InduSoft CNF Files

Description and Standard Syntax of the
Configuration Files Created by STUDIO

PROPRIETARY NOTICE

Index

I. Introduction

This document describes the format of the text files created by STUDIO when configuring an application. The screen files (*.SCR or *.SCC), compiled maths (*.MAC) and any other binary file (*.BIN) are not text files, therefore are not described in this document.

➲ **Caution:** The format of any file described in this document can be modified in upgraded versions of STUDIO without any formal warning from the software manufacturer.

II. Database Files (\<ApplicationPath>\Database\)

II.1. TAGL.TXT - Application Tags Database

▪ **Standard Syntax for each tag**

```
// X.Y – Application Tags
#T1|T2|T3|T4|T5|T6|T7|
#Parameters
<[P1.P2]>|P3|P4|P5|P6|P7|P8|P9|P10|P11|P12|
#Alarm
<[A1.A2]>|A3|A4|A5|A6|A7|A8|A9|A10|A11|A12|A13|A14|A15|A16|A17|
#History
<[H1.H2]>|H3|H4|H5|H6|
```

▪ **Tag Properties:**
T1 = Position of the tag in the Tags Datasheet View (line number)
T2 = Tag Name
T3 = Tag Size
T4 = Tag Type (0=Boolean; 1=Integer; 2=Real; 3=String; 4..n=Class)
T5 = Class Name
T6 = Description
T7 = Web Data type (0=Local; 1=Server)

▪ **Parameters:**
P1 = Constant Value (value = 0)
P2 = Class Member Name (only for Class Tag)
P3 = Version of the syntax for the Parameters (current value = 1)
P4 = Retentive Value (1=Enabled; 0=Disabled)
P5 = Retentive Parameters (1=Enabled; 0=Disabled)
P6 = Dead Band (1=Enabled; 0=Disabled)
P7 = Smoothing (1=Enabled; 0=Disabled)
P8 = Dead Band Value
P9 = Min. Value
P10 = Max. Value
P11 = Unit
P12 = Startup Value

▪ **Alarm Properties:**
A1 = Array Index
A2 = Class Member Name (only for Class Tag)
A3 = Version of the syntax for the Alarm Properties (current value = 2)
A4 = Translation (1=Enabled; 0=Disabled)
A5 = Constant Value (value=1)
A6 = Dead Band Value
A7 = Deviation Dead Band
A8 = Deviation Set Point
A9 = Remote Ack Tag
A10 = Amount of Alarm Messages
A11 = Alarm Type (1=HiHi; 2=Hi/On; 4=Lo/Off; 8=LoLo; 16=Rate/Changed; 32=Deviation+; 64=Deviation-)
A12 = Rate Unit (0=1/sec; 1=1/min; 2=1/hor)

A13 = Group Number
A14 = Priority
A15 = Message
A16 = Selection
A17 = Limit

▪ **History Properties:**
H1 = Array Index
H2 = Class Member Name (only for Class Tag)
H3 = Version of the syntax for the History Properties (current value = 1)
H4 = Constant Value (value=1)
H5 = Group Number
H6 = Log Dead Band

✎ **Notes:**
▪ The first line of the *Application Tags Database* file must begin with the chars `//`. The text besides these chars can be any comment. Usually, this text is `X.Y – Application Tags,` where `X.Y` is the product version.
▪ The parameters **A11** … **A17** must be repeated in the same line for each alarm type configured for the same tag.
▪ The text `.P2` , `.A2` and `.H2` must be omitted for single tags (non-class tags)

III. Tasks Configuration Files (\<ApplicationPath>\Config\)

III.I. ALARM???.ALR - Alarm Worksheet

▪ **Standard Syntax**

```
H1
alarm
H2│H3
H4
SH5
RH6
RH7
RH8
RH9
RH10
RH11
TH12
TH13
TH14
TH15
RH16
RH17
RH18
FH19
FH20
FH21
FH22
FH23
FH24
B1GB2 RB3    FB4    SB5    IB6    SB7
GB8    RB9    FB10   SB11   IB12   SB13
```

