TECH TIP – Glossary of Terms

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Direct Thermal Technology- Direct thermal imaging technology uses a document media which contains the "ink" in a colorless form as a coating on the surface. Heat generated in the tiny printhead element transfers to the thermal paper roll and activates the ink to develop color. Direct thermal imaging uses a single consumable.

Dot Matrix Impact Printer prints inked images on paper by electrically driving solenoid pins into an ink ribbon situated between the pint mechanism and the paper. Because each solenoid pin is controlled individually, a dot matrix printer has the flexibility to print various fonts and even some simple graphics on ordinary paper. If a special, multicolor ribbon is used in the printer mechanism, impact printers may print several colors within the same document.

Dpi - Abbreviation of dots per inch, which indicates the resolution of images. The more dots per inch, the higher the resolution. A common resolution for thermal printers is 203 dots per inch. This means 203 dots across and 203 dots down, so there are 41,209 dots per square inch

Ethernet - A local area network (LAN) architecture developed by Xerox Corporation in cooperation with DEC and Intel in 1976. Ethernet uses a bus or star topology and supports data transfer rates of 10 Mbps. The Ethernet specification served as the basis for the IEEE 802.33 standard, which specifies the physical and lower software layers. It is one of the most widely implemented LAN standards.

Impact Printer - Refers to a class of printers that work by banging a head or needle against an ink ribbon to make a mark on the paper. This includes dot matrix printers, daisy wheel printers and line printers. In contrast, laser and ink-jet printers laser are nonimpact printers. The distinction is important because impact printers tend to be considerably noisier than nonimpact printers but are useful for multipart forms such as invoices.

Kiosk Printers- Kiosk printers are best suited for equipment that is unattended and used by the public, such as ATM machines or informational kiosks. Their key features are their method of paper presentation to the user, and a large roll of paper that minimizes down time for replacement.

Kiosk Paper Presentation -Kiosk Paper presentation is typically by one of three methods: (1) a mechanical presenter which retains the paper while it is printing and rolls it out to the user only after it is cut, (2) a cut-and-drop technique whereby the paper exits the printer as it is printing and until it is cut, but then has to drop a short distance into a tray or receptacle for the user to retrieve (though sometimes the paper is directed through a guide), or (3) a "pull-tear" technique in which the paper may exit to the user while printing, but cutting is accomplished as the paper is pulled and makes contact with a fixed blade, thus preventing damage to the printer by premature pulling.

RoHS- The RoHS Directive stands for "the restriction of the use of certain hazardous substances in electrical and electronic equipment". This Directive bans the placing on the EU market of new electrical and electronic equipment containing more than agreed levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants.

RS-232C- Short for recommended standard-232C, a standard interface for connecting serial devices. Many people, however, still refer to the standard as RS-232C, or just RS-232. Almost all modems conform to the EIA-232 standard and most personal computers have an EIA-232 port for connecting a modem or other device. In addition to modems, many display screens; mice and serial printers are designed to connect to an EIA-232 port.

The EIA-232 standard supports two types of connectors -- a 25-pin D-type connector (DB-25) and a 9-pin D-type connector (DB-9). The type of serial communications used by PCs requires only 9 pins so either type of connector will work equally well.

Although EIA-232 is still the most common standard for serial communication, the EIA has recently defined successors to EIA-232 called RS-422 and RS-423. The new standards are backward compatible so that RS-232 devices can connect to an RS-422 port.

Serial - One by one. Serial data transfer refers to transmitting data one bit at a time. The opposite of serial is parallel, in which several bits are transmitted concurrently.

Thermal Transfer Technology - Thermal transfer imaging technology uses a transfer ribbon in addition to the document media. Heat generated in the tiny printhead is transferred to the plastic ribbon, which in turn releases the ink to be deposited on the receptor media. Thermal transfer requires two consumables – the ribbon and the document.

Thermal Printer - A printer that uses heat to transfer an impression onto paper. There are two kinds of thermal printers:

> **Thermal Wax Transfer**: a printer that adheres a wax-based ink onto paper. A thermal printhead melts wax-based ink from the transfer ribbon onto the paper. When cool, the wax is permanent. This type of thermal printer uses an equivalent panel of ink for each page to be printed, no matter if a full page or only one line of print is transferred. Monochrome printers have a black page for each page to be printed, while color printers have either three (CMY) or four (CMYK) colored panels for each page. The big advantages of these printers over thermal dye transfer printers are that they don't require special paper and they are faster.
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> **Direct Thermal**: a printer that prints the image by burning dots onto coated paper when the paper passes over a line of heating elements. Early fax machines used direct thermal printing.

USB -Short for Universal Serial Bus, an external bus standard that supports data transfer rates of of 12 Mbps. USB also supports Pluf- and Play installation and hot plugging. It is expected to completely replace serial and parallel ports.