# Milan / Paylink Firmware Version 4.1.12.6 Release Notice.

This is a **Full**  (4) release of the Milan / Paylink Interface firmware - code version **1.12.6**.

This release note covers the differences from **4.1.12.4**, people upgrading from earlier version should read the release notes for 3.1.12.3 and 4.1.12.4.

Compared to 4.1.12.4 this release:
- o   Provides the first support for Paylink Lite 2,
- o   Has a major rewrite for the F56 and BCR / CR01x protocols,
- o   Adds the Innovative SmartHopper to the supported peripherals.
- o   Fixes a number of minor bugs.
- o   Incorporates the new Extended Escrow facility (new in 3.1.12.6)
- o   Incorporates the new Precise Payment facility (new in 3.1.12.6)

## Windows code versions.

To obtain all of the new facilities / fixes described in this release document the following PC/Windows versions are required:

Aesimhei.dll             Version 1.6.0.1 or later
Aesimhei.h              Dated 14 March 2013 or later (for new facilities)
Paylink.exe            Version 4.1.12.6 (For windows, this now replaces AESxDriver)

## Paylink Lite 2 Support

This version of the Paylink.exe supports Paylink Lite 2 under Windows. Note that, for simplicity of low level driver installation, Paylink Lite 2 uses the same USB hardware identity, and so older versions of the Paylink.exe driver will not produce an error message if connected to Paylink Lite 2, but will just hang.

## Precise Payment Support

This version of the Paylink firmware / driver / DLL will allow users to specify counts of specific coins / notes from specific Dispensers. Paylink will only attempt to pay out those specified, and will not automatically retry with lower denominations.

The new functions SetDispenseQuantity() and PaySpecific() are documented in the Getting Started section of the Milan Application program Interface Manual.

## Extended Escrow Support

This version of the Paylink firmware / driver / DLL will allow users to specify that a roll on a CCNet B2B note acceptor will be used for extended escrow. A new section of the API allows Paylink to report the status of the notes on this roll, and to control how Paylink reads, saves and recycles these notes.

The new functions ReadEscrowBlock () and EscrowCommand() are documented in the Extended Escrow section of the Milan Application program Interface Manual.

## Specific bugs fixed.

The following minor bugs have been present in 4.1.12.4 and all earlier versions of Paylink

- The Future Logic Printer driver had a fault in the protocol that was ignored by old printer firmware, but not the latest releases.
- The ccTalk coin driver would ignore coin positions that were set up but did not contain numeric characters (e.g. "TOKEN").
- The NV200 / SmartPayout handler did not handle certain payout failures correctly.
- The Paylink driver would fail in the presences of certain other USB peripherals.
- Following a self test failure from a ccTalk note acceptor, Paylink now issues a reset command to try to clear it.
- The "Error During Payout" status from a SmartPayout is now regarded as ending the payout.
- There was an error in assigning timeout values to multiple MCL hoppers.
- 4.1.12.x "broke" ID-003 barcode reading - this release fixes it.
- MDB Tube level monitoring bugs have been fixed.

- For Dispensers that were physically part of an acceptor, there was a internal linkage that could cause a 5 second delay in starting a payout.
- Some of the statuses returned by the Innovative SmartHopper were not processed correctly.
- For an MDB changer that was disconnected, earlier version would just hang on a Payout, this now produces an error as with all other dispensers.

### General improvements.

- For large MDB changer payouts, Paylink now send multiple 200 unit requests, rather than multiple 255 unit requests, this produces more "sensible" results.
- Merkur MD100 note recycler can now have routing changed at run time, by changing the CoinPath fields in the acceptor control block.

### BCR / CR01x fixes / improvements.

- The maximum coin float level can be set in the configuration file.
- Cope with the CR10x sometimes stopping responding to certain messages.
- Carousel clear is sent to a CR10x 2 seconds after the unit is disabled, if a Payout has not been requested.
- The unit is reported busy while any of the carousel, singulator, payout belt etc. are active.
- Paylink now waits until the unit is not busy before enabling acceptance.
- Paylink now waits for Money In to clear before issuing a payout.
- BCR fault reports are now responded to with a subsystem clear command

### F56 / F53 fixes / improvements.

- The F56 handler now supports the CDM-4000 dispenser from MFS
- When Paylink pays out multiple note denominations it copes with cassettes being empty.
- Where two cassettes have the same value and the one in use reports empty, Paylink will first try the other one until that runs out.
- Greatly improved setting of Dispenser->Count and accurate continuation of ongoing payouts during recovery after power failures.

### CCNet fixes / improvements.

- The application can manage the number of notes on a roll by setting and clearing the routing for notes in the acceptor control block.
- Improved power failure processing while accepting notes.
- Note scaling can be provided in the configuration file
- For a B2B60, Paylink can eject notes as they are paid, at the expense of losing the ability to monitor when the individual notes are taken during a single payout.

### New Protocols / Devices / Facilities

Compared to 1.12.4, the following items have changed:

### Payout

- The MDB Level 3 payout system is now always used *after* any normal hopper that matches the base value. (Unless the hopper has previously failed.)
- Where two payout devices have the same value, Paylink will first try one that didn't have a problem when a payout was last made.

### Configuration

- It is now possible to specify system colours for enabled and disabled acceptors. At present, these are only used to control an Innovative SmartPayout note recycler.

- For CCNet acceptors you can now configure the scale factor to multiply note values by (the default is 100) and can specify the EJECT keyword to cause the B2B60 not to hold onto the note.

- It is now possible to configure a Merkur MD100 note recycler and BCR Coin recycler to have a specified maximum float level (the same level on all rolls.)

- Note that many note devices are controlled during operation by the application changing routing when the roll is "full". This doesn't work for an MD100, which empties its roll when changes are made, and so this has to be done in the configuration..

- Auxiliary Paylink Lite 2 units can be connected to a PC alongside the main unit, to allow multiple units to be connected.

## Peripherals

This release now supports the Innovative SmartHopper running in CC2 (ccTalk) mode.
- Each separate coin is reported as a different dispenser.
- Paylink can also be configured to process the SmartHopper with a connected acceptor.
- With a connected acceptor, Paylink discovers the supported input coins and continually checks the acceptors stastus.

### *PC Support Software.*

There are no changes to the PC support software associated with this release.

### *Compatibility with x.1.12.x*

Applications working with x.1.12.3, x.1.12.4 or x.1.12.5, will work unchanged with 3.1.12.6.

### *Upgrade / Downgrades*

Any earlier version of the firmware can be upgraded to this version without any problems, although information stored on the Paylink (such as totals and keys) will be lost. Downgrading to 1.11.x, 1.10.x will not cause any problems.