13.56 MHz standard readers range to Architect® range migration
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I. Introduction

This document will help you in the transition of our end of life products to the new range Architect®.

It describes the mapping products and or manipulation steps performed to ensure the transition to new references.
II. Equivalences

II-1. LXS hybrid reader migration grid

<table>
<thead>
<tr>
<th>Original Reference</th>
<th>New Compatible Reference</th>
<th>Compatibility</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>LXS-Rx1-A/BF0-xx</td>
<td>ARC-R31-I/BF5-xx</td>
<td>Total</td>
<td>SCB with SEC card + import .spa &amp; BCA</td>
</tr>
<tr>
<td>LXS-Rx1-A/BF1-xx</td>
<td>ARC-R31-I/BF5-xx</td>
<td>Total with condition</td>
<td>SCB with SEC card + import .spa &amp; BCA</td>
</tr>
<tr>
<td>LXS-Rx1-A/BF2-xx</td>
<td>ARC-R31-I/BF5-xx</td>
<td>Total with condition</td>
<td>SCB with SEC card + import .spa &amp; BCA</td>
</tr>
<tr>
<td>LXS-Rx1-A/BF3-xx</td>
<td>ARC-R31-I/BF5-xx</td>
<td>Total with condition</td>
<td>SCB with SEC card + import .spa &amp; BCA</td>
</tr>
<tr>
<td>LXS-Rx1-A/BF4-xx</td>
<td>ARC-R31-I/BF5-xx</td>
<td>Total with condition</td>
<td>SCB with SEC card + import .spa &amp; BCA</td>
</tr>
<tr>
<td>LXS-Rx1-E/BF5-xx</td>
<td>ARC-R31-I/BF5-xx</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LXS-Sx1-E/BF5-xx</td>
<td>ARC-S31-I/BF5-xx</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LXS-Rx2-E/BF5-5AB</td>
<td>ARC-R32-I/BF5-xx</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LXS-Sx2-E/BF5-5AB</td>
<td>ARC-S32-I/BF5-xx</td>
<td>Total</td>
<td>-</td>
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<tr>
<td>LXS-Rx3-E/BF5-7AB</td>
<td>ARC-R33-I/BF5-xx</td>
<td>Total</td>
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<tr>
<td>LXS-Sx3-E/BF5-7AB</td>
<td>ARC-S33-I/BF5-xx</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LXS-Rx3-E/BF5-7AA + INT-R33-E</td>
<td>ARC-Rx3-I/BF5-7AA + INT-R33-E</td>
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<td>LXS-Sx3-E/BF5-7AA + INT-E-7AA/7BB</td>
<td>ARC-Sx3-I/BF5-7AA + INT-E-7AA/7BB</td>
<td>Total</td>
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## II-2. LXS reader migration grid

