

► TCP300 II Series

A "thermochromic" visual and magnetic card reader / writer system which can be used to erase and re-write / print up-to-date information, loyalty points and special promotions on the front of a low cost thin PET card or paper ticket (incremental write only).

The back of the card can be used to encode holder information and points etc. on an ISO standard 3 track magnetic stripe or can be used in a "customised" format as the whole of the back of the card can be magnetically programmed.



SPECIFICATIONS

TCP300 II Media Technology	PET (Thin Type Card) Single use Paper Card for ticketing etc.
Output Colour	Blue or Black output dependant on card coating. <i>(Note – new colours are being introduced by the card manufacturers)</i>
Card / Media Thickness / Size	0.18 – 0.26 mm; 85.6 x 54 mm
Print Area	480 x 320 dots, max. 20 characters x 13 lines
Print Type	Alphanumeric, Chinese characters (GB, Big5)
External characters, Graphics	
Dot Pitch	Vertical: 0.125mm; Horizontal: 0.121mm
TCP300 II Reader / Writer	
Card Feed Speed	up to 400mm/second
Dual Interface	USB 2.0 & RS232C serial as standard with Ethernet option
Magnetic Stripe Read / Write	1 Track or 3 Tracks; JIS2 / ISO
System Reliability	500,000 Card Pass under normal conditions
Operating Conditions	5 to 35°C, 20 – 80% RH (w/o condensation)
Storage Conditions	-30 to 35°C, 20 – 90% RH (w/o condensation)
Dimensions / Weight	119 (W) x 270 (D) x 132.5 (H) mm / approx. 2.5Kg

Please note, specifications may be subject to change.

► TCP400 Series

A "thermochromic" visual and magnetic card reader / writer system which can be used to erase and re-write / print up-to-date information, loyalty points and special promotions on the front of an industry standard 760 micron Leuco card. The unique dual pass head can provide clear text at 30mm per second with a lower, high quality output speed for barcodes, photographic reproduction or other high quality output.



SPECIFICATIONS

TCP400 Card	Leuco based Technology
Output Colour	Blue or Black output dependant on card coating. <i>(Note – new colours are being introduced by the card manufacturers)</i>
Card Thickness / Size	0.68 ~ 0.84 mm; 85.6 x 54 mm
Card Display Re-Write Speed	30mm / second
High Quality Print Mode	Dual pass process for security photographs etc.
Re-Writable Card Display Area	40 x 66.8mm (width x depth) / 552 x 320 dots (one side)
Print Type	Alphanumeric, Chinese characters (GB, Big5)
Print Resolution / Dot Pitch	203 dpi / Vertical: 0.125mm; Horizontal: 0.121mm
Card Life	500 insertions (300 insertions with barcode use)
TCP400 Reader / Writer	
Card Feed Speed	up to 300mm/second with two quality modes
Dual Interface	USB 2.0 & RS232C serial as standard with Ethernet option
Magnetic Stripe Read / Write	1 Track or 3 Tracks; JIS2 / ISO
System Reliability	300,000 Card Pass under normal conditions
Print Head / Eraser Life	100,000 re-writes
Operating Conditions	5 to 35°C, 20 – 80% RH (w/o condensation)
Storage Conditions	-30 to 65°C, 20 – 90% RH (w/o condensation)
Dimensions / Weight	119 (W) x 270 (D) x 132.5 (H) mm / approx. 2.5Kg

Please note, specifications may be subject to change.

2/09

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► Card Systems with a Visible Difference

Unique Visual Card Systems from Star Micronics

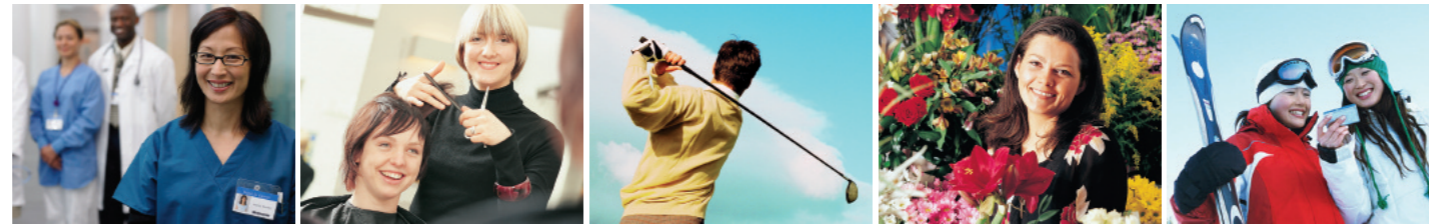
Systems that communicate directly with your Customers, Clients or Employees with cards that can be "instantly" re-written up to 500 times at the cash desk.

STAR TECHNOLOGY THAT'S CHANGING THE FACE OF THE CARD WORLD

Just how will your Card System stand out from the crowd?

Why Star Micronics?

Star's experience to date has led to a range of systems and services unrivalled by any other manufacturer. We understand you are looking for a Card System provider to provide choice and "know-how" for these simple, but complex solutions.



The key result of the wide-spread technology available today in domestic and commercial use has meant that users of all types expect far more sophistication than ever before. This expectation naturally includes the usual card applications – security access solutions, loyalty or membership card systems etc.

Star Micronics has been in the card business for over 20 years and can provide your users with the sophistication required from a unique range of visual card systems that can literally erase and re-write a card with new text and graphics in just 3 to 4 seconds. The use of this technology is virtually unlimited expanding targeted applications from the usual door access or loyalty cards to appointment card systems for hairdressers, driving schools, opticians and even the medical industry.

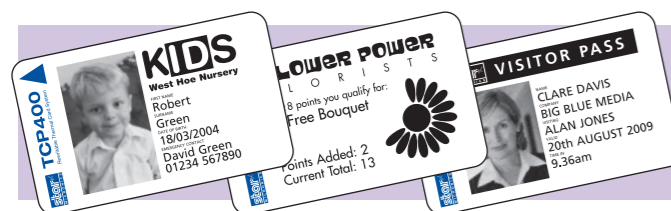


1. Technology

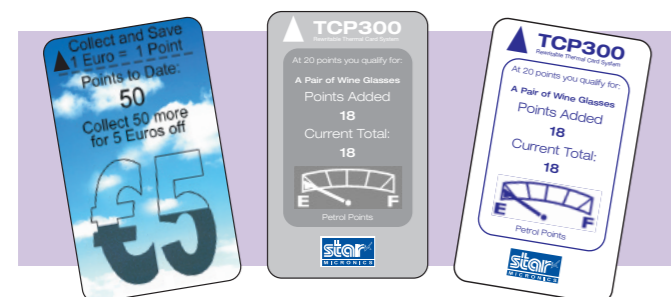
Star's latest generation of thermochromic Visual Card reader / writer systems uses Leuco based technology to create high quality text and graphics on low cost "instantly" re-writable thick (credit card style – 760 microns) or thin (PET 0.26mm) card systems.

Key advantages

TCP400 Series uses 760 micron "credit card" style of card systems which can be used with contactless IC chip card / RFID reader / writers (re-writable up to 500 insertions – 300 with barcode use).



TCP300 II Series uses 0.18mm to 0.26mm thick cards which can be also re-written up to 500 times. High contrast blue or black text and graphics can be produced on any colour "Leuco" based card. White text can also be produced on glossy silver standard cards.



2. Versatility

- The TCP400 Series can be integrated with RFID or IC chip systems.
- The TCP300 II Series can also print high quality text and graphics on low cost paper tickets for short term / temporary passes, tickets or vouchers.
- Meets all ISO / JIS standards for 3 track magnetic stripe and are suitable for use with contactless IC chip use.
- Dual Interface as standard (USB and RS232C) with user installable low cost Ethernet and Wireless options.
- Mechanism versions of either system available TCM300 II and TCM400.



3. Usability

- Compact clamshell™ design for easy maintenance with automatic indicators to warn users when to run the head cleaning cycle.
- Easy access to heads for routine maintenance.
- Unique card cleaning feature on TCP400 for fast and easy access.
- Dual Interface as standard (USB and RS232C) with user installable low cost Ethernet and Wireless options.



4. Star "Know-How"

Star's expertise has resulted in a range of integration tools from Active X controls, Microsoft Windows™ drivers to Windows / Linux™ based support libraries.

5. Unlimited Applications



Security Access / Employee Time Tracking Systems

What could be easier for security purposes than a card that, not only opens the appropriate door etc., but also states clearly where an employee or visitor should or should not be within a building? Star's proven technology is ideal for us in a reception environment. Visitor / Employee information can be quickly updated showing clearly which areas can be accessed or how many hours have been worked for flexi-time purposes.

Loyalty

Just as the "paperless" office has never fully been realised, commerce is now fully aware of just how profitable the printed word is with regards to loyalty. Users can now literally "see" their progress and are motivated as to just why they should remain loyal and return!

Membership / Electronic Wallets

The output of high quality graphics and photos has led to more and more membership schemes using the Star range of Visual Card Systems enabling fast and "diplomatic" member verification. These advantages also work in a variety of other industries from crèches to snooker halls. IC Chip use on the TCP400 cards can lead to the inclusion of an "electronic wallet" scheme as it is well known that members spend more money with cards than cash!

Appointment Cards

Whether you are a hairdresser, driving instructor or a dentist, you will know the amount of money lost through "forgotten" appointments. Star's experience has shown that the production of a high quality appointment card (which can be re-used for subsequent customers) reduces this frustrating commercial problem.

Blank cards

Cards can be sourced from manufacturers around the world with pricing dependent on colours used and quantity produced. In order to facilitate start-up projects, Star Micronics can provide boxes of 100 "blank" thin or thick cards for the TCP300 II and TCP400 respectively.

