

CLAIMS

1. An automatic document feeder comprising:
 - a sliding platform (1) configured to be movable between an open position where a document can be placed on the sliding platform (1) and a reading position where the document can be scanned by a standard reader (21);
 - a sensor (13) configured to detect presence of the document on the sliding platform (1) when in the open position;
 - a linear actuator (4) configurable to pin the document onto the sliding platform (1);
 - a motor (6) for moving the sliding platform (1) between the open position and the reading position;
 - an end position sensor (10) configured to detect the sliding platform (1) when in the reading position; and
 - a controller (22) communicatively connectable with the sensor (13), the linear actuator (4), the motor (6) and the end position sensor (10),
 wherein the automatic document feeder is adaptively installable onto the standard reader (21) and
 - wherein the controller (22) is configured to:
 - detect, by the sensor (13), the document on the sliding platform when in the open position,
 - activate the linear actuator (4) to pin the document onto the sliding platform (1),
 - activate the motor (6) to move the sliding platform to the reading position,
 - activate the standard reader (21) to scan the document upon detecting, by the end position sensor (10), the sliding platform (1) is in the reading position, and
 - upon receiving a signal from the standard reader (21), deactivate the linear actuator (4) to release the document and activate the motor (6) to move the sliding platform (1) to the open position.
2. The automatic document feeder of claim 1, further comprising a horizontal guide (2) and a system of springs (9), wherein the horizontal guide (2) and the system of springs (9) are operable to place the document in the sliding platform (1) in a correct feeding position.
3. The automatic document feeder of claim 1 or 2, further comprising a linear spring (14) configured to work in tandem with the linear actuator (4) to hold the document in position on the sliding platform (1).
4. The automatic document feeder of any one of the preceding claims, further comprising a protection bar (12), wherein the protection bar (12) is coupled to the sliding platform (1) and configured to prevent foreign objects from entering the automatic document feeder.

5. The automatic document feeder of any one of the preceding claims, further comprising a bobbin (5), wherein the bobbin (5) is configured to transfer movement from the motor (6) to the sliding platform (1).
6. The automatic document feeder of any one of the preceding claims, further comprising size guides (3) configured to ensure that the document is correctly aligned while the sliding platform (1) is in motion.
7. The automatic document feeder of claim 6, further comprising two opposing sets of bushings (8) configured to minimise friction while the sliding platform (1) is in motion.
8. The automatic document feeder of claim 6 or 7, further comprising bearing (20) positioned on a surface on which the sliding platform (1) rests.
9. The automatic document feeder of any one of the preceding claims, further comprising a rigid piece of plastic (11) configured to activate the end position sensor (10) when the sliding platform (1) is in the reading position.
10. The automatic document feeder of any one of the preceding claims, further comprising longitudinal guides (7) configured to keep the document flat on the sliding platform (1).
11. The automatic document feeder of any one of the preceding claims, further comprising a space between the sliding platform (1) and a base of the automatic document feeder, wherein the space is equivalent to approximately four sheets of paper.
12. The automatic document feeder of any one of the preceding claims, wherein the document may be bulky.
13. The automatic document feeder of any one of the preceding claims, wherein the linear actuator (4) pins the document to the sliding platform (1) with a frictional force of 30N.
14. The automatic document feeder of any one of the preceding claims, wherein the sliding platform (1) is configured such that the document on the sliding platform (1) is at least partially visible at all times.
15. The automatic document feeder of any one of the preceding claims, wherein the sliding platform (1) is configured such that the document on the sliding platform (1) may be removed at any time.

16. A method of operating an automatic document feeder comprising:
- receiving a document on a sliding platform (1) being configured to be movable between an open position where the document can be placed on the sliding platform (1) and a reading position where the document can be scanned by a standard reader (21), wherein the automatic document feeder is adaptively installed onto the standard reader (21);
 - detecting presence of the document by a sensor (13) when the sliding platform (1) is in the open position;
 - repositioning the document on the sliding platform (1) via a horizontal guide (2) using a system of springs (9) to slide the document towards an edge of the sliding platform (1);
 - activating a linear activator (4) to pin the document to the sliding platform;
 - activating a motor (6) to move the sliding platform (1) to the reading position;
 - scanning the document by the standard reader (21); and
 - upon concluding the scanning of the document by the standard reader (21), moving the sliding platform (1) to the open position and deactivating the linear actuator to unpin the document.