<table>
<thead>
<tr>
<th>Original Reference</th>
<th>New Compatible Reference</th>
<th>Compatibility</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>LXS-R31-A/1A3-xx</td>
<td>ARC-R31-A/103-xx</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LXS-R31-A/PH1-xx</td>
<td>ARC-R31-A/PH5-xx</td>
<td>Total with condition</td>
<td>SCB with SECard + import .spa &amp; BCA</td>
</tr>
<tr>
<td>LXS-R31-A/PH1-2K</td>
<td>No</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>LXS-R31-A/PH1-2R</td>
<td>No</td>
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<tr>
<td>LXS-R31-A/PH4-xx</td>
<td>ARC-R31-A/PH5-xx</td>
<td>Total with condition</td>
<td>SCB with SECard + import .spa &amp; BCA</td>
</tr>
<tr>
<td>LXS-R31-A/PH2-2P</td>
<td>ARC-R31-A/103-xx</td>
<td>Total with condition</td>
<td>SCB with SECard + import .spa &amp; BCA</td>
</tr>
<tr>
<td>LXS-R31-A/PH2-3T</td>
<td>ARC-R31-A/103-3T</td>
<td>Total</td>
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<tr>
<td>LXS-R31-A/2A3-3T</td>
<td>ARC-R31-L/LE2-3T</td>
<td>Total</td>
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<tr>
<td>LXS-R31-A/103-2H</td>
<td>ARC-R31-A/103-3T</td>
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<tr>
<td>LXS-R3x-A/X03-5X</td>
<td>ARC-R32-L/LE2-5AB</td>
<td>Total with condition</td>
<td>Integrated protocol 5AB</td>
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<td>ARC-R32-A/103-5AB</td>
<td>Partial</td>
<td>Not ISO 15693 + Integrated protocol 5AB</td>
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<tr>
<td>LXS-R32-D/203-5K</td>
<td>ARC-R32-L/LE2-5AB</td>
<td>Total with condition</td>
<td>Integrated protocol 5AB</td>
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<td>ARC-R32-A/103-5AB</td>
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<td>Not ISO 15693 + Integrated protocol 5AB</td>
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<td>LXS-R31-E/103-xx</td>
<td>ARC-R31-A/103-xx</td>
<td>Total</td>
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<tr>
<td>LXS-R31-E/PH5-xx</td>
<td>ARC-R31-A/PH5-xx</td>
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<tr>
<td>LXS-S31-E/PH5-xx</td>
<td>ARC-S31-A/PH5-xx</td>
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<td>LXS-R32-E/PH5-5AB</td>
<td>ARC-R32-A/PH5-5AB</td>
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<td>-</td>
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<tr>
<td>LXS-S32-E/PH5-5AB</td>
<td>ARC-S32-A/PH5-5AB</td>
<td>Total</td>
<td>-</td>
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<td>LXS-R33-E/PH5-7AB</td>
<td>ARC-R33-A/PH5-7AB</td>
<td>Total</td>
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<tr>
<td>LXS-S33-E/PH5-7AB</td>
<td>ARC-S33-A/PH5-7AB</td>
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<tr>
<td>LXS-R33-E/PH5-7AA + INT-R33-E</td>
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<tr>
<td>LXS-S33-E/PH5-7AA + INT-E-7AA/7AB</td>
<td>ARC-S33-A/PH5-7AA + INT-E-7AA/7AB</td>
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<tr>
<td>LXS-R31-F/LE2-2TA</td>
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<td>Not 2TA protocol on ARC + SEGIC configuration for swap reading</td>
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<tr>
<td>LXS-R31-F/LE2-3La/3Lb/3I</td>
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<td>-</td>
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<tr>
<td>Original Reference</td>
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<td>Compatibility</td>
<td>Conditions</td>
</tr>
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<td>--------------------</td>
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<td>------------</td>
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<tr>
<td>LXS-W32-A/PH1-5D</td>
<td>ARC-W32-A/PH5-5AA</td>
<td>Total with condition</td>
<td>Integrated SSCP protocol</td>
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<td>SSCP = 1 stop bit</td>
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<tr>
<td>LXS-W32-A/PH1-5V</td>
<td>ARC-W32-A/PH5-5AA</td>
<td>Partial</td>
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<td>-</td>
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<td>-</td>
<td>Not ISO 15693</td>
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<td>LXS-W33-A/PH1-7B</td>
<td>ARC-W33-A/PH5-7AA</td>
<td>Total with condition</td>
<td>Integrated SSCP protocol</td>
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<td>LXS-W3x-B/101-5i</td>
<td>No</td>
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<td>-</td>
</tr>
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<td>LXS-W32-C/LE1-5E</td>
<td>ARC-W32-L/LE2-5AA</td>
<td>Total with condition</td>
<td>Integrated LEGIC SSCP protocol</td>
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<tr>
<td>LXS-W32-E/PH5-5AA</td>
<td>ARC-W32-A/PH5-5AA</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LXS-W33-E/PH5-7AA</td>
<td>ARC-W33-A/PH5-7AA</td>
<td>Total</td>
<td>-</td>
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<tr>
<td>LXS-W33-E/PH5-7AD</td>
<td>ARC-W33-A/PH5-7AD</td>
<td>Total</td>
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<tr>
<td>LXS-W33-E/PH5-7BB</td>
<td>ARC-W33-A/PH5-7BB</td>
<td>Total</td>
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<tr>
<td>LXS-W33-E/PH5-7AD</td>
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<tr>
<td>LXS-W33-E/PH5-7BB</td>
<td>ARC-W33-A/PH5-7BB</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LXS-W33-E/PH5-7AD</td>
<td>ARC-W33-A/PH5-7AD</td>
<td>Total</td>
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</table>
### II-3. LXE reader migration grid

