"   "

1

.

,   ,
.

,   ASCII Data Parser,
,   "Python plugin"   "Proxy plugin".

XML   ,
.   XML
.

,   ,   XML   .

2

:

: Windows 2000 SP4   ,   32-x   64-x
,   .
-                    .

:   5 MB
.

:
.
.

( ),   Advanced Serial Data Logger.

3

1.   (, Advanced Serial Data Logger),
;
2.   ;
3.   ,
Windows;
4.   .
"   ";
5.   .   "   ".

,
.   . 1-2.

"   "   .
.
"   -   ".
"   "   "   ".
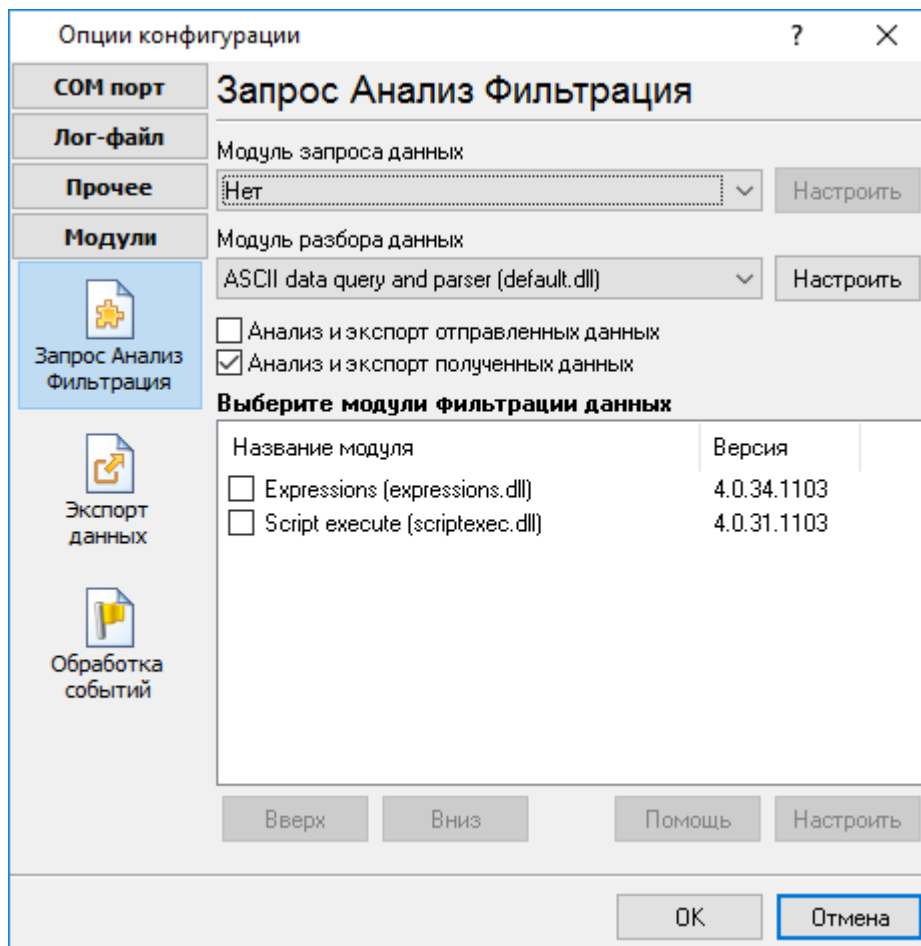
. 1.
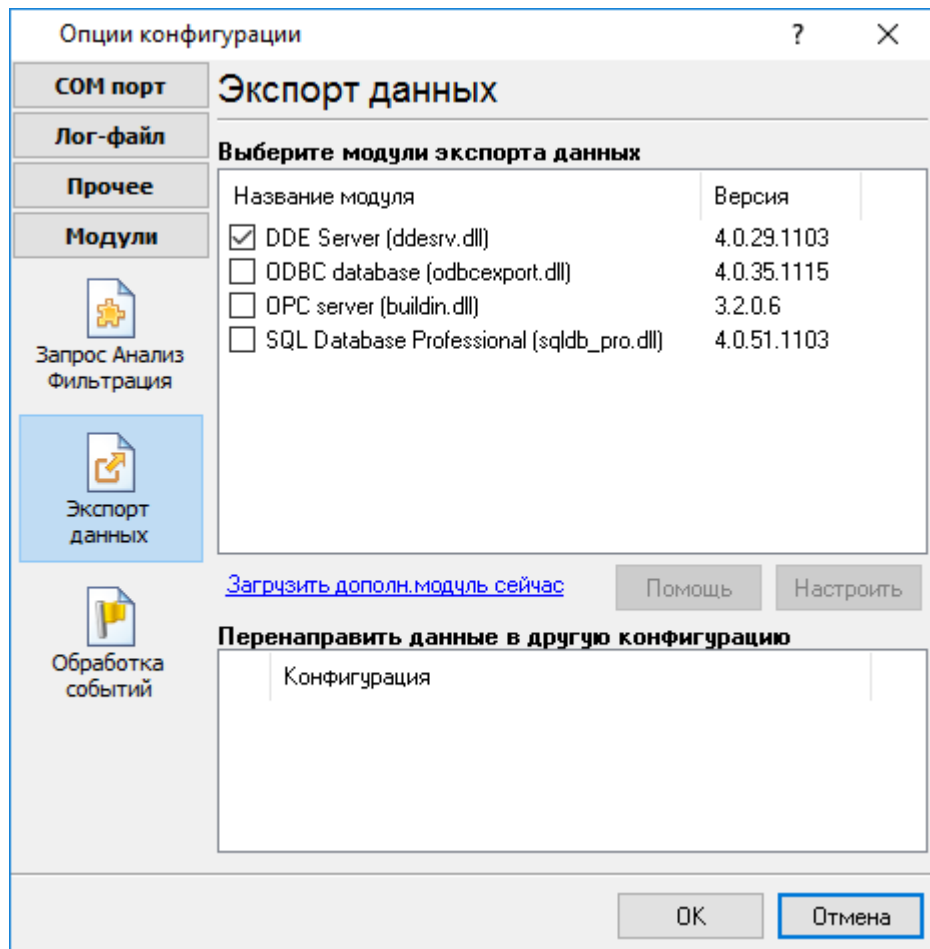
. 2.
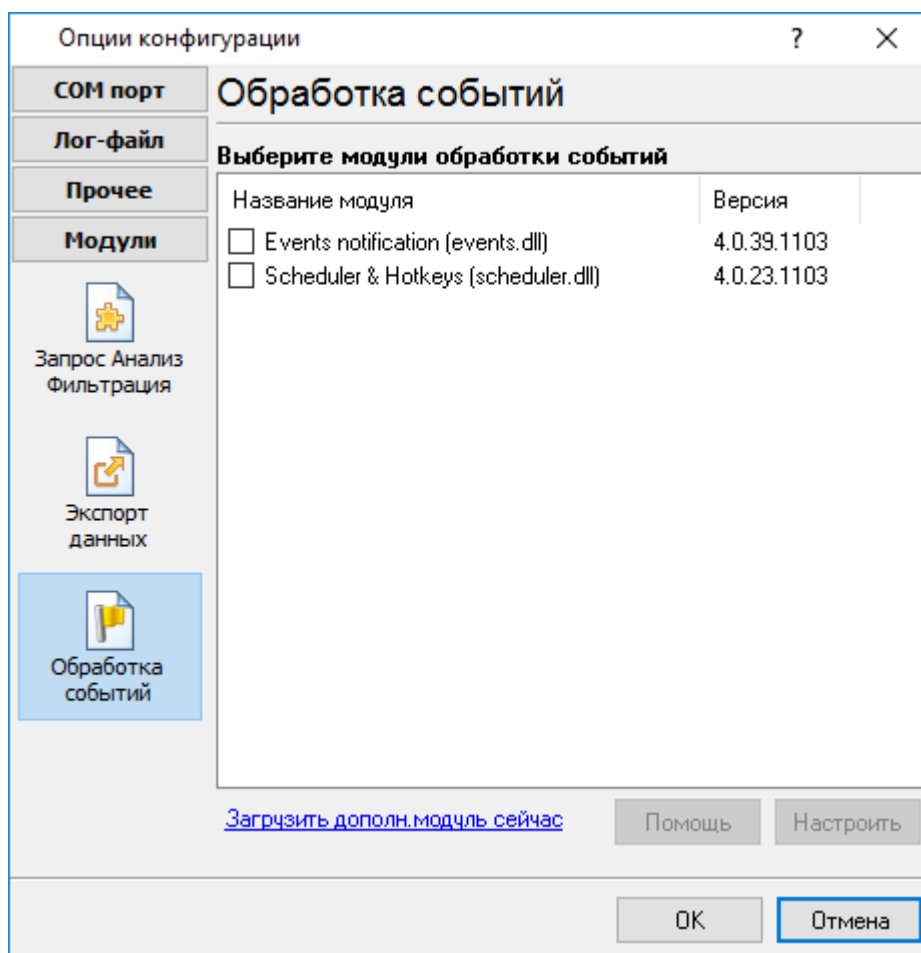
. 3.

