able to re-program the Flash ROM you need QFLASH.EXE (version 3.00 or newer) and a computer running Windows (98 or later) connected to PORT 1 of the cash-register. For connection to the computer you need a cable with all signals connected (NULL modem) or with RTS/CTS and DTR/DSR interconnected on both sides of the cable. See next pages for the lay-out.

The name of the binary file containing the cash register program has a fixed lay out and contains the register type and the release date.

The lay out is "xxYYMMDD.BIN". YYMMDD specifies the release date where YY is the year MM is the month and DD is the day. xx specifies the register type. The currently available types are:

- T0 - QMP3000 with 2 line LCD display and thermal printer
- T2 - QMP3000 with 8 line LCD display and thermal printer
- T6 - QMP3000 with 16 line LCD display and thermal printer
- M0 - QMP3000 with 2 line LCD display and matrix printer
- M2 - QMP3000 with 8 line LCD display and matrix printer
- M6 - QMP3000 with 16 line LCD display and matrix printer
- N0 - QMP3000 with 2 line LCD display and without internal printer
- N2 - QMP3000 with 8 line LCD display and without internal printer
- N6 - QMP3000 with 16 line LCD display and without internal printer

- D0 - CR1000 with VFD or 2 line LCD display, all printers
- E0 - CR1000SE with VFD or 2 line LCD display, all printers
- E2 - CR1000SE with 8 line LCD display, all printers

QFLASH.EXE (version 3.00 or newer)

This is the Flash Utility program which is required to write the Flash ROM.

P8WE_08.QRD (only required for QMP thermal printer, Western Europe)

P8BA_08.QRD (only required for QMP thermal printer, Baltic States)

P8CE_08.QRD (only required for QMP thermal printer, Eastern Europe)

P8CY_08.QRD (only required for QMP thermal printer, Cyrillic)

P8GR_08.QRD (only required for QMP thermal printer, Greek)

P8HE_08.QRD (only required for QMP thermal printer, Hebrew)

DP6xx-01.QRD (only required for QMP dot matrix printer)

This file contains the Printer Driver of the QMP3000 series and only needs to be installed when a new Printer Driver is required. It is not necessary for CR1000.

xxYYMMDD.BIN

This file contains the Cash Register Program for the QMP register and only needs to be installed when a there is a new version of the software available.

Flash Programming Procedure

1. Power Off the cash register.
2. Power On the cash register with the Central Lock in P-position while holding the key#1 and key#5 depressed when you have a 128 or 104 keyboard else when you have a 64 keyboard you MUST hold key#57 and key#61 depressed (See next pages for the correct locations on a 128, 104 or 64 keyboard). The register should now display:

Line 1 : "QFlash Rel. 3.00"

Line 2 : "Starting QFlash" followed by "Port# 1 115200"

Now the register is ready for communicating with the QFLASH program.

3. Start the QFLASH program (default is COM1, 115200 Baud).
4. When you only want to program a new release of the cash register program continue with step 5. When you want to install a new release of the printer driver click on the button called : "Write Printer Area". You are asked to select a file and you should select the file "P8WE_05.QRD" or "P2WE_05.QRD". After selection the file is sent to the register and written into the Flash ROM. When you also want to program a new release of the cash register program continue with step 5 else continue with step 6.

NOTE:

When you need the printer driver for the BALTIC STATES or EASTERN EUROPE you must select the corresponding print driver!

5. Click on the button called "Write Program Area". You are asked to select a file and you should select the file "xxYYMMDD.BIN" (with the correct date). After selection the file is sent to the register and written into the Flash ROM.
6. When finished Power Off the register.
7. Continue with the Application Init Procedure when there is no application program in the register else Power On the register with Lock in P-position so the Working Memory is cleared.

Application Init Procedure

1. Power Off the cash register.
2. Power On the cash register with the Central Lock in P-position while holding the key#2 and key#6 depressed. Only if you have a QMP3000 with 64 keyboard you MUST hold key#58 and key#62 depressed (See next pages for the correct locations on a 128, 104 or 64 keyboard). The register should now display:

Line 1 : "QMPxxxx" followed by "- - P - -"

Now the register is initialised with the default application program.

3. The application can be modified with the QPROG program, the computer is default connected to PORT 1 of the register and the baud rate is 57600 (fixed for the moment).