<table>
<thead>
<tr>
<th>Original Reference</th>
<th>New Compatible Reference</th>
<th>Compatibility</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>LXE-R31-E/103-xx</td>
<td>ARC-R31-A/103-xx</td>
<td>Total with condition</td>
<td>Larger gauge</td>
</tr>
<tr>
<td></td>
<td>ARC1-R31-(A or B)/PH1-xx</td>
<td>Total with condition</td>
<td>Configured for UID reading</td>
</tr>
<tr>
<td></td>
<td>ARC1-R31-(A or B)/PH5-xx</td>
<td>Total with condition</td>
<td>Configured for UID reading</td>
</tr>
<tr>
<td>LXE-R31-E/PH5-xx</td>
<td>ARC1-R31-(A or B)/PH5-xx</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LXE-S31-E/PH5-xx</td>
<td>ARC1-S31-(A or B)/PH5-xx</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LXE-R32-E/PH5-5AB</td>
<td>ARC-R32-A/PH5-5AB</td>
<td>Total with condition</td>
<td>Larger gauge</td>
</tr>
<tr>
<td>LXE-S32-E/PH5-5AB</td>
<td>ARC-S32-A/PH5-5AB</td>
<td>Total with condition</td>
<td>Larger gauge</td>
</tr>
<tr>
<td>LXE-R33-E/PH5-7AB</td>
<td>ARC1-R33-(A or B)/PH5-7AB</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LXE-S33-E/PH5-7AB</td>
<td>ARC1-S33-(A or B)/PH5-7AB</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LXE-R33-E/PH5-7AA  + INT-R33-E-xx (Easy Secure)</td>
<td>ARC1-R33-(A or B)/PH5-7AA + INT-R33-E-xx (Easy Secure)</td>
<td>Total</td>
<td>-</td>
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<tr>
<td>LXE-S33-E/PH5-7AA  + INT-E-7AA/7AB (EasySecure)</td>
<td>ARC1-S33-(A or B)/PH5-7AA + INT-E-7AA/7AB (EasySecure)</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LXE-W32-E/PH5-5AA</td>
<td>ARC-W32-A/PH5-5AA</td>
<td>Total with condition</td>
<td>Larger gauge</td>
</tr>
<tr>
<td>LXE-W33-E/PH5-7AA</td>
<td>ARC1-W33-(A or B)/PH5-7AA</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LXE-W33-E/PH5-7BB  + INT-E-xAA/7BB (RemoteSecure)</td>
<td>ARC1-W33-(A or B)/PH5-7BB + INT-E-xAA/7BB (RemoteSecure)</td>
<td>Total</td>
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## II-4. LX1 reader migration grid

