

# First Look at the Lexmark T640/ T642/ T644

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**R**leased in June 2005, Lexmark's new line of workgroup printers is far superior to the T630, the printer it replaced. Based on the same engine configuration as the T630, Lexmark made the standard improvements to the T640, T642 and the T644, increasing the print speed and improving the print quality. But it did not stop there. Lexmark added a host of new features designed to make the printers more user friendly.

Some of these new features include an LCD display that shows graphics to guide the user through maintenance tasks, a 10-digit keypad for entering passwords when printing confidential documents and a USB interface port that enables users with a memory stick to walk up to the printer and print documents without having to download them onto a computer.

## Lexmark T640

The Lexmark T640 family of printers is made up of five models. Each model has a print speed of 35 ppm with a first-page-out speed as fast as six seconds and a maximum print resolution of 2400 image quality. The T640 family uses a 400 MHz processor and comes standard with 64MB memory which can be upgraded to 576MB. Each machine ships with a 6,000-page, standard-yield, return-program print cartridge (64015S); but also supports the 6,000 page standard yield print cartridge (64035SA), the 21,000-page high-yield return-program print cartridge (64015HA); and the 21,000-page high-yield print cartridge (64035HA). The duty cycle of the T640 family of printers is rated at 200,000 one-time maximum impressions per month.

The base model T640 (retail price \$699) and the T640n (retail price \$949) come equipped with a 250-sheet output bin, a 100-sheet multipurpose tray and a 250-sheet input tray. The T640 comes standard with an Ethernet port that makes the T640n printer network ready.

Lexmark's T640tn (retail price \$1,199) and the T640dn (retail price \$1,339) have the same features as the T640n machine but with added paper handling capabilities. An extra 500-sheet drawer is added to the base of the printer to support longer print jobs. The T640dn printer includes a 250-sheet duplex unit mounted to the back of the machine. The T640dn has a duplex speed of 30 spm.

The last printer in the T640 family is the T640dtn (retail price \$1,449). This high-end printer has the networking capabilities of the T640n, the improved paper handling abilities of the T640tn and the same 250-sheet duplex unit of the T640dn.

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## Lexmark T642

Consisting of four models, the T642 family of printers has a print speed of 45 ppm with a first-page-out speed of 8.5 seconds and 2,400 image quality resolution. The T642 uses a 457 MHz processor and comes standard with 64MB of memory, which is upgradeable to 576MB. The Lexmark T642n, T642tn and the T642dtn printer models ship with 128MB of memory that can be upgraded to 640MB. Like the T640 machines, the T642 ships with a 6,000-page standard-yield, return-program print cartridge (64015S), but also supports the 6,000-page standard-yield print cartridge (64035SA); the 21,000-page high-yield, return-program print cartridge (64015HA) and the 21,000-page high-yield print cartridge (64035HA). The T642 printer family duty cycle is rated at 225,000 one-time maximum impressions per month.

The base model T642 (retail price \$799) and the T642n (retail price \$1,149) printers have the same paper handling capabilities, which include a 500-sheet output bin, a 500-sheet input tray and a 100-sheet multipurpose feeder. The T642n ships with twice as much memory as well as an Ethernet network port, which enables the printer to be used by multiple users.

The T642tn (retail price \$1,399) and the T642dtn (retail price \$1,549) printers have the same base configuration as the T642n but come with an additional 500-sheet drawer almost doubling its paper handling capabilities. A 500-sheet duplex unit is added to the T642dtn machine for automatic two-sided printing. Lexmark's T642dtn has a duplex speed of up to 35 spm.

## Lexmark T644

The Lexmark T644 family of printers is the fastest of the group. The T644 printer family has a print speed of 50 ppm and can deliver its first page in 8.5 seconds at a 2400 dpi image quality resolution. Each printer uses a 514MHz processor and comes standard with a 128MB memory stick that can be upgraded to 640MB. The

printers ship with the 21,000-page high-yield return program print cartridge (64015HA), but can also support the 6,000-page standard-yield, return-program print cartridge (64015SA); the 6,000-page standard-yield print cartridge (64035SA); the 21,000-page high-yield print cartridge (64035HA); the 32,000-page extra-high-yield, return-program print cartridge (64415XA); and the 32,000-page extra-high-yield print cartridge (64435XA). The duty cycle of the T644 family of printers is rated at 250,000 one-time maximum impressions per month.

Lexmark's base model T644 (retail price \$899) and the networked model T644n (retail price \$1,249) come equipped with a 500-sheet output bin, a 500-sheet input tray and a 100-sheet multipurpose feeder. The T644n printer comes with an Ethernet 10/100BaseTX port, allowing the printer to be hooked up to a network.

The T644tn (retail price \$1,499) and the T644dtn (retail price \$1,649) have the same standard options as the T644n but include the extra 500-sheet paper tray. Lexmark's T644dtn comes standard with a 500-sheet duplex unit. The T644dtn has a duplex speed of 37 spm.

## Cartridges Supplies

While component qualification is still under way at this time, we have ruled out the use of the existing Lexmark toners. It looks like the 10 ppm increase in print speed from the T634 to the T644 affects the fusing properties of the T630 toner in the T640 machine. Our testing has repeatedly shown that toner accumulates on the lower fuser roller throughout the life of the cartridge. As a result, when the page passes through the fuser unit assembly, the toner sticking to the fuser roller adheres to the back of the page. This is not a problem that is going to be detected by running a few pages. In our testing, we typically saw this phenomenon occur at around 4,000 pages. We are diligently working with our vendors at this time formulating a new toner specifically for the T640 engine.



Photo 1



Photo 2

Our testing has shown that the sensitivity level of the drum is also different. Lexmark Optra S drums that are currently being used in cartridges ranging from the Optra S to the T630 do not work well in the T640. Our tests show light printing when we used the T630 drum, and when we switched to an OEM drum the density increased.

### Cartridge Design

The design of the T640 cartridge is very similar to that of the T630 (see **Photos 1** and **2**). Notches cut out in the waste hopper prevent the T630 cartridges from fitting in the T640 and vice-versa (see **Photos 3** and **4**). A single cut out on the T644 32,000-page extra-high-yield, return-program print cartridge (64415XA) and the 32,000-page extra-high-yield print cartridge (64435XA) prevents the cartridges from being used in the T640 and T642 family of printers (see **Photo 5**).



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7

Lexmark also changed the placement of the cartridge handle. Since the release of the Optra S cartridge, we are used to seeing the cartridge handle on the waste hopper section (see **Photo 6**). With the release of the T640's cartridge, the cartridge handle has been moved to the toner hopper section (see **Photo 7**).

### The Aftermarket Response

With the improvements Lexmark has made to the toner and drum formulations, it is taking a little longer for the aftermarket to qualify components. Because the cartridges have to work in a variety of printers with different print speeds, it is critical that the correct toner and drum are used. Look for new toner and drum formulations in the upcoming months. \*

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