4

Plug-in -

- , . :
Advanced Serial Data Logger

- ." ".

- , , ,
.
.

- ." ".

5

5.1

"xml" "Configs",
"uniparser.dll".

:

```
uniparser
|--Configs
|   |--config.xml
|--uniparser.dll
```

XML , [XML](). ,
:

1. ("true" "false") , :
   o 0 - false.
   o 1 - true.

2. **[d]**,
   :
   o 0 **[d]**.
   o **value** - (**[d]** 0).

3. , , false,
   0, .

4. XML
   HTML . XML
   :
   o < <
   o > >
   o & &
   o " ( ) "

5. .
   , .

:

logtitle="value" - .
logtitle='value' - .
logtitle='value1 "value2"-value1' - ,
                value2 ,
                .
logtitle='value" - ,
       , .
logtitle=value - , .

logtitle="value1 & value2" -   .

5.2

                    XML 1.0   XML
        .

        :

```
<?xml version="1.0" encoding="windows-1251"?>

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

                            ANSI   Windows: Windows 1250, Windows 1251, Windows
1252   . .,   UTF-8.

                                            Windows 1252.

5.3   XML

        XML   .   .
                                      .

        :

```
<Config name="MyPlugin [Custom Format 0]" logtitle="MyPlugin">
```

Config -   .

name, logtitle -   .

                                                                        .   ,
                ,   ,
        .

5.4   XML

5.4.1

    <!-- ... --> -   ,
                            .

5.4.2 Config

XML ,
.

: .

:

name - , ,
- .

logtitle - , , ,
, .

5.4.2.1 Devices

.
.

: <u>Config</u>

:

name - .

caption - (,
).

5.4.2.1.1 Includes

,
.

: <u>Devices</u>, <u>Device</u>

:

5.4.2.1.1.1 IncludeItem

,
. .

: <u>Includes</u>

:

name -   .

                        ,   "Include".

                        :

```
<IncludeItem name="decode_gps_fix">
      <Item value="1" name="No fix" />
      <Item value="2" name="2D" />
      <Item value="3" name="3D" />
      <Item value="" name="Unknown" default="1" />
</IncludeItem>
```

5.4.2.1.2 Include

                                                                              ,

                                          "IncludeItem".

                              :

                  :

name -   .

                  :

```
<Include name="decode_gps_fix" />
```

5.4.2.1.3 Device

                                                            .

                              : Devices

                  :

name -   .

caption -   .

5.4.2.1.3.1 SetVar

                                    ,
                              (,   ).
                                                      ,
(   )   .

                        : Device

:

name - .

value - ( ).

type - ([**d**]). "const",
.

:

```
<SetVar name="UNIQUE_ID" value="" />
```

5.4.2.1.3.2 Options

, ___,
.

"OK" , .

: Device, Command

:

, .

: Options

:

name - .
, .
, , ,
, .

caption - .

hint - , .

type - ,
. :

- integer - .
- string - [**d**].
- uppercase - , .
- mixedcase - , .
- lowercase - , .
- password - , .
- hex - , A-F 0-9.
- alphanumeric - , .

- validchars -   ,   ,
  "validchars".
- combodropdown -   ,
       "comboitems" "combovalues",
  "[ComboItems](#)".   ,   ,
  (Text)   .
- combosimple -   .
- combodropdownlist -   .
- combodropdownvalueslist -   ,
       "combovalues" "value"
  "ComboItems",
       .
- color -   ,   RGB.
- extended -   .
- checkbox -   "check box",   :
  - 0 -   [**d**].
  - 2 -   .
  - 4 -   (check box).

default -   .

min, **max** -   .
     .   ,
     ,   .

validchars -   ,   .

comboitems -   ,   ,
     "~".   , comboitem1~ comboitem2~ comboitem3.

combovalues -   ,   ,
     "~".   , value1~ value2~ value3.
     ,   comboitems.
     ,   .

checktype -   "check box".

  - 1 - check box c   [**d**].
  - 2 - check box c   .
  - 3 - radio button.

     :