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<th>Original Reference</th>
<th>New Compatible reference</th>
<th>Compatibility</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>LX1-R31-A/1A3-xx</td>
<td>ARC1-R31-(A or B)/PH1-xx</td>
<td>Total with conditions</td>
<td>3 m cable (instead of 0.5 m)</td>
</tr>
<tr>
<td>LX1-R31-A/PH1-xx</td>
<td>ARC1-R31-(A or B)/PH1-xx</td>
<td>Total with conditions</td>
<td>3 m cable (instead of 0.5 m) SCB with SEC Card + import .spa &amp; BCA</td>
</tr>
<tr>
<td>LX1-R31-B/1A3-xx</td>
<td>ARC1-R31-(A or B)/PH1-xx</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LX1-R31-B/PH1-xx</td>
<td>ARC1-R31-(A or B)/PH1-xx</td>
<td>Total with conditions</td>
<td>SCB with SEC Card + import .spa &amp; BCA</td>
</tr>
<tr>
<td>LX1-R31-(A ou B)/PH1-2K</td>
<td>No</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>LX1-R31-A/PH2-3T</td>
<td>ARC1-R31-(A or B)/PH5-3T</td>
<td>Total with conditions</td>
<td>3 m cable (instead of 0.5 m) Conf. SEC Card</td>
</tr>
<tr>
<td>LX1-R31-B/PH2-3T</td>
<td>ARC1-R31-(A or B)/PH5-3T</td>
<td>Total with conditions</td>
<td>SEC Card configuration</td>
</tr>
<tr>
<td>LX1-R31-E/103-xx</td>
<td>ARC1-R31-(A or B)/PH1-xx</td>
<td>Total with conditions</td>
<td>3 m cable (instead of 0.5 m)</td>
</tr>
<tr>
<td>LX1-R31-G/103-xx</td>
<td>ARC1-R31-(A or B)/PH1-xx</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LX1-R31-E/PH1-xx</td>
<td>ARC1-R31-(A or B)/PH1-xx</td>
<td>Total with conditions</td>
<td>3 m cable (instead of 0.5 m)</td>
</tr>
<tr>
<td>LX1-R31-G/PH1-xx</td>
<td>ARC1-R31-(A or B)/PH1-xx</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LX1-R31-E/PH5-xx</td>
<td>ARC1-R31-(A or B)/PH5-xx</td>
<td>Total with conditions</td>
<td>3 m cable (instead of 0.5 m)</td>
</tr>
<tr>
<td>LX1-R31-G/PH5-xx</td>
<td>ARC1-R31-(A or B)/PH5-xx</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LX1-S31-E/PH5-xx</td>
<td>ARC1-S31-(A or B)/PH5-xx</td>
<td>Total with conditions</td>
<td>3 m cable (instead of 0.5 m)</td>
</tr>
<tr>
<td>LX1-S31-G/PH5-xx</td>
<td>ARC1-S31-(A or B)/PH5-xx</td>
<td>Total</td>
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### II-5. MS module migration grid

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<th>Original Reference</th>
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<th>Compatibility</th>
<th>Conditions</th>
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<td>MS-R31-A/1A3-xx</td>
<td>MS-R31-E/103-xx</td>
<td>Total</td>
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</tr>
<tr>
<td>MS-R31-A/PH1-xx</td>
<td>MS-R31-E/PH5-xx</td>
<td>Total with condition</td>
<td>SCB with SEC card + import .spa &amp; BCA</td>
</tr>
<tr>
<td>MS-R31-A/PH1-2K</td>
<td>No</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MS-R31-A/PH2-3T</td>
<td>MS-R31-E/103-3T</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>MS-R31-A/X03-2B</td>
<td>MS-R31-E/103-2B</td>
<td>Partial</td>
<td>Not ISO 15693</td>
</tr>
<tr>
<td>MS-R31-A/X03-2H</td>
<td>MS-R31-E/103-2H</td>
<td>Partial</td>
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<td>MS-R31-A/X03-3CB</td>
<td>MS-R31-E/103-3CB</td>
<td>Partial</td>
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<tr>
<td>MS-R31-A/X03-3i</td>
<td>MS-R31-E/103-3i</td>
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<td>MS-R31-A/103-5D</td>
<td>MS-R31-E/PH5-5AB</td>
<td>Integrated protocol 5AB</td>
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<tr>
<td>MS-W31-X/PH1-5D</td>
<td>MS-W31-E/PH5-5AA</td>
<td>Total with condition</td>
<td>Integrated SSCP protocol</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MS-W31-X/PH1-5M</td>
<td>No</td>
<td>-</td>
<td>SSCP = 1 stop bit</td>
</tr>
<tr>
<td>MS-W31-X/St1-5N</td>
<td>No</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MS-W31-A/PH1-5V</td>
<td>MS-W31-E/PH5-5AA</td>
<td>Partial</td>
<td>UID Master Mode (in autonomous) + integrated SSCP protocol</td>
</tr>
<tr>
<td>MS-W31-D/PH3-5K</td>
<td>No</td>
<td>-</td>
<td>Not ISO 15693</td>
</tr>
</tbody>
</table>