▪ **Worksheet Header**

H1 = Text configured in the *Description* field
H2 = Version of the file syntax (current value = 0)
H3 = Access Level for the Security System
H4 = Number of lines configured in the body of the *Alarm* worksheet
H5 = Text configured in the *Group Name* field
H6 = *Beep* checkbox (0=Unchecked; 1=Checked)
H7 = *Save To Disk* checkbox (0=Unchecked; 1=Checked)
H8 = *Summary* checkbox (0=Unchecked; 1=Checked)
H9 = *To Printer* checkbox (0=Unchecked; 1=Checked)
H10 = *Generate Ack Messages* checkbox (0=Unchecked; 1=Checked)
H11 = *Generate Norm Messages* checkbox (0=Unchecked; 1=Checked)
H12 = Tag configured in the *Total Active* field
H13 = Tag configured in the *Total Active or Unack* field
H14 = Tag configured in the *Disable* field
H15 = Tag configured in the *Remote Ack* field
H16 = *Ack* checkbox (0=Unchecked; 1=Checked)

H17 = *Enable* checkbox for custom colors (0=Checked; 1=Unchecked)
H18 = *Enable* checkbox for custom colors (0=Unchecked; 1=Checked)
H19 = Foreground color for message in the *Start* status
H20 = Background color for message in the *Start* status
H21 = Foreground color for message in the *Ack* status
H22 = Background color for message in the *Ack* status
H23 = Foreground color for message in the *Norm* status
H24 = Background color for message in the *Norm* status

- **Worksheet Body**
B1 = Constant character (ASCII code = 12)
B2 = *Tag Name* configured in the line 1
B3 = *Type* configured in the line 1 (0=High; 1=Hi; 2=Lo; 3=Lolo; 4=Rate; 5=Dev+; 6=Dev-)
B4 = *Limit* configured in the line 1
B5 = *Message* configured in the line 1
B6 = *Priority* configured in the line 1
B7 = *Selection* configured in the line 1
B8 = *Tag Name* configured in the line 2
B9 = *Type* configured in the line 2 (0=HiHi; 1=Hi; 2=Lo; 3=LoLo; 4=Rate; 5=Dev+; 6=Dev-)
B10 = *Limit* configured in the line 2
B11 = *Message* configured in the line 2
B12 = *Priority* configured in the line 2
B13 = *Selection* configured in the line 2

✎ **Notes:**
- The TAB char must be used between the *Tag Name* (for example: **B2**), the *Type* (for example: **B3**), the *Limit* (for example: **B4**), the *Message* (for example: **B5**), the *Priority* (for example: **B6**) and the *Selection* (for example: **B7**).
- The syntax G**B8** R**B9** F**B10** S**B11** I**B12** S**B13** is used for each line configured in the body of the *Alarm* worksheet.

III.2. TREND???.TRD - Trend Worksheet

- **Standard Syntax**

```
H1
trend
H2|H3
H4
RH5
RH6
TH7
IH8
TH9
RH10
RH11
SH12
B1GB2 FB3
GB4    FB5
```

- **Worksheet Header**
H1 = Text configured in the *Description* field
H2 = Version of the file syntax (current value = 0)
H3 = Access Level for the Security System
H4 = Number of lines configured in the body of the *Trend* worksheet
H5 = *Save On Trigger* checkbox (0=Unchecked; 1=Checked)
H6 = *Save on Tag Change* checkbox (0=Unchecked; 1=Checked)
H7 = Tag configured in the *Disable* field
H8 = Value configured in the *File Life Time (days)* field
H9 = Tag configured in the *Save On Trigger* field
H10 = *Date (Default)* checkbox (0=Unchecked; 1=Checked)
H11 = *Batch* checkbox (0=Unchecked; 1=Checked)
H12 = Text configured in the *Batch* field

- **Worksheet Body**
B1 = Constant character (ASCII code = 12)
B2 = *Tag Name* configured in the line 1
B3 = *Dead Band* configured in the line 1
B4 = *Tag Name* configured in the line 2
B5 = *Dead Band* configured in the line 2

- ✎ **Notes:**
- The TAB char must be used between the *Tag Name* (for example: **B2**) and the *Dead Band* (for example: **B3**).
- The syntax G**B4** F**B5** is used for each line configured in the body of the *Trend* worksheet.

