

Milan / Paylink Firmware Version 4.1.9.8 Release Notice.

This is a **FULL** (4) release of the Milan / Paylink Interface firmware - code version **1.9.8** and supersedes release 4.1.9.6.

This release implements the new Escrow and Barcode facilities described in the latest user guide.

It is mostly compatible with the old standard DLLs - versions 1.1.0.0 & 1.1.0.6, but to use the Escrow and Barcode facilities DLL release 1.2.0.2 is needed. The one exception to this is that the outputs are now driven in a different way - the older (PCI only) DLLs will drive digital outputs 1-8 permanently on.

The main features of this release as compared with 1.8.14 are:

- Running on Paylink USB units as well as PCI cards.
- Support for ARDAC / JCM note acceptors using the ID-003 protocol.
- Support for GPT note acceptors using the V2.2 GPT Enhanced Serial Protocol.
- Removal of redundant communications traffic in all, but especially cctalk, drivers.
- Improved handling of hoppers during fault situations.
- Interface functions and protocol handling to allow use of a note acceptor escrow function. (See details in the API documentation.)
- Interface functions and protocol handling to allow use of the ID-003 note acceptor barcode functionality. (See details in the API documentation.)
- Interface functions and protocol handling, to allow use of a FutureLogic ticket printer from Paylink. (See details in the API documentation.)
- An auditing event channel to notify the application of non currency events. (See details in the API documentation.)

Significant Side effects from versions 1.8.14 and earlier

- The value returned by the **CurrentPaid** function is now preserved across restarts. Earlier version reset this to zero. *User applications may accidentally depend upon this reset.*
- The internal interface between the DLL and the firmware for digital outputs has been upgraded and as a result, DLLs earlier than 1.2.0.0 will drive outputs 1-8. Note that associated with this, there is a bug whereby some DLLs just before 1.2.0.0 will appear to work, but will not drive outputs off.

PC Software Compatibility

The new functions used to access the Escrow and Barcode facilities require the use of DLL version 1.2.0.2. or later. In conjunction with this, the latest aesimhei.h header file is necessary to provide the function definitions.

Programs compiled for all older DLLs are guaranteed to continue operate correctly with the new DLL version 1.3.2.2 included in this release (or any later version), but will be unable to make use of the new facilities. **There is a bug in DLL version 1.3.1.2 included in the 4.1.9.6 release, that will overwrite memory if used with code compiled using older headers. This applies to all DLLs from version 1.3.0.0.**

The latest aesimhei.h / .pas / .bas, included with this release, will only function with DLLs version 1.3.2.2 or later (as included in this release). **Attempts to run software compiled with these latest headers in conjunction with DLLs older than 1.3.1.2 will result in an open error.**

Bug Fixes since 1-9-5 (Initial Paylink) release.

- Fix for NV7 firmware bug triggered by sending a self test message at start-up.
- Improved handling of cctalk peripherals that do not respond for a long time.
- Generally improved synchronisation of PC driver program and Paylink following USB link failure & restart
 - Specific fix for a USB failure / restart causing all peripherals to become disabled.
 - Specifically fix timing bug that set all coin routing to zero.
- Data & Time of firmware build available to new configuration calls in DLL.
- ID-003 protocol updated to continually override the automatic return of notes held in Escrow.
- ID-003 protocol updated to scan for '(' character when determining currency set.
- ID-003 protocol updated to cope with acceptors that refuse to change the inhibit status of notes.

- ID-003 protocol updated to issue RETURN events.
- Minute marker output to diagnostic channel to enhance reset / hang monitoring, and every 30 seconds RED blinks off, to distinguish between a firmware crash and a failed connection.

Bug Fixes since 4-1-9-6 release.

- cctalk protocol updated to continually override the automatic return of notes held in Escrow.
- Meter protocol updated to allow meter communications failures and subsequent resets as a normal activity, with no increments being lost.

Upgrade / Downgrades

Any earlier version of the firmware can be upgraded to this version without any problems.

Due to residual data in the E²Prom, downgrading from this version to other versions may or may not work; the only guaranteed downgrade paths are to version 2.1.9.2 and 4.1.8.14.

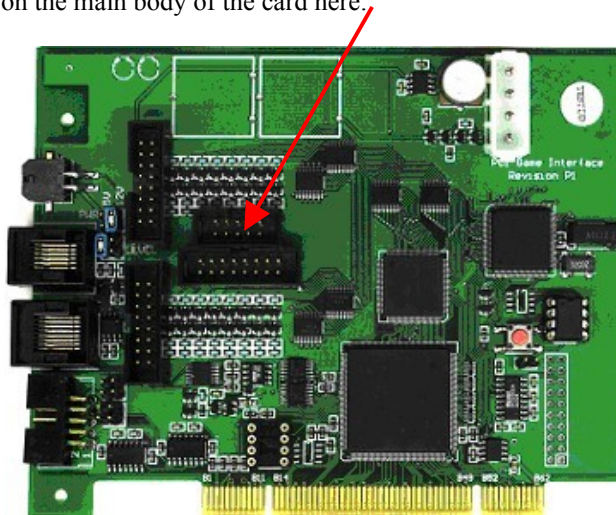
JCM / GPT acceptor support on Paylink (Genoa) unit.

The ARDAC II, ID-003 and GPT Argus V2.2 acceptor protocols are supported on the multi purpose RS232 port (RJ 45 connector). As there are no switches or jumpers on the Paylink unit, the protocol will be selected via a configuration utility or API calls. As this facility is not implemented, an interim solution has been adopted of creating a different firmware image for each protocol.

In its factory configuration, the ID-003 protocol is support, to use one of the others it is necessary to run **Genoa<Protocol>V4-1-9-6.exe** from the Firmware folder in the distribution.

JCM / GPT acceptor support on PCI Card.

The ID-003 and GPT Argus V2.2 acceptor protocols are now supported on the multi purpose RS232 port. This port has multiple uses, which require totally different communications drivers. The default (and at present only) method of specifying which driver to use is with **a jumper** on the utility inputs. These inputs are located on the main body of the card here:



These utility inputs are numbered (with the card in this orientation) as:

9	7	5	3	1
10	8	6	4	2

And the configuration involves a single jumper on the 4 pins at the right hand end thus:

Jumper Location	Meaning
No jumper	Port used for Firmware diagnostics
Pins 9 & 10 (Vertical)	ARDAC 5 / WACS protocol
Pins 9 & 7 (Horizontal)	JCM ID003 protocol
Pins 8 & 10 (Horizontal)	GPT Serial V2.2