

CipherLab User Guide

Data Output Formatting For Android Mobile Device

Version 1.00



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RELEASE NOTES

Version	Date	Notes
1.00	Jan. 17, 2018	► Initial Release

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DATA OUTPUT

1.1 INTRODUCTION

Data formatting is provided for users to customize data format before transmission.

Users can use XML syntax to edit customized data format. Please locate the *DataFormatting.xml* file in the **/sdcard/ReaderService_Data** directory (or **Device\Internal storage\ReaderService_Data** in file transfer mode) and then reboot the device.

1.2 RULES: CRITERIA LINKED TO ACTIONS

Rules carry out detailed actions when the data meets certain criteria. One rule may consist of single or multiple criteria applied to single or multiple actions.

For example, a data formatting rule could be:

Criteria: *When scan data is Code 39, length 12, and data include the string "129".*

Actions: *pad all sends with zeros to length 8,*

send all data up to X,

send a space

1.3 CRITERIA

Three criteria are supported.

Code Type: Please refer to Supported Code Type.

Code Length: Define the barcode length.

Specific String: The barcode contains this string.

1.4 ACTION

1.4.1 SEND BARCODE DATA

Description	Command Format
Send data sequence until a matching character.	Send Data Up To <Character>
Send the next character(s) of specified number.	Send Data Next <N>
Send data up to specific string.	Send Data Up To Specific <String>
Send all data that remains.	Send All Data That Remains
Send all data that remains and skip the last N character(s).	Send All Data That Remains and Skip Last <N>

1.4.2 MOVE CURSOR

Description	Command Format
Move cursor to the start position.	Move Cursor To Start
Move cursor to the end position.	Move Cursor To End
Move the cursor to the position after the matching character.	Move Cursor To <Character>
Move cursor to the position after the next N character(s).	Move Cursor To Next <N>
Move the cursor to the position after the specific string.	Move Cursor To Specific <String>

1.4.3 REPLACE DATA

Description	Command Format
Replace data.	Replace Data <Specific String> <Replace String>
Replace a character with another.	Replace Char <Character> <Character>

1.4.4 SEND CHARACTERS

Description	Command Format
Send characters.	Send <Characters>

1.4.5 SEND CONTROL

Description	Command Format
Send control code.	Send Control <Control Code>

1.4.6 SEND KEY EVENT

Description	Command Format
Send key event.	Send KeyEvent <Key Code>

1.5 SAMPLE

1.5.1 SAMPLE 1

```
<?xml version="1.0" encoding="UTF-8"?>

<DataFormatting Number="1">

  <DataFormattingRule>

    <Criteria>

      <CodeType>GS1-128 (EAN 128)</CodeType>

      <CodeLength>0</CodeLength>

    </Criteria>

    <Actions Number="2">

      <Action>Move Cursor To Next 3</Action>

      <Action>Send Data Next 13</Action>

    </Actions>

  </DataFormattingRule>

</DataFormatting>
```

<DataFormatting Number="1"> →only one rule is defined

→In this rule, code type must be GS-128 with no limit on code length.

```
<Criteria>

  <CodeType>GS1-128 (EAN 128)</CodeType>

  <CodeLength>0</CodeLength>

</Criteria>
```

→Two actions are defined to move the cursor to the position three characters forward and send data of 13 characters beginning after that position.

```
<Actions Number="2">

  <Action>Move Cursor To Next 3</Action>

  <Action>Send Data Next 13</Action>
```



```
</Actions>
```

→Result: Data "1193160905021011063294" is formatted to "9316090502101".

1.5.2 SAMPLE 2

```
<?xml version="1.0" encoding="UTF-8"?>
<DataFormatting Number="3">
  <DataFormattingRule>
    <Criteria>
      <CodeType>GS1-128 (EAN 128)</CodeType>
      <CodeLength>0</CodeLength>
    </Criteria>
    <Actions Number="4">
      <Action>Move Cursor To Next 3</Action>
      <Action>Send Data Next 13</Action>
      <Action>Move Cursor To Next 16</Action>
      <Action>Send Data Next 7</Action>
    </Actions>
  </DataFormattingRule>
  <DataFormattingRule>
    <Criteria>
      <CodeType>QR Code</CodeType>
      <CodeLength>0</CodeLength>
      <Specific>17418957-9</Specific>
    </Criteria>
    <Actions Number="4">
      <Action>Move Cursor To Specific 17418957-9</Action>
```

```
<Action>Send Data Next 8</Action>
<Action>Move Cursor To Next 1</Action>
<Action>Send Data Next 1</Action>
</Actions>
</DataFormattingRule>
<DataFormattingRule>
  <Criteria>
    <CodeType>PDF417</CodeType>
    <CodeLength>0</CodeLength>
  </Criteria>
  <Actions Number="1">
    <Action>Send Data Next 9</Action>
  </Actions>
</DataFormattingRule>
</DataFormatting>

<DataFormatting Number="3"> → Three rule are defined.
```