Keyboard Configurations

128 keys Flat Keyboard

Key Numbers:

| | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|
| 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 |
| 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |
| 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 |
| 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 |
| 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 |
| 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 |
| 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 |
| 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

Starting QFlash Utility

For starting the QFlash utility turn lock in P-position and power on register while holding keys depressed as shown in the table below.

| Depressed Keys | Baud rate |
|----------------|-----------|
| 1 & 5 | 115200 |
| 9 & 13 | 57600 |
| 17 & 21 | 38400 |
| 25 & 29 | 19200 |
| 33 & 37 | 9600 |
| 41 & 45 | 4800 |
| 49 & 53 | 2400 |
| 57 & 61 | 1200 |

Hard Init Procedure

For making a HARD INIT turn lock in P-position and power on register while holding keys 2 and 6 depressed

104 keys Push Button Keyboard

Key Numbers:

| | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|
| 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 |
| 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 |
| 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 |
| 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| | | | | | | | |
| 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 |
| 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

Starting QFlash Utility

For starting the QFlash utility turn lock in P-position and power on register while holding keys depressed as shown in the table below.

| Depressed Keys | Baud rate |
|----------------|-----------|
| 1 & 5 | 115200 |
| 9 & 13 | 57600 |
| 17 & 21 | 38400 |
| 25 & 29 | 19200 |
| 33 & 37 | 9600 |
| 41 & 45 | 4800 |
| 49 & 53 | 2400 |
| 57 & 61 | 1200 |

Hard Init Procedure

For making a HARD INIT turn lock in P-position and power on register while holding keys 2 and 6 depressed

64 keys Push Button Keyboard

Key Numbers:

| | | | | | | | |
|----|----|----|----|----|----|----|----|
| 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 |
| 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

Starting QFlash Utility

For starting the QFlash utility turn lock in P-position and power on register while holding keys depressed as shown in the table below.

CR1000:

| Depressed Keys | Baud rate |
|----------------|-----------|
| 1 & 5 | 115200 |
| 9 & 13 | 57600 |
| 17 & 21 | 38400 |
| 25 & 29 | 19200 |
| 33 & 37 | 9600 |
| 41 & 45 | 4800 |
| 49 & 53 | 2400 |
| 57 & 61 | 1200 |

QMP3000:

| Depressed Keys | Baud rate |
|----------------|-----------|
| 57 & 61 | 115200 |
| 49 & 53 | 57600 |
| 41 & 45 | 38400 |
| 33 & 37 | 19200 |
| 1 & 5 | 9600 |
| 9 & 13 | 4800 |
| 17 & 21 | 2400 |
| 25 & 29 | 1200 |

Hard Init Procedure

For making a HARD INIT turn lock in P-position and power on register while holding keys 58 and 62 depressed at the QMP3000 or keys 2 and 6 at the CR1000.

156 keys Flat Keyboard

Key Numbers:

| | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 |
| 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 |
| 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 |
| 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 |
| 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 |
| 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 |
| 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 |
| 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 |
| 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 |
| 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |

Starting QFlash Utility

For starting the QFlash Utility turn lock in 'T'-position and power on register while holding keys depressed as shown in the table below .

| Depressed Keys | Baud rate |
|----------------|-----------|
| 1 & 5 | 115200 |
| 14 & 18 | 57600 |
| 27 & 31 | 38400 |
| 40 & 44 | 19200 |
| 53 & 57 | 9600 |
| 66 & 70 | 4800 |
| 79 & 83 | 2400 |
| 92 & 96 | 1200 |

Hard Init Procedure

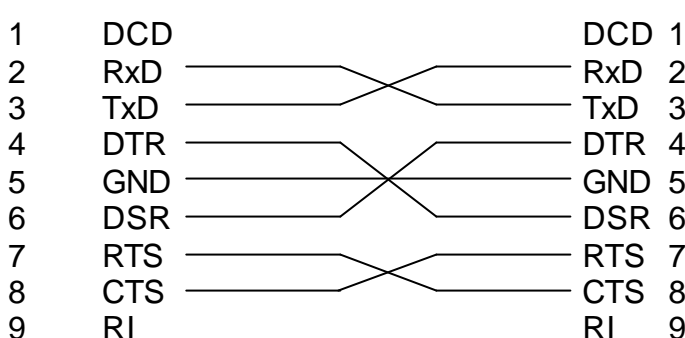
For making a HARD INIT turn lock in 'T'-position and power on register while holding keys 2 and 6 depressed.

Cable Layout

Parameters of the RS-232C Interface:

- Data format: 1 start bit, 8 data bit, 1 stop bit, no parity
- Data rate: 57600 Baud (Standard)

| - Pin description: | PC (D-Sub female 9pins) | QMP (D-Sub female 9pins) |
|--------------------|-------------------------|--------------------------|
| 1 | DCD | DCD 1 |
| 2 | RxD | RxD 2 |
| 3 | TxD | TxD 3 |
| 4 | DTR | DTR 4 |
| 5 | GND | GND 5 |
| 6 | DSR | DSR 6 |
| 7 | RTS | RTS 7 |
| 8 | CTS | CTS 8 |
| 9 | RI | RI 9 |



A cable between the PC and the QUORION QMP cash register has two 9-pin female D-Sub connectors.