III.3. <RecipeName>.RCP - Recipe Worksheet

▪ **Standard Syntax**

```
H1
*
H2|H3
H4
SH5
R
TH6
RH7
B1TB2 IB3
TB4    IB5
```

▪ **Worksheet Header**
H1 = Text configured in the *Description* field
H2 = Version of the file syntax (current value = 0)
H3 = Access Level for the Security System
H4 = Number of lines configured in the body of the *Recipe* worksheet
H5 = Text configured in the *File Name* field
H6 = Text configured in the *Register Number* field
H7 = *Save As XML* checkbox (0=Unchecked; 1=Checked)

▪ **Worksheet Body**
B1 = Constant character (ASCII code = 12)
B2 = *Tag Name* configured in the line 1
B3 = *Number of Elements* configured in the line 1
B4 = *Tag Name* configured in the line 2
B5 = *Number of Elements* configured in the line 2

✎ **Notes:**
▪ The TAB char must be used between the *Tag Name* (for example: **B2**) and the *Number of Elements* (for example: **B3**).
▪ The syntax T **B4** I **B5** is used for each line configured in the body of the *Recipe* worksheet.

III.4. <ReportName>.REP - Report Worksheet

▪ **Standard Syntax**

```
H1
*
H2 | H3
H4
ℝH5
ₛH6
ℝH7
B1
```

▪ **Worksheet Header**

H1 = Text configured in the *Description* field
H2 = Version of the file syntax (current value = 0)
H3 = Access Level for the Security System
H4 = Constant Value (value=0)
H5 = *Disk Append* checkbox (0=Unchecked; 1=Checked)
H6 = Text configured in the *Output File* field
H7 = *Unicode* checkbox (0=Unchecked; 1=Checked)

▪ **Worksheet Body**

B1 = Constant character (ASCII code = 12)

✎ **Notes:**
▪ The text typed in the body of the *Report* worksheet (text format) is saved in another file with extension TXT (for example: Report1.TXT).
▪ The text typed in the *Report Writer* (RTF format) is saved in another file with extension RTF (for example: Report1.RTF).

III.5. ODBC???.DBC - ODBC Worksheet

▪ **Standard Syntax**

```
H1
ODBC
H2|H3
H4
SH5
SH6
SH7
SH8
TH9
TH10
TH11
TH12
TH13
SH14
TH15
TH16
B1TB2 SB3
TB4    SB5
```

▪ **Worksheet Header**
H1 = Text configured in the *Description* field
H2 = Version of the file syntax (current value = 0)
H3 = Access Level for the Security System
H4 = Number of lines configured in the body of the *ODBC* worksheet
H5 = Text configured in the *Data Source* field
H6 = Text configured in the *User* field
H7 = Text configured in the *Password* field
H8 = Text configured in the *Table* field
H9 = Tag configured in the *Select* field
H10 = Tag configured in the *Next* field
H11 = Tag configured in the *Insert* field
H12 = Tag configured in the *Update Trigger* field
H13 = Tag configured in the *Delete* field
H14 = Text configured in the *Condition* field
H15 = Tag configured in the *Status* field
H16 = Tag configured in the *Transaction* field

▪ **Worksheet Body**
B1 = Constant character (ASCII code = 12)
B2 = *Tag Name* configured in the line 1
B3 = *Column* configured in the line 1
B4 = *Tag Name* configured in the line 2
B5 = *Column* configured in the line 2

✎ **Notes:**
▪ The TAB char must be used between the *Tag Name* (for example: **B2**) and the *Column* (for example: **B3**).
▪ The syntax T**B4** S**B5** is used for each line configured in the body of the *ODBC* worksheet.