### II-6. M1 module migration grid

<table>
<thead>
<tr>
<th>Original Reference</th>
<th>New Compatible Reference</th>
<th>Compatibility</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1-X31-A/PH1-5V</td>
<td>No</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>M1-R31-A/1A3-XX</td>
<td>No</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>M1-R31-A/PH1-XX</td>
<td>No</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
## II-7. STR reader migration grid

<table>
<thead>
<tr>
<th>Original Reference</th>
<th>New Compatible Reference</th>
<th>Compatibility</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>STR-R3x-B/x03-5X</td>
<td>ARC-R3x-G/PH5-5AB</td>
<td>Partial</td>
<td>Not ISO 15693 + Integrated protocol 5AB</td>
</tr>
<tr>
<td></td>
<td>ARC-R3x-L/LE2-5AB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STR-R35-E/PH5-5AB</td>
<td>ARC-R35-G/PH5-5AB</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>STR-R32-E/PH5-5AB</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STR-S35-E/PH5-5AB</td>
<td>ARC-S35-G/PH5-5AB</td>
<td>Total</td>
<td>No ARC RS232 desktop reader</td>
</tr>
<tr>
<td>STR-S32-E/PH5-5AB</td>
<td>No</td>
<td></td>
<td>No ARC RS232 desktop reader</td>
</tr>
<tr>
<td>STR-W35-B/PH1-5D</td>
<td>ARC-W35-G/PH5-5AA</td>
<td>Totale with conditions</td>
<td>Integrated SSCP protocol</td>
</tr>
<tr>
<td>STR-W3X-B/PH1-5M</td>
<td>No</td>
<td></td>
<td>SSCP = 1 stop bit</td>
</tr>
<tr>
<td>STR-W3X-B/PH1-5V</td>
<td>ARC-W35-G/PH5-5AA</td>
<td>Partial</td>
<td>UID Master Mode (in autonomous) + integrated SSCP protocol</td>
</tr>
<tr>
<td>STR-W3X-B/PH3-5K</td>
<td>No</td>
<td></td>
<td>No ISO 15693 in read / write</td>
</tr>
<tr>
<td>STR-W32-E/PH5-5AA</td>
<td>No</td>
<td></td>
<td>No ARC RS232 desktop reader</td>
</tr>
<tr>
<td>STR-W35-E/PH5-5AA</td>
<td>ARC-W35-G/PH5-5AA</td>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>

## II-8. Keypad reader migration grid

<table>
<thead>
<tr>
<th>Original Reference</th>
<th>New Compatible Reference</th>
<th>Compatibility</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCI-R31-A/1A3-xx</td>
<td>ARC-R31-B/103-xx</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>LCI-R31-A/PH1-xx</td>
<td>ARC-R31-B/PH5-xx</td>
<td>Totale with conditions</td>
<td>SCB with SECard + import .spa &amp; BCA</td>
</tr>
<tr>
<td>LXC-R31-E/103-xx</td>
<td>ARC-R31-B/103-xx</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>LXC-R31-G/103-xx</td>
<td>ARC-R31-B/103-xx</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>LXC-R31-G/PH5-xx</td>
<td>ARC-R31-B/PH5-xx</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>LXC-S31-G/PH5-xx</td>
<td>ARC-S31-B/PH5-xx</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>LXC-R32-E/PH5-5AB</td>
<td>ARC-R32-B/PH5-5AB</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>LXC-S32-E/PH5-5AB</td>
<td>ARC-S32-B/PH5-5AB</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>LXC-R33-E/PH5-7AB</td>
<td>ARC-R33-B/PH5-7AB</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>LXC-S33-E/PH5-7AB</td>
<td>ARC-S33-B/PH5-7AB</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>LXC-W32-E/PH5-5AA</td>
<td>ARC-W32-B/PH5-5AA</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>LXC-W33-E/PH5-7AA</td>
<td>ARC-W33-B/PH5-7AA</td>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>
II-9. Biometric reader migration grid

