



Identiv uTrust TS Card

Ordering Guide

January 2017

Table of Contents

1. uTrust TS Cards Ordering Guide	3
2. Summary of Ordering Information	3
3. Detailed Ordering Information	3
3.1. Order Format	3
3.2. Selecting a Base Card Part Number	4
3.3. Selecting a Configuration Card Part Number	5
3.3.1. Card Formats	5
3.3.2. Card Numbering	6
3.4. Selecting a Reader	7
4. Selecting a Migration Strategy	9
4.1. Migrating Cards First	9
4.2. Migrating Readers First	9
4.3. Mixed Migration Strategies	9
Appendix A – Part Number Decoder	10
Appendix B – Card Format Number Ranges	10

Identiv uTrust TS Cards

1. uTrust TS Card Ordering Guide

The ordering process for uTrust TS Cards is designed to be as simple as possible, while maintaining compatibility with existing access control systems and processes.

This guide describes the information that is required to place an order for uTrust TS Cards, and gives you the information required to make sure that what you order will meet your requirements. In addition, this guide provides advice on selecting readers, and planning your migration path to a high security access card.

2. Summary of Ordering Information

Model	Compatible With	Description	Part Number
uTrust TS Standard 256B ISO Card 5020-SDXXX	uTrust TS Readers (Advanced, Migration, ScramblePad)	uTrust TS Standard 256B ISO Card – 35D with NextUP	5020-SDSSM-001
		uTrust TS Standard 256B ISO Card – 37D without NextUP	5020-SDSRM-001
uTrust TS Migration 256B Plus Prox ISO Card 5020-MDXXX	All HID proximity-compatible 125 kHz LF Readers	uTrust TS Standard 256B ISO Card – 35D with NextUP	5020-MDSSM-001
		uTrust TS Readers (Advanced, Migration, ScramblePad, Proximity)	5020-MDSRM-001

Enrollment Process	Description	Equipment Required
Automated Enrollment Using uTrust TS Universal Enrollment Station	Connect the uTrust TS Universal Enrollment Station to the access control system workstation using USB. Enroll card automatically by tapping on enrollment reader.	uTrust TS Universal Enrollment Station – SMES-U-USB-T and uTrust TS Wallmount or Keypad Reader - 81xxABTytyy or 82xxABTytyy
Manual Enrollment Using Printed Card Number	Read card number from the back of the uTrust TS Card. Manually enter the number into the access control system.	None

3. Detailed Ordering Information

3.1. Order Format

An order for uTrust TS Cards must include the following information:

Order Field	Description	Example
Part Number	<p>This consists of a base part number, one of:</p> <ul style="list-style-type: none"> - 5020-SD – uTrust TS Standard Card - 5020-MD - – uTrust TS Standard Card <p>And a configuration part number, one of:</p> <ul style="list-style-type: none"> - SSM-001 – NextUP 35D - SRM-001 – 37D without NextUP <p>These are then concatenated to form the complete part number.</p>	<p>Examples of valid part numbers include:</p> <p>5020-SDSSM-001 – uTrust TS Standard Card w/ NextUP 35D</p> <p>5020-SDSRM-001 – uTrust TS Standard Card w/ 37D</p> <p>5020-MDSSM-001 – uTrust TS Migration Card w /NextUP 35D</p> <p>5020-MDSRM-001 – uTrust TS Migration Card w/ 37D</p>
Quantity	The number of cards to be produced. There is no minimum order quantity for uTrust TS Cards, unless additional custom graphical or electrical personalization is requested.	None
Card Format Encoding Details	<p>Depending on the specific configuration specified in the part number, additional information may be required to correctly encode the card format.</p> <p>If SSM-001, then the order must include:</p> <ul style="list-style-type: none"> - NextUp identifier - (Optional) Start Number <p>For SRM-001 orders, no additional information is required.</p>	<p>For example, place the following in the memo field to order using a NextUp ID:</p> <p>NextUp ID: 12345 Start Number: 10100</p>

3.2. Selecting a Base Card Part Number

There are two base part numbers for uTrust TS Cards:

Card	Base Part Number	Technology	Base Markings	Suitable for Use In
uTrust TS Standard 256B ISO Card	5020-SD	MIFARE DESFire EV1 256B – 13.56MHz HF – ISO14443 Type A	<ul style="list-style-type: none"> • Vertical slot punch marking • Horizontal slot punch marking • Identiv logo and trace number 	New installations with uTrust TS Readers

uTrust TS Migration 256B Plus Prox ISO Card	5020-MD	125kHz LF Proximity MIFARE DESFire EV1 256B – 13.56MHz – ISO14443 Type A	<ul style="list-style-type: none"> Vertical slot punch marking Horizontal slot punch marking Identiv logo and trace number 	<ul style="list-style-type: none"> Existing installations that use HID Prox and HID Prox-compatible readers Installations that include a combination of HID Prox, HID Prox-compatible, and/or uTrust TS Readers New greenfield installations with uTrust TS Readers
--	---------	---	---	--

For those familiar with other manufacturer’s HF cards, the following table provides an indication of similar cards from other manufacturers:

Card	Base Part Number	Similar to HID Cards	Similar to Allegion Cards	Similar to Other Cards
uTrust TS Standard 256B ISO Card	5020-SD	iCLASS® (SR/SE) and iCLASS® Seos, including part numbers 2000, 3000, and 5006	aptiQ Smart Credentials with MIFARE® Classic Technology aptiQ Smart Credentials with MIFARE DESFire™ EV1 Technology	Other cards based on MIFARE
uTrust TS Migration 256B Plus Prox ISO Card	5020-MD	iCLASS® (SR/SE) or iCLASS® Seos with Prox, including 2020, 3100, and 5106	Allegion Multi-Technology Credentials	Other cards based on MIFARE that also include 125kHz LF proximity technology

Please note that the uTrust TS Standard 256B and uTrust TS Migration 256B Cards have 256 bytes (2 kilobits) of memory, and do not have space for additional applications to be loaded. Future extensions of the uTrust TS Card product line will include higher memory cards that are suitable for loading additional applications.

3.3. Selecting a Configuration Part Number

3.3.1. Card Formats

All access cards are encoded using a specific card format. This format specifies how the card number (and optionally the facility code) are put together for transmission between the reader and the access control panel. It is necessary to ensure that the card format in use:

- Can be read by all of the readers in the system, both existing and new readers
- Can be decoded by the panel
- Can be supported in the access control system

To make use of the uTrust TS Card as simple as possible, Identiv uses two industry standard card formats, that are recognized by all leading access control systems and readers.

The most card popular format is the 35D format, which is compatible with the HID Corporate 1000 format (H5XXXX), is a managed format that assigns a customer number/facility code. This is widely used by enterprises, and supported in all major access control systems.

Identiv also provides the 37D format, which is compatible with the HID 37-bit no facility code format (H10302), and also does not include a facility code. This is also widely supported in major access control systems.

3.3.2. Card Numbering

The final piece of configuration concerns how the card numbers are to be encoded onto the card, using a particular card format.

uTrust TS Cards support two different modes, depending on whether the NextUP program is used or not.

In NextUP approach, which can only be used with uTrust TS Cards in conjunction with the 35D format, a customer fills out a form to sign up for the Identiv NextUP program. The customer is then assigned a NextUP identifier, which they then place on all of their orders for uTrust TS Cards. Based on this NextUP identifier, Identiv tracks all of the card numbers used under that identifier, and maintains the uniqueness of the card number on behalf of the customer. Using the NextUP program, a customer simply specifies their NextUP identifier on the order, and Identiv automatically uses the next unique card numbers.

Alternatively, if a customer is not using the NextUP program, Identiv automatically generates unique card numbers for the customer. This option can only be used with the 37D format.