III.6. MATH???.MAT - Math Worksheet

- **Standard Syntax**

```
H1
math
H2|H3
H4
EH5
B1TB2 EB3
TB4    EB5
```

- **Worksheet Header**

H1 = Text configured in the *Description* field
H2 = Version of the file syntax (current value = 0)
H3 = Access Level for the Security System
H4 = Number of lines configured in the body of the *Math* worksheet
H5 = Value configured in the *Execution* field

- **Worksheet Body**

B1 = Constant character (ASCII code = 12)
B2 = *Tag Name* configured in the line 1
B3 = *Expression* configured in the line 1
B4 = *Tag Name* configured in the line 2
B5 = *Expression* configured in the line 2

> ✎ **Notes:**
> - The TAB char must be used between the *Tag Name* (for example: **B2**) and the *Expression* (for example: **B3**).
> - The syntax T**B4** S**B5** is used for each line configured in the body of the *Math* worksheet.

III.7. SCHED???.SCH - Scheduler Worksheet

- **Standard Syntax**

```
H1
sched
H2|H3
H4
B1RB2 TB3    MB4    DB5    TB6    eB7    eB8
RB9    TB10  MB11   DB12   TB13   eB14   eB15
```

- **Worksheet Header**
H1 = Text configured in the *Description* field
H2 = Version of the file syntax (current value = 0)
H3 = Access Level for the Security System
H4 = Number of lines configured in the body of the *Scheduler* worksheet

- **Worksheet Body**
B1 = Constant character (ASCII code = 12)
B2 = *Event* configured in the line 1 (0=Calendar; 1=Clock; 2=Change)
B3 = *Trigger* configured in the line 1
B4 = *Time* configured in the line 1 (HH:MM:SS)
B5 = *Date* configured in the line 1 (MM:DD:YYYY)
B6 = *Tag* configured in the line 1
B7 = *Expression* configured in the line 1
B8 = *Disable* configured in the line 1
B9 = *Event* configured in the line 2 (0=Calendar; 1=Clock; 2=Change)
B10 = *Trigger* configured in the line 2
B11 = *Time* configured in the line 2 (HH:MM:SS)
B12 = *Date* configured in the line 2 (MM:DD:YYYY)
B13 = *Tag* configured in the line 2
B14 = *Expression* configured in the line 2
B15 = *Disable* configured in the line 2

✎ **Notes:**
- The TAB char must be used between the *Event* (for example: **B2**), the *Trigger* (for example: **B3**), the *Time* (for example: **B4**), the *Date* (for example: **B5**), the *Tag* (for example: **B6**), the *Expression* (for example: **B7**) and the *Disable* (for example: **B8**).
- The syntax R**B9** T**B10** M**B11** D**B12** T**B13** e**B14** e**B15** is used for each line configured in the body of the *Scheduler* worksheet.

III.8. <DriverName>???.DRV – Standard Driver Worksheet

▪ **Standard Syntax**

```
H1
H2
H3 | H4
H5
ᴛH6
ᵛH7
ᴛH8
ᴛH9
ᴛH10
ᵛH11
ᴛH12
ᴛH13
ˢH14
ˢH15
ᴵH16
ᴵH17
ꜰH18
ꜰH19
B1ᴛB2 ᴮB3     ꜰB4     ꜰB5
ᴛB6     ᴮB7     ꜰB8     ꜰB9
```