<table>
<thead>
<tr>
<th>Original Reference</th>
<th>New Compatible Reference</th>
<th>Compatibility</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDS-R31-E/PH5-xx</td>
<td>ARC-R31-D/PH5-xx</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LDS-S31-E/PH5-xx</td>
<td>ARC-S31-D/PH5-xx</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LDS-R33-E/PH5-7AA  + INT-R33-E-xx (EasySecure)</td>
<td>ARC-R33-D/PH5-7AA + INT-R33-E-xx (EasySecure)</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>LDS-W33-E/PH5-7AA</td>
<td>ARC-W33-D/PH5-7AA</td>
<td>Total</td>
<td>-</td>
</tr>
</tbody>
</table>
III. Implementation of mixed fleet

Many cases may require a mixed fleet of Standard readers A and/or E and ARCHITECT® readers:

✓ Case 1: extension of an installation with standard A reader.
✓ Case 2: replacement of standard A reader.
✓ Case 3: extension of an installation with standard E reader.
✓ Case 4: replacement of standard E reader.

III-1. Case 1 and 2

Reading of CSN only
Standard readers A and Architect® readers are configured to read MIFAREClassic® serial number (UID).
This case does not require specific operation. Compatibility between the two ranges is complete.

Private Id reading
Readers must be configured to read a private ID on MIFARE Classic®.
This case requires two configuration cards, a BCA for standard readers A and a SCB for Architect® readers.

III-2. Case 3 and 4

Reading of CSN only
Standard readers E and Architect® readers are configured to read the serial number (UID) of the same chips.
This case does not require specific operation. Compatibility between the two ranges is complete.

Reading of Private ID
Readers must be configured to read the same private ID on chip MIFARE®.
The SCB created to configure the standard reader E are compatible with Architect® readers.
In this case, the Architect® readers behave like standard readers (no management of new functionalities). No specific action is required.

To manage all the new Architect® features it will be necessary to recreate a SCB configuration card with SECard (from V2.0.x).
IV. Migration of configuration: SECard

Objectives:

✓ Generate, with SECard, a new configuration card (SCB) that will allow Architect® readers to read user cards identically to standard readers A.

✓ Generate, with SECard, a new configuration card (SCB) that will allow Architect® readers to read user cards identically to standard readers E and to use the latest Architect® features.

✓ Create user cards indifferently with PRG-PH1 or SECard.
IV-1. Objective 1

Generate, with SECARD, a new configuration card (SCB) that will allow Architect® readers to read user cards identically to standard readers (methods 1, 2 or 3).
Readers migration

Architect® readers must be configured with a configuration card (SCB) created from the SECard software. They cannot be configured with the old configuration card (BCA) created with PRG-PH1.

Three methods allow import the current configuration in SECard.

Depending on the method, the configuration allows:
- To configure only the reader to read existing user cards.
- To configure the reader to read existing user cards and to create new ones.

The choice of method is listed below:

<table>
<thead>
<tr>
<th>No BCA card</th>
<th>Method 1</th>
<th>Manual entry of readers’ configuration and users cards creation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No configuration file .spa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BCA card</td>
<td>Method 2</td>
<td>Import readers’ configuration settings</td>
</tr>
<tr>
<td>Configuration file .spa</td>
<td>Method 3</td>
<td>Import readers’ configuration and user cards creation settings</td>
</tr>
</tbody>
</table>

**Method 1: Manual entry of configuration in SECard**

All configuration parameters must be entered in the appropriate fields in the Setup Wizard SECard.
Method 2: Import, in SECard, of reading parameters from BCA configuration card, created with PRG-PH1.

For this readers’ migration, a tool has been added to SECard allows import the reading parameters of a reader, from BCA configuration card created with PRG-PH1.

It is necessary to know the value of the company key BCA. This tool is accessible, in SECard (V.2.x.x), from button ”Tools”

There are three import methods:

Reading an existing BCA configuration card

✓ and import configuration parameters to the Mifare Classic/SL1 configuration:
   The MIFARE® Classic parameters are filled into card configuration utility of SECard “SCB Wizard”.

✓ and save the parameters into .ese file:
   Parameters are saved in .ese file (by default BCAImport.ese) different from that used for the general configuration.