```
<Option name="DATAFORMAT" caption="Data format" type="combodropdownvalueslist" default=
      <ComboItems>
            <Item name="Engineering unit" value="0" />
            <Item name="Perecent of FSR (full scale range)" value="1" />
            <Item name="2s complement hexadecimal" value="2" />
            <Item name="Ohms" value="3" />
      </ComboItems>
</Option>
```

"combobox".

: [Option](#)

:

Item

.

: ComboItems

:

name -   .

value -   .

5.4.2.1.3.3 Request

,   .

.   ,

.   [Item](#), [Items](#).

: [Device](#)

:

5.4.2.2 Commands

(   ),   .

: [Device](#)

:

5.4.2.2.1 Command

(   ).   :

-                               .
-            .
-           .

: [Commands](#)

:

name -   .

caption -   ,   .

5.4.2.2.1.1 Responses

                                   (   )   .

                              : [Command](#)

                              :

                                          .

                              : [Responses](#)

                              :

begin -   (   )   .
                                                                              .
                    ,   begintype.   -   .   :
begin="+RGA".

begintype -   :
  ○ 0 -   **[d]**.
  ○ 1 -   .

beginbuff - (**[d]** 0)
          .
                    ,   .   ,
                    ,   .
                                                  1.

end - (**[d]**   )   (   )   .
                    ,   **endtype**.   : end="#0D#0A"

endtype -   :
  ○ 0 - **[d]**   .
                                                  ,
                              .   : end="#0D#0A".
                                          ASCII   CR   LF   0x0Dh 0x0Ah
                              .
  ○ 1 -   .
  ○ 2 -   ,
                    ,   **len**.
  ○ 3 -   .
                                          timeout.
                    ,   .

o 4 -   3,   ,
         ,   0.

o 5 -   3,   ,
         ,   1.

o 6 -   **timeout**.
                                    Responses.

endbuff - (**[d]** 0)
         .   **beginbuff**.

len -   .   , . .
                        .

maxpacketsize –   .
            16384.   .

override - (**[d]** 0)   **override**   "1",   **endtype**   "3",
                                        Response,
                        Responses.
            ,   .   ,   ,
                        endtype   **begintype**   0   1.

validatesize - (**[d]** 0)   .
                  ,   ,
            1,   ,
            ,   .

timeout - (**[d]** 500)
                  (**endtype**).
            (   )   ,
                        .

parse -   ,   : "b,p,e",
      ,   :
o b -   .
o p -   , . .   ,
            .
o e -   .

      : parse="bp".
                                          .

                              ,   .   ,
         ,   .
                                                                    (,
if).

                  : Response

            :   Item.

,   :

case - (**[d]**   )   .   ,
                                                                         ,   ,   **if**
          "true".

                                                       .

                                     : Responses, Items

                          :   -   ,
                    ,   ,   [**parse**](parse).

                    :

type -   .   :
    o **break** -   .
    o **goto** -   ,   **expr**.
                                                                id,   **expr**.
                                            .

                                      .
    o **log** -   ,   **value**.
    o **push** -   ,   **name**,
                                      .   ,
                                .   **value**,
                    .
    o **pop** -   **name**,
                                                                                                         .
                    ,   **value**,
              ,   **value**,
                    name.   pop   **datatype**,
                                                  .
                                .
    o **reset** -   ,   **name**,   .
    o **const** -   ,   **value**,
                                        name.   [_____](link)
        [_____](link),   .   : <Item
        type="const" pos="1" value="*NULL*" />
    o **format** -   [**format**](format)   [_____](link),
                                                              ,
        name.
    o **filter** -   ,
        [**filtertype**](filtertype).   **name**,
                                              .
                          .
    o **decode** -   .
        value   ,   ,
        name,   ,   **name**   .
                                                        ,
                    ,   default="1".   :

```
<Item type="decode" pos="1" size="1" value="{CALL_TYPE}" name="DIRECTION" export
      <Item value="0" name="INT" />
      <Item value="1" name="OUT" />
      <Item value="2" name="IN" />
      <Item value="" name="INT" default="1" />
</Item>
```

            ,   "CALL_TYPE"   "1",
"DIRECTION"   "OUT".
"CALL_TYPE"   "10",   "DIRECTION"
        "INT".

  o **var** -
                .   :

```
<Item type="var" pos="1" size="-1" value="{CALL_TYPE}" name="DIRECTION" export="
```

                        "CALL_TYPE"
"DIRECTION".

  o **hex** -   .   :

```
<Item type="hex" pos="1" size="-1" value="#0D#0A" name="VALUE" export="1">
```

  o **fix** -   **<u>size</u>**   ,   **<u>pos</u>**.
                 <u>value</u>.
  o **delimit** -   ,
  ordernum.   ,   ,
                     delimiter.   **ordernum**   "1".
  ordernum   **<u>   </u>**.
  <u>value</u>.   :

        : 123,321;456;789;012

```
<Item type="delimit" pos="1" size="-1" ordernum="1" delimiter=";" name="FLAG1" d
```

       "123,321"   "FLAG1".