▪ **Worksheet Header**
H1 = Text configured in the *Description* field
H2 = Driver Name (for example: ABKE)
H3 = Version of the file syntax (current value = 0)
H4 = Access Level for the Security System
H5 = Number of lines configured in the body of the *Standard Driver* worksheet
H6 = Tag configured in the *Read Trigger* field
H7 = Value configured in the *Enable Read When Idle* field
H8 = Tag configured in the *Read Completed* field
H9 = Tag configured in the *Read Status* field
H10= Tag configured in the *Write Trigger* field
H11= Value configured in the *Write on Tag Change* field
H12= Value configured in the *Write Completed* field
H13= Tag configured in the *Write Status* field
H14= Text configured in the *Station* field
H15= Text configured in the *Header* field
H16= *Increase priority* checkbox (0=Unchecked; 1=Checked)
H17= *Min/Max* checkbox (0=Unchecked; 1=Checked)
H18= Value configured in the *Min* field
H19= Value configured in the *Max* field

▪ **Worksheet Body**
B1 = Constant character (ASCII code = 12)
B2 = *Tag Name* configured in the line 1
B3 = *Address* configured in the line 1
B4 = Div/*Min* configured in the line 1
B5 = Add/*Max* configured in the line 1

B6 = *Tag Name* configured in the line 1
B7 = *Address* configured in the line 1
B8 = Div/*Min* configured in the line 1
B9 = Add/*Max* configured in the line 1

☞ **Notes:**
▪ The TAB char must be used between the *Tag Name* (for example: **B2**), the *Address* (for example: **B3**), the *Div/Min* (for example: **B4**) and the *Add/Max* (for example: **B5**).
▪ The syntax `T`**B6** `B`**B7** `F`**B8** `F`**B9** is used for each line configured in the body of the *Standard Driver* worksheet.

III.9. OPCCL???.OPC - OPC Client Worksheet

▪ **Standard Syntax**

```
H1
OpcCl
H2|H3
H4
SH5
VH6
VH7
VH8
TH9
SH10
IH11
I
R
R
R
R
R
R
T
T
T
R
R
F255.000000
F16777215.000000
F65280.000000
F16777215.000000
F16711680.000000
F16777215.000000
IH12
IH13
B1TB2 SB3    RB4    FB5    FB6
TB7    SB8    RB9    FB10   FB11
```

▪ **Worksheet Header**
H1 = Text configured in the *Description* field
H2 = Version of the file syntax (current value = 0)
H3 = Access Level for the Security System
H4 = Number of lines configured in the body of the *OPC Client* worksheet
H5 = Server Identifier Name
H6 = Tag name configured in the *Disable* field
H7 = Value configured in the *Update Rate (ms)* field
H8 = Value configured in the *Percent Deadband* field
H9 = Tag configured in the *Status* field
H10 = Text configured in the *Remote Server Name* field
H11 = Read after writing (0=Unchecked; 1=Checked)
H12 = Accept TagName in the Item columns (1=Unchecked; 2=Checked)
H13 = Read before writing (0=Unchecked; 1=Checked)

- **Worksheet Body**

B1 = Constant character (ASCII code = 12)
B2 = *Tag Name* configured in the line 1
B3 = *Item* configured in the line 1
B4 = *Scan* selected in the line 1 (0=Always; 1=Screen)
B5 = *Div factor*
B6 = *Add factor*
B7 = *Tag Name* configured in the line 2
B8 = *Item* configured in the line 2
B9 = *Scan* selected in the line 2 (0=Always; 1=Screen)
B10 = *Div factor*
B11 = *Add factor*

✍ **Notes:**
- The TAB char must be used between the *Tag Name* (for example: **B2**), the *Item* (for example: **B3**) and the *Scan* (for example: **B4**).
- The syntax T**B7**   S**B8**   R**B9**   F**B10**   F**B11** is used for each line configured in the body of the *OPC Client* worksheet.