✓ Both:
   The MIFARE® Classic parameters are filled into card configuration utility of SECard “SCB Wizard” and saved in .ese file (by default BCAImport.ese) different from that used for the general configuration.
Once method selected click on

With this method only the parameters necessary for the reader to read card users will be imported (i.e., green boxes).
Method 3: Import, in SECARD, of configuration file .spa, created with PRG-PH1

For this readers’ migration, a tool has been added to SECARD allows import the reading parameters of A reader, from .spa file configuration created with PRG-PH1.

This tool is accessible, in SECARD (V2.x.x), from button “Tools”

There are three import methods:

✔ Import configuration parameters from existing .spa file to the Mifare Classic/SL1 configuration:
The MIFARE® Classic parameters are filled into card configuration utility of SECARD “SCB Wizard”.

✔ Save .eSe file:
Parameters are saved in .eSe file (by default BCAImport.eSe) different from that used for the general configuration.

✔ Both:
The MIFARE® Classic parameters are filled into card configuration utility of SECARD “SCB Wizard” and saved in .eSe file (by default BCAImport.eSe) different from that used for the general configuration.

Once method selected click on
With this method **all** the parameters necessary for the reader to read users card will be imported (i.e. green boxes) and all write parameters (i.e. red boxes) necessary for the encoding of new user card.

Note:

- “BCA company key” on 6 bytes will be imported into “SCB company key” field with zero padding left to reach the 16 bytes.
- Secure Plus parameters will not be imported because the functionality does not exist in this form in SECard.
- The configuration of communication parameters (baudrate, COM port number) will not be imported in view of the differences between the range E / A & ARC.
- The key values of BCE card will be copied in the table of values read "Crypto1keys" of SKB card.
IV-2. **Objective 2**

Generate, with SECARD, a new configuration card (SCB) that will allow Architect® readers to read user cards identically to standard readers E and to use the latest Architect® features (method 4).

For this readers’ migration, a tool has been added to SECARD allows import the reading parameters of E reader, from .ese file configuration created with SECARD version < 2.x.x.

**It is necessary to know the password of .ese file if the file is protected.**
This tool is accessible, in SECARD (V2.x.x), from button “Tools”

![SECARD tool](image)

After .pse file created, the configuration wizard allows you to change reader settings.

Refer to SECARD manual to create the configuration card and save the configuration into .pse file.

IV-3. **Objective 3**

Create user cards indifferently with PRG-PH1 or SECARD once set.

You have to follow the method 1, 3 or 4 so that all the parameters necessary for encoding user cards are entered in the SECARD software.
V. Serial readers Read / Write

Protocols (5D, 5V, 7B) of range A are not available on Standard E readers or on Architect® readers.

To support new generations of chips and implement secure communications functions, the STid Secure Common Protocol (SSCP) has been developed.

All functionalities of range A have been kept in Standard E and Architect® range.

The open protocol SSCP can secure the connection between the reader and the system, by data encryption (AES) and mutual authentication "reader-controller" before any communication.

This serial protocol allows the exploitation of all chips range Mifare® securely or insecurely: MIFARE® Classic, MIFARE Plus®, MIFARE® DESFire® and DESFire® EV1, MIFARE® Ultralight® C.

Serial interface parameters:

<table>
<thead>
<tr>
<th>Baudrate</th>
<th>9600, 19200, 38400, 57600, 115200 bauds. default 38400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of bits</td>
<td>8</td>
</tr>
<tr>
<td>Transfer Mode</td>
<td>LSB first</td>
</tr>
<tr>
<td>Stop bit</td>
<td>1</td>
</tr>
<tr>
<td>RS485</td>
<td>Default broadcast address 00h.</td>
</tr>
</tbody>
</table>

MIFARE® SDK (DEVKIT) will enable the integration of SSCP protocol and functions read and write for Ultralight® C, MIFARE® Classic, MIFARE Plus® and MIFARE® DESFire® chips.

Training is available to assist you in the integration of MIFARE Plus® and DESFire® technologies in access control systems, and in the development of applications using these technologies.