Rule 1

```
<DataFormattingRule>

→Code type must be GS-128 with no limit on code length defined in the rule.
```

```
<Criteria>
  <CodeType>GS1-128 (EAN 128)</CodeType>
  <CodeLength>0</CodeLength>
</Criteria>
```

→Four actions are defined to move the cursor to the position three characters forward and send data of 13 characters beginning after that position; then move the cursor past 16 characters and send seven characters beginning after that position.

```
<Actions Number="4">  
  <Action>Move Cursor To Next 3</Action>  
  <Action>Send Data Next 13</Action>  
  <Action>Move Cursor To Next 16</Action>  
  <Action>Send Data Next 7</Action>  
</Actions>  
</DataFormattingRule>
```

Rule 2

```
<DataFormattingRule>
```

```
  <Criteria>
```

→In this rule, code type must be QR Code with no limit on code length. Besides, data must contain "17418957-9".

```
    <CodeType>QR Code</CodeType>  
    <CodeLength>0</CodeLength>  
    <Specific>17418957-9</Specific>  
  </Criteria>
```

```
  <Actions Number="4">
```

→Four actions are defined to move the cursor to the position before the string "17418957-9" and send data of eight characters beginning after the string; then move the cursor a character forward and send a characters beginning after that position.

```
    <Action>Move Cursor To Specific 17418957-9</Action>  
    <Action>Send Data Next 8</Action>  
    <Action>Move Cursor To Next 1</Action>  
    <Action>Send Data Next 1</Action>  
  </Actions>  
</DataFormattingRule>
```

→Result: Data "17418957-9" is formatted to "174189579".

Rule 3

<DataFormattingRule>

→ In this rule, code type must be PDF417 with no limit on code length.

<Criteria>

<CodeType>PDF417</CodeType>

<CodeLength>0</CodeLength>

</Criteria>

→ One action is defined to send data of nine characters after the current position.

<Actions Number="1">

<Action>Send Data Next 9</Action>

</Actions>

</DataFormattingRule>

</DataFormatting>

1.6 SUPPORTED CODE TYPE

Australian Postal
Aztec
Bookland
Chinese 2 of 5
Codabar
Code 11
Code 128
Code 39
Code 39 Full ASCII
Code 93
Composite CC-A + EAN128
Composite CC-A + EAN13
Composite CC-A + EAN8
Composite CC-A + RSS Expanded
Composite CC-A + RSS Limited
Composite CC-A + RSS14
Composite CC-A + UPC-A
Composite CC-A + UPC-E
Composite CC-B + EAN128
Composite CC-B + EAN13
Composite CC-B + EAN8
Composite CC-B + RSS Expanded
Composite CC-B + RSS Limited
Composite CC-B + RSS14
Composite CC-B + UPC-A
Composite CC-B + UPC-E
Composite CC-C + EAN128
Coupon Code
Data Matrix

Dutch Postal
EAN13
EAN13 with Addon 2
EAN13 with Addon 5
EAN8
EAN8 with Addon 2
EAN8 with Addon 5
French Pharmacode
GS1 DataBar14
GS1 DataBarExpanded
GS1 DataBarLimited
GS1-128 (EAN 128)
IATA25
Industrial 2 of 5
Interleaved 2 of 5
ISBT 128
ISBT 128 Concatenation
ISSN
Italian Pharmacode
Japan Postal
Korean 3 of 5
Macro Micro PDF417
Macro PDF
Matrix 2 of 5
Maxicode
Micro PDF
Micro QR Code
MSI
PDF417
Plessey
QR Code
Telepen
TLC 39

Trioptic Code 39
UK Postal
UPC A
UPC A with Addon 2
UPC A with Addon 5
UPC E0
UPC E0 with Addon 2
UPC E0 with Addon 5
UPC E1
UPC E1 with Addon 2
UPC E1 with Addon 5
UPU FICS Postal
US Planet
US Postnet
USPS 4CB One Code Intelligent Mail