III.10. TCPCL???.TCP - TCP/IP Client Worksheet

▪ **Standard Syntax**

```
H1
TCPCl
H2|H3
H4
TH5
SH6
B1TB2 SB3
TB4   SB5
```

▪ **Worksheet Header**
H1 = Text configured in the *Description* field
H2 = Version of the file syntax (current value = 0)
H3 = Access Level for the Security System
H4 = Number of lines configured in the body of the *TCP/IP Client* worksheet
H5 = Tag configured in the *Connection Status* field
H6 = Value configured in the *Server IP Address* field
H7 = Value configured in the *Disable* field
H8 = *Send Fields* checkbox (0=Unchecked ; 1=Checked)

▪ **Worksheet Body**
B1 = Constant character (ASCII code = 12)
B2 = *Tag Name* configured in the line 1
B3 = *Remote Tag* configured in the line 1
B4 = *Tag Name* configured in the line 2
B5 = *Remote Tag* configured in the line 2

✎ **Notes:**
▪ The TAB char must be used between the *Tag Name* (for example: **B2**) and the *Remote Tag* (for example: **B3**).
▪ The syntax T**B4** S**B5** is used for each line configured in the body of the *TCP/IP Client* worksheet.

III.11. DDECL???.DCL – DDE Client Worksheet

- **Standard Syntax**

```
H1
DdeCl
H2|H3
H4
sH5
sH6
TH7
TH8
TH9
TH10
TH11
vH12
vH13
B1TB2 sB3
TB4    sB5
```

- **Worksheet Header**
H1 = Text configured in the *Description* field
H2 = Version of the file syntax (current value = 0)
H3 = Access Level for the Security System
H4 = Number of lines configured in the body of the *DDE Client* worksheet
H5 = Text configured in the *Application Name* field
H6 = Text configured in the *Topic* field
H7 = Tag configured in the *Connect* field
H8 = Tag configured in the *Read Trigger* field
H9 = Tag configured in the *Read Status* field
H10= Tag configured in the *Write Trigger* field
H11= Tag configured in the *Write Status* field
H12= Value configured in the *Enable Read When Idle* field
H13= Value configured in the *Write on Tag Change* field

- **Worksheet Body**
B1 = Constant character (ASCII code = 12)
B2 = *Tag Name* configured in the line 1
B3 = *Item* configured in the line 1
B4 = *Tag Name* configured in the line 2
B5 = *Item* configured in the line 2

✎ **Notes:**
- The TAB char must be used between the *Tag Name* (for example: **B2**) and the *Item* (for example: **B3**).
- The syntax T**B4** s**B5** is used for each line configured in the body of the *DDE Client* worksheet.

IV. Map of Revisions

Revision	Author	Date	Comments
A	Fabio Terezinho	Feb/15/2000	Initial revision
B	Fabio Terezinho	Feb/16/2000	▪ Included Index ▪ Included Recipe Configuration Files ▪ Included OPC Configuration Files
C	Fabio Terezinho	Jun/15/2000	Included TCPClient Configuration Files
D	Fabio Terezinho	Dec/14/2000	Included parameter T7 for TAGL.TXT file, for Studio v4.1
E	Fabio Terezinho	Jan/05/2001	▪ Included B4 and B7 (Scan Type) for OPCCL???.OPC worksheet ▪ Included H7 (XML Format) for <RecipeName>.RCP worksheet
F	Fabio Terezinho	Mar/25/2002	▪ Overall layout revision ▪ Included *ALARM???.ALR - Alarm Worksheet* ▪ *Included TREND???.TRD - Trend Worksheet* ▪ *Included <ReportName>.REP - Report Worksheet* ▪ *Included ODBC???.DBC - ODBC Worksheet* ▪ *Included MATH???.MAT - Math Worksheet* ▪ *Included SCHED???.SCH - Scheduler Worksheet* ▪ *Included <DriverName>???.DRV – Standard Driver Worksheet* ▪ *Included DDECL???.DCL – DDE Client Worksheet*
G	Fabio Terezinho	Aug/19/2003	Included Proprietary Notice
H	Fabio Terezinho	Oct/3/2003	Layout revision
I	Fabio Terezinho	Feb/21/2005	Updated the TCP/IP Client worksheet (included parameters H7 and H8).
J	Fabio Terezinho	Mar/3/2010	Updated OPC Client worksheet configuration.