The following table summarizes these options:

Configuration	Configuration Part Number	Requires NextUP?	Card Format	Facility Code	Card Number	Required Information in Order
35D/Corporate 1000-compatible using NextUP	SSM-001	Yes	35D	Fixed; Determined by customer's NextUP identifier	Sequential; start number specified in order, or determined by the last order delivered under the NextUP program. Uniqueness of card number and facility code	NextUp identifier Optionally, starting card number

					enforced by Identiv.	
37D without NextUP	5020-MD	No	37D	No facility code in this card format	Non-sequential; assigned by Identiv. Uniqueness of card numbers is enforced by Identiv.	None

3.4. Selecting a Reader

When selecting the uTrust TS Reader to use, the main consideration is whether or not it is necessary to support legacy 125kHz LF proximity credentials.

In cases where 125kHz LF proximity support is required, then it will be necessary to use the uTrust TS Migration Reader. This reader supports HID, Indala, Casi, AWID, EM and a variety of other credentials. Full details on the exact cards supported may be found in the uTrust TS Reader Ordering Guide.

In cases where no legacy card support is required, it is possible to use the uTrust TS Advanced Reader. This reader only supports 13.56MHz HF credentials, and provides the easiest way to immediately upgrade the security of the solution.

In addition, the uTrust TS Migration card is compatible with a variety of other readers that support HID Prox-compatible credentials. These readers can be used with the uTrust TS Migration card to facilitate the migration process.

A summary of the reader compatibility is given in the following table:

uTrust TS Card	Identiv uTrust TS Readers	HID Readers	Other Readers
uTrust TS Migration Card - 5020-MD	uTrust TS Advanced Readers: 8000ABP0000 8000ABT0000 8100ABP0000 8100ABT0000 8200ABT0000 uTrust TS Migration Readers: 8010ABP0000 8010ABT0000 8110ABP0000 8110ABT0000 8210ABT0000 uTrust TS Network	Identiv Hirsch Part Numbers: CR20L-BL CR21L CR22L CR22L-II CR23L CR24L CR-SE-RP10 CR-SE-RP15 CR-SE-RP40 iCLASS SE Readers with Prox option (RPx0), including: 900PxxxE	All other readers supporting HID Prox-compatible cards, including: <ul style="list-style-type: none"> Allegion – PR10 proximity, and MT11, MT15 and MTK15 multi-tech readers. AWID Farpointe The ISO14443A CSN/UID will be read on some readers. This is different from the card number in the Wiegand data format. Third party MIFARE DESFire EV1 readers may be configured to work with the public format

	<p>Readers: 8030ABP0000 8030ABT0000 8130ABP0000 8130ABT0000 8230ABT0000</p> <p>uTrust TS Proximity Readers: 8020ABP0000 8020ABT0000 8120ABP0000 8120ABT0000 8220ABT0000</p> <p>ScramblePad: DS47L-SSP-TS 8330ABT0000</p>	<p>910PxxxE 920PxxxE 921PxxxE 922PxxxE 925PxxxE 940PxxxE 95APxxxE</p> <p>ProxPoint Plus: 6005 6008</p> <p>MiniProx: 5365 5368</p> <p>ProxPro and ProxPro II: 5355 5455</p>	<p>used by uTrust TS Cards – contact your sales rep for further details.</p>
uTrust TS Standard Card - 5020-SD	<p>uTrust TS Advanced Readers: 8000ABP0000 8000ABT0000 8100ABP0000 8100ABT0000 8200ABT0000</p> <p>uTrust TS Migration Readers: 8010ABP0000 8010ABT0000 8110ABP0000 8110ABT0000 8210ABT0000</p> <p>uTrust TS Network Readers: 8030ABP0000 8030ABT0000 8130ABP0000 8130ABT0000 8230ABT0000</p> <p>ScramblePad: DS47L-SSP-TS 8330ABT0000</p>	<p>The ISO14443A CSN/UID will be read on some readers. This is different from the card number in the Wiegand data format.</p> <p>Third party MIFARE DESFire EV1 readers may be configured to work with the public format used by uTrust TS Cards – contact your sales rep for further details.</p>	<p>The ISO14443A CSN/UID will be read on some readers. This is different from the card number in the Wiegand data format.</p>

The above compatibility table applies to Identiv Readers in the base configuration (“0000”). Other readers in custom configurations may or may not be configured to read uTrust TS Cards.