```
<Item type="delimit" pos="1" size="-1" ordernum="2" delimiter="," name="FLAG2" v
```

       "321"   "FLAG2".

  o **regexp** -   ,
                       ordernum.
          expr.   **ordernum**   1. **ordernum**
  <u>   </u>.
                        .
        ,   **match**   (1, 2
   . .).   **<u>value</u>**.   :

CALL_TYPE = 123456I

```
<Item type="regexp" size="-1" name="_DIRECTION" expr="(I|O)" value="{CALL_TYPE}" datat
```

       "I"   "_DIRECTION".

```
<Item type="regexp" size="-1" name="_BEGIN" expr="^(.{5})" datatype="string" />
```

                                   "_BEGIN".

- o **expr** -   ,   **expr**,
             ,   **name**.   :

```
<Item type="expr" size="-1" expr="'IN'+'{DIRECTION}'" name="CALL_TYPE" datatype="string
```

     "DIRECTION"   '12345',   "CALL_TYPE"
'IN12345'.

- o **pascal** -   Pascal-   ,   .
          :

```
<Item size="-1" type="pascal"><![CDATA[begin SendByte($06); end.]]></Item>
```

                                ,   .

        ,
      UniParser_ScriptTest.exe   "[Script Execute](Script%20Execute)".

- o **crc_AAA** -   ,   AAA - <u>   </u>.

   pos   **size**.
           .   :

```
<Item type="crc_crc8-sum" pos="0" size="10" name="CRC" />
```

name -   (   ).

value - (**[d]**   )   .
    fix, **expr**, **regexp**   :
- o   .   ,
                 .
               .   ,   .
- o   .
           ,   .

pos - (**[d]** 0)   .
   .   "{VAR}+1",
  {VAR}   ,
         "VAR".   "-1",
                    ,
             .

size - (**[d]** -1)   .   ,
                    .

-                ,

validatesize,   ,
.   .

default - (**[d]**   )   .
                                    :
  o   .
  o   .
  o   -
         .

format -   _____   .
                                                                    ,
                         .   : format="trim;uppercase".

caption - (**[d]**   )   .
                                                                          .

datatype - (**[d]** string)   .   : string, boolean, float,
smalllnt, integer, word, dword, date, time, datetime, unknown.
                                             ,   ,
                                 .

export -   .
  o 0 **[d]** -
                                                      .
  o 1 -   , . .
                                                              .
  o 2 -   NULL.
  o 3 -   NULL,   (
).
  o 4 -   NULL,   false (
).

             :   ,   ,
                                     .   : name="_TEMP".

count - (**[d]** 1)   _____.
                                                       ,   .   **count**
         ,
                                   ,   ,
                         caption:
  o ITEM_COUNT -   ,   1   count.
  o ITEM_COUNT_Z -   ,   0   count-1.

                                                                             .   :

```
<Item name="NAME{ITEM_COUNT_Z}" count="{_COUNT1}" caption="Name{ITEM_COUNT_Z}" e
```

                             ,   ,   .
                                                                                     "_COUNT1",

.   : NAME0, NAME1, NAME2   . .

.

filtertype -   "**filter**".
(   )   **expr**.
name,   .

.

- o 0 -   **format**.
- o 1 **[d]** -   .   (. **exprtype**),
                                                       .   .

.

- o 2 -   .
- o 3 -   ,   **expr**.
- o 4 -   ,   **expr**.
- o 5 -   ,   0x20h.
- o 6 -   ,   0x7Fh.
- o 7 -   .
- o 8 -   **target**.
- o 9 -   .

expr -   .   .

exprtype -   **filtertype** 1   2:
- o 0 **[d]** -   .
- o 1 -   .
- o 2 -   .

if - (**[d]**   )   ,   .
                                                              "false",   .

:

```
... if="LENGTH('{FLAG3}')&lt;=5" />
```

FLAG3.

_____   .   ,
,   .

5.4.2.3   Predefine

.

: [Config]

:

"bool"   "0".
"1".

tree -   .

reqtype -   (,
                                        . .).

respitems -   .

dataquery -   ,
                          .

command -   ,
                          .   .

                                        ,   .

unique - (bool, **[d]** 0).   "1",
                                                                                     ,
                          .

device - (bool, **[d]** 0).   "1",
                          .

5.4.2.3.1 QUERYXML

                                        XML   .

                                        : Predefine

                    :

                                                    :

```
<Predefine tree="1" unique="0" device="0" command="0" reqtype="0" respitems="0"
     <QUERYXML>
          <Request caption="My Request" expanded="1">
               <DeviceType>DEF</DeviceType>
               <ReqType>DEF</ReqType>
               <ItemType>B</ItemType>
               <RequestMethod>
                    <Timeout>2000</Timeout>
                    <MethodPoll check="2">
                         <PollInterval>5</PollInterval>
                         <PollIntervalUnits>1</PollIntervalUnits>
                    </MethodPoll>
               </RequestMethod>
          </Request>
     </QUERYXML>
</Predefine>
```

20

.

: <u>QUERYXML</u>

:

caption - (**[d]**   )   .
.

expanded - (bool, **[d]** 0).   "1",
/   .

,
.   **name**   <u>Device</u>.

: <u>QUERYXML</u> => <u>Request</u>

:

,
.   **name**   <u>Command</u>.

: <u>QUERYXML</u> => <u>Request</u>

:

.   :

- D -   .   .
- B -   .
- R -   ,   .
- S -   ,   .

: <u>QUERYXML</u> => <u>Request</u>

:

(,   . .).

: <u>QUERYXML</u> => <u>Request</u>

:

.

: [QUERYXML](#) => [Request](#) => [RequestMethod](#)

:

,   .

: [QUERYXML](#) => [Request](#) => [RequestMethod](#)

:

check -   .   2,   .

.   . [MethodOnce](#).

.   .

: [QUERYXML](#) => [Request](#) => [RequestMethod](#) => [MethodPoll](#)

:

:

- 0 -   .
- 1 -   .
- 2 -   .
- 3 -   .

: [QUERYXML](#) => [Request](#) => [RequestMethod](#) => [MethodPoll](#)

:

6

.

    uniparser.dll   uniparser.dbg,   .
    DLL   DBG   ,   ,
    .

7

utc2local, local2utc -   UTC   .

dec2hex, hex2dec -   .

num2date -   TDateTime.

time2sec -   .

sec2datetime, msec2datetime -   ,   TDateTime.

sec2datetime2, msec2datetime2 -   ,
    (1   1970)   TDateTime.

be2le -   Big Endian   Little Endian.

bytes2uint64 -   Int64.

bytes2int64 -   Int64.

bytes2dword -   DWORD.

bytes2word -   WORD.

bytes2byte -   Byte.

bytes2longint -   Longint.

bytes2smallint -   Smallint.

bytes2shortint -   Shortint.

bytes2signle -   Single.

bytes2double -   Double.

getbit(X) -   ,   (   ).

leadzero -   ,   ,
    ,   size.

leadspace -   ,   .

hi -   .

lo-   .

trim -   .

trunc -   ,   .

trimleft -   .

trimright -   .

uppercase -   .

utf8decode, utf8encode -   UTF-8.

lowercase -   .

delete(X, Y) -   Y   X. X, Y -   .

substr(X, Y) -   Y   X   . X, Y -   .

div(X) -   X,   X   .

mul(X) -   X,   X   .

sub(X) -   X   ,   X   .

add(X) -   X   ,   X   .

"@",

.

,

.

8

:

crc8-sum
crc8
crc8-darc
crc8-i-code
crc8-itu
crc8-maxim
crc8-rohc
crc8-wcdma

crc16-sum
crc16
crc16-buypass
crc16-dds-110
crc16-dect
crc16-dnp
crc16-en-13757
crc16-genibus
crc16-maxim
crc16-mcrf4xx
crc16-riello
crc16-t10-dif
crc16-teledisk
crc16-usb
crc16-ccitt-1D0F
crc16-ccitt-FFFF
x25
xmodem
modbus
kermit

crc24
crc24-flexray-a
crc24-flexray-b

crc32
crc32-bzip2
crc32c
crc32d
crc32-mpeg
posix
crc32q
jamcrc
xfer