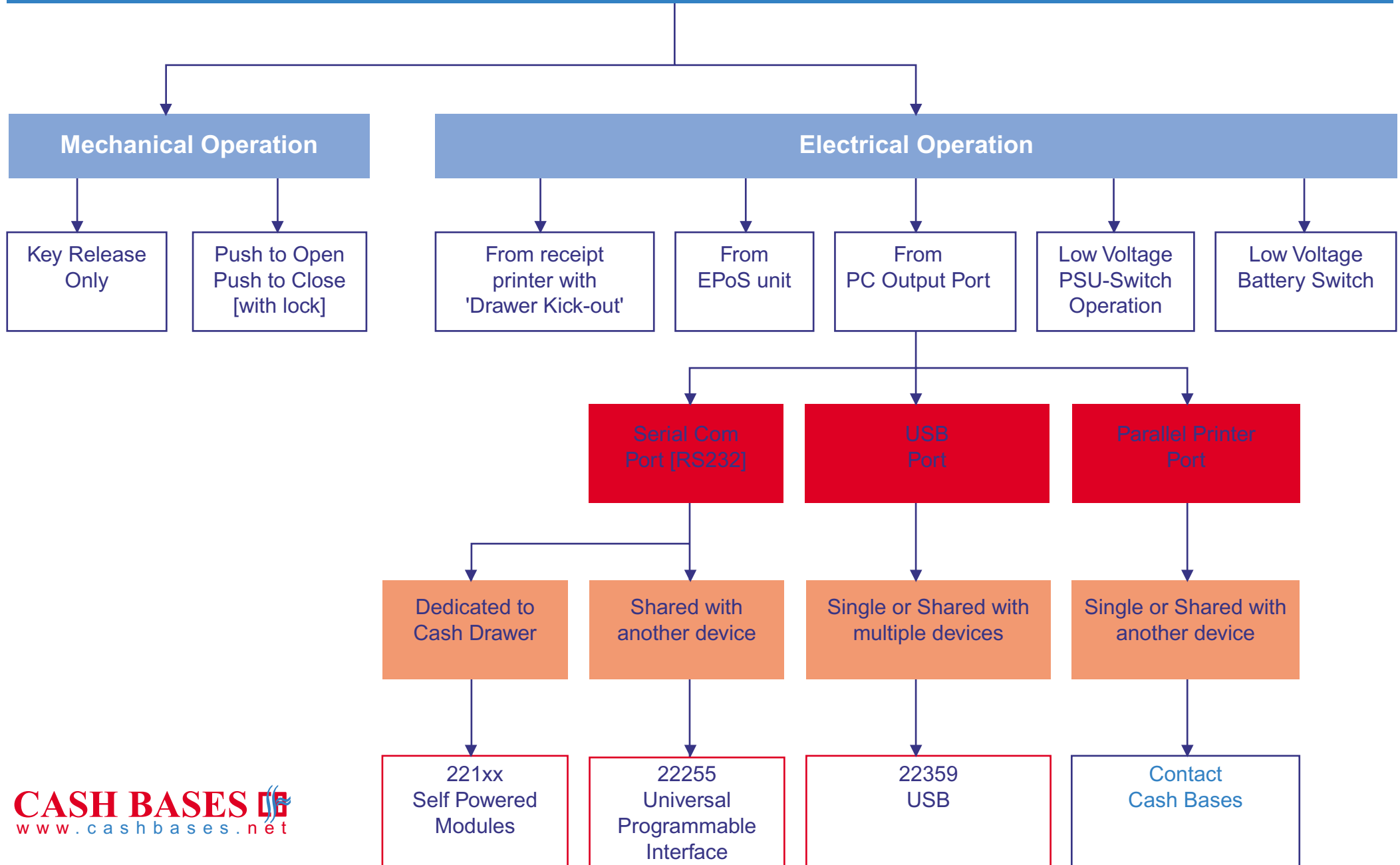


Cash Drawer Technical Interface

How may the cash drawer be opened?



Cash Bases Technical Interface - Cash Bases 22109, 22110 and 22111 Self-Powered Modules

These self-powered interfaces are packaged in small in-line modules complete with industry standard cash drawer connectors:-

- 22109 - 010 : RS232 to DB9F cash drawer connector
- 22110 - 010 : RS232 to RJ11 cash drawer connector
- 22111 - 010 : RS232 to DB9F or RJ11 cash drawer connector

Features:

- Power derived from PC serial connector i.e. COM1
- Opens 12 or 24 volt cash drawers
- Uses industry standard 'EPSON' compatible RJ11 or 'Cash Bases' dual-voltage DB9F cash drawer connector.
- Can open drawer repetitively every 5 seconds maximum, after initial charge up time of 20 seconds maximum from computer switch on
- Returns cash drawer open / closed status via CTS signal
- PC cable integral (9 way D type)
- Can be set to open cash drawer on ONE, TWO or more characters (set by baud rate) **
- Ignores power on / off spikes from PCs
- Housed in a small ABS module 110mm x 57mm x 22mm
- No switches / links to set-up, just plug in and use
- Quieter solenoid operation via power conservation which removes power when drawer is seen to have opened

Set-Up:

Intended for use with a spare COM port that can be dedicated to open a Cash Drawer and any software package that can 'print' to that COM port.

The actual characters printed do not matter, however, the number of characters needed depends on the number of zeros in the binary representation of the character – ideal character is the NUL character (binary 00000000). For example a single NUL character at 300 baud will open the cash drawer, two NUL characters at 600 baud will open the cash drawer etc. This will vary slightly, depending on the combination of P.C. and cash drawer being used.

A simple set-up can be achieved by sending the desired characters and increasing the baud rate step by step until the cash drawer no longer opens, then decrease the baud rate by two steps to allow a margin of error.

** Typical settings: (depending on actual characters) are:

- For single characters use 300 baud or slower
- For two characters use 600 baud or slower
- For five characters use 2400 baud or slower

00 00	opens at 1200 baud
07	opens at 300 baud
07 07	opens at 600 baud
1B 30	opens at 600 baud
1B 70 00 55 00	opens at 2400 baud

Alternatively send approximately twenty NUL characters at 9600 baud

DTR must remain set High (This should be set automatically when addressing the COM port).

CTS may be used to read the drawer open / closed condition.

Cash Bases Technical Interface - 22255 Universal Programmable Cash Drawer Interface

Many POS applications utilise some form of Journal Printer to connect and drive what is essentially a 'dumb' Cash Drawer. Others employ a more direct connection, via an interface to drive the cash drawer. However, this interface is often installed within the actual cash drawer. This limits the user in the choice of drawer both by manufacturer and type for specific applications.

In addition, in many instances the software has been written specifically for a particular make of cash drawer and cannot easily be changed by the user or indeed distributor to accommodate another supplier's interface. The 22255 Universal Programmable Cash Drawer Interface has been designed to resolve these problems, allowing any of the Cash Bases range or indeed third party drawer to emulate almost any existing cash drawer set up.

Configured initially to emulate an Epson printer with cash drawer connected, the 22255 can be re-programmed to operate on any other command string. Programming of the interface is accomplished on a Windows based PC with a simple set up program. This method means that there are no switches or set-up links to fail in the relatively harsh environment of a retail till system.

For new applications, many extra features are available including running security counters of manual 'opening' and system 'opening' of the cash drawer, drawer switch 'inversion' feature, and selectable baud rate.

Features:

■ Fully programmable 'Open Drawer' command:

- From 1 to 8 bytes of 'Escape Sequence / Codes'
- Programmable 'Pulse Width'
- Programmable 'Drawer Number'
- Programmable 'Hold-off' time

■ Fully programmable 'Get Drawer Status' command:

- From 1 to 8 bytes of 'Escape Sequence / Codes'
- Programmable 'Drawer Number'

■ Two fully programmable 'Replies' to the 'Get Drawer Status' command:

- From 1 to 7 bytes of 'Reply' codes

■ Two readable security 'Counters' for usage monitoring: (retained during Power Off)

- One 'Drawer Opened by System Command' counter
- One 'Drawer Manually Opened' counter
- Internal Memory retains programmed data / configuration during Power Off conditions
- Non-volatile Memory guaranteeing a minimum of 10 years data retention
- Memory Lock prevents further programming

■ Simple 'Shareware' set up program available to 'Program' the interface

- Emulates most intelligent Cash Drawers and Printers with Cash Drawer interfaces. e.g. EPSON, STAR, CITIZEN, JUKI etc. compatible.
- Emulates most Cash Drawer Standards.
- Daisy-chaining of interfaces permitting more than one Cash Drawer per RS232 cable.
- Output connector for daisy-chaining and / or Printer connection.
- Programmable Baud Rate from 300 to 19200 Baud.
- Invert function to select 'normally open' or 'normally closed' drawer switches.

Additional Technical Information:

- PC RS232 compatible
- RS232 Printer Output Connector
- Epson compatible RJ11 cash drawer connector
- Small size: L110 x W55 x D25 mm
- 24 volt operation from external Power Supply [supplied separately]

Cash Bases Technical Interface - Cash Bases 22359-010 Cash Drawer to Universal Serial Bus Module

The 22359-010 Cash Drawer USB Module is designed to provide USB interfacing to Cash Bases range of cash drawers previously configured to connect to EPOS systems or receipt printers with an RJ12-6 pin connector. The CDUSB Module derives its power from the USB Bus.

The CDUSB Module uses a Virtual Serial Port Driver, which makes the USB Port appear to software like a standard RS232 Serial Port. This enables existing POS software to communicate with the CDUSB Module as though connected to a Serial Port.

A unique serial number is assigned to each CDUSB Module. The Driver Software will assign the next available 'Virtual' Serial Port to each device it recognises, enabling the independent operation of several Cash Drawers from one PC.

Features:

- USB Cash Drawer Interface.
- USB Bus Powered.
- Operates with Windows '98 and later.
- Supplied with Virtual Serial Port Driver and Set-up Manual.
- Accepts all standard POS Drawer Open Commands.

Set-Up:

Installation of the drivers for the CDUSB Module is fully described in the manual supplied with the driver disk.

The driver disk contains two devices, which will install through 'Windows', a USB high speed serial converter (to operate the cash drawer) and a USB serial port (Virtual 'COM' port).

Operation:

The following commands, when sent to the allocated Virtual Serial Port, can be used to trigger the CDUSB Module to open the connected Cash Drawer:

Open Commands	Hex	Description
^5	07	Citizen 'Open Cash Drawer 1'
ESCp0	1B, 70, 0	Epson 'Open Cash Drawer 1'
CC1(CR)	43, 43, 20, 31, 0D	CC1(CR) 'Open Cash Drawer 1'

The following commands may be used to obtain 'Drawer Status' information from the CDUSB Module :-

Commands to obtain information from the CDTM	Hex	Description
DG 2 (CR)	44, 47, 20, 32, 0D	Protolink 'Dump Firmware Version'
GSaFF	1D, 61, FF	Epson 'Enable Automatic Status Back'