

Long Range UHF RFID Reader

Aktuelle Konfiguration des Reader

Version 1.1

Juni 2009

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1. Vorbemerkungen

1.1. Hinweise



Sandlab Corp. ist aktives Mitglied bei GS1 und EPC Global sowie Mitglied der GS1 EPC Global Software Action Group (SAG), welche den GS1 EPC Global Tag Data Standard (TDS) und den GS1 EPC Global Tag Data Translation Standard (TDTS) entwickelt.

Wir überprüfen laufend die Konvertierungsfunktionen und die Einhaltung aller aktuellen Standards und stehen hierzu auch im direkten Kontakt mit GS1 EPC Global. Die Standards unterliegen jedoch laufend Änderungen und sind in Teilbereichen (noch) nicht immer eindeutig. Wir können daher keine Garantie für die korrekte Umsetzung aller Details übernehmen. Insbesondere haften wir nicht für Folgeschäden, die sich aus verkehrten Umrechnungen ergeben können!