Identiv Readers purchased prior to the launch of the uTrust TS Card product line may not contain the

cryptographic keys required to support uTrust TS Cards. These readers can be recognized by checking the version number on the unit. Version numbers lower than v2.1.333 do not include the uTrust TS Card keys. Please consult your Identiv sales representative for further information on how to update these readers to the latest firmware and configuration version.

4. Selecting a Migration Strategy

For new installations, deployment of TS Cards is straightforward: simply deploy uTrust TS Readers, and use the uTrust TS Standard Card. However, in cases where an existing system of cards and readers is in place one of two approaches may be pursued: either migrate cards first, or migrate readers first.

4.1. Migrating Cards First

In most cases, the simplest approach is to begin by migrating cards, by beginning to issue uTrust TS Migration Cards to users. This allows the organization to take advantage of the 125kHz LF proximity technology in the uTrust TS Migration Card to work with the existing installation of HID Prox-compatible readers. A further advantage of this approach is that it can take advantage of the existing card replacement budget to begin the process of migrating to a more secure card.

Once all of the cards have been migrated to uTrust TS Migration Cards, the customer may begin to deploy uTrust TS Advanced Readers, thereby upgrading the security of those doors by utilizing the secure 13.56MHz HF technology. This process can be done over a longer period of time, focusing initially on just those doors that require the highest security.

Finally, once all of the readers have been changed to uTrust TS Advanced Readers, future card replacements can be done using the uTrust TS Standard card, thereby reducing card costs while maintaining the highest level of security.

4.2. Migrating Readers First

Alternatively, it may be the case that a customer is in a position to begin upgrading readers in advance of cards. In this case the best approach is to begin moving to the uTrust TS Migration Reader, which will work with the existing population of 125kHz or 13.56MHz cards (see the uTrust TS Reader Ordering Guide for details on the cards supported by this reader.)

Once all of the readers have been upgraded to the uTrust TS Migration Reader, then the customer may move straight to issuing uTrust TS Standard cards, which will work with the uTrust TS Migration Readers in the secure mode.

As a final step, once all of the non-uTrust TS Cards have been replaced, the customer may upgrade the configuration of the uTrust TS Migration Readers to only accept the secure uTrust TS Standard Cards, and to disable other 125kHz LF proximity and other less secure cards. For details on how to perform this upgrade, please contact your Identiv sales representative.

4.3. Mixed Migration Strategies

In practice, particularly for large deployments, a combination of the above strategies will be required. In these cases, it is possible to mix and match uTrust TS Cards, third party cards, uTrust TS Readers, and third party readers, and leverage the flexibility of the Identiv products to migrate to a more secure solution with a minimum of effort and cost.

For these more complex cases, please contact your Identiv sales representative for additional advice.

Appendix A – Part Number Decoder

uTrust TS Card part numbers are in the form:

5020-XDXXX

The following table specifies the meaning of the X positions:

Element of Part Number	Description
1 st X	Additional Technologies Includes "S": Standard, no additional technologies "M": Migration, includes 125kHz LF proximity technology
2 nd X	Cryptographic Key Model "S": Standard Keys ("House") For future use: "V": VIP Program – custom keys defined by customer
3 rd X	Card Numbering "S": Sequential (35D only) "R": Non-sequential (37B only)
4 th X	Marking "M": Inkjet Marking (both sales order number and card number) For future use: "L": Laser Marking (both sales order number and card number) "U": No Marking (no sales order number, no card number) "O": Inkjet Marking (card number only) "P": Laser Marking (card number only)

Appendix B – Card Format Number Ranges

Format Code	Description	Identiv Format Code	Bits	Possible Facility Codes	Possible Serial Numbers
H5XXXX 35	HID Corporate 1000	35D	35	0-4, 095	0-1, 048, 575
H10302	37 bit No Facility	37D	37	N/A	0-4, 294, 967, 295