

Architecture

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`derafu/escpos` wraps [mike42/escpos-php](#) instead of implementing the ESC/POS protocol itself — but that library is treated as a replaceable implementation detail, not part of this package's contract. Nothing in the public API accepts or returns a `Mike42\Escpos\*` type or constant; see [Vocabulary](#) and [Printing Images](#) for the two places that leak would normally happen (command values, and image types) and how they are closed.

Why this matters

If a consumer's code imports `Mike42\Escpos\*` directly to call this package, upgrading `mike42/escpos-php` to a new major version can break that consumer's code too — even though they never touched the underlying library's version themselves. Isolating it behind this package's own API means a breaking change in the underlying library only needs to be absorbed in one place: here.

The seam: `PrinterInterface`

`Derafu\Escpos\Contract\PrinterInterface` defines every operation `EscposPrinter` needs from a backend: `text()`, `feed()`, `selectPrintMode()`, `setJustification()`, `barcode()`, `pdf417()`, `image()`, `cut()`, `pulse()`, `getOutput()`, `close()`.

`Derafu\Escpos\Adapter\Mike42Printer` is the only class in this package allowed to use `Mike42\Escpos\*`, and it is the default implementation of `PrinterInterface`. `EscposPrinter` is a thin facade: it owns option resolution, the `sprintf()/line-break` convenience of `print()/println()`, special character handling, and the `end()` workflow (finish, optionally cut and pulse) — and delegates everything else to whichever `PrinterInterface` it was given.

```
use Derafu\Escpos\Contract\PrinterInterface;
use Derafu\Escpos\EscposPrinter;

// Normally you never need this – omitting the second argument builds the
// default Mike42Printer from your options array.
$printer = new EscposPrinter($options, $customPrinterImplementation);
```

That second constructor argument is the extension point: a different backend (or a test double) can

be swapped in without changing `EscposPrinter`'s public API, or any code that already depends on `PrinterInterface` instead of the concrete class.

Exceptions

Every exception this package throws implements `Derafu\Escpos\Exception\EscposExceptionInterface`, so you can catch anything it raises without needing to know the specific class:

Exception	Thrown when
<code>ConnectorNotSupportedException</code>	The configured connector type has no known implementation (only memory exists today).
<code>ProfileNotFoundException</code>	The configured capability profile does not exist.
<code>UnbufferedConnectorException</code>	<code>dump()/end()</code> is called on a connector that does not buffer data in memory (memory always does; this exists so the failure mode is a clear exception if that ever changes, not a corrupted read).
<code>InvalidImageDataException</code>	<code>RasterImage::fromPngData()</code> is given data that cannot be decoded as an image.
<code>NetworkDeliveryException</code>	<code>NetworkTransport::send()</code> cannot connect, or cannot deliver all bytes.

None of these extend a `Mike42\Escpos\*` exception, for the same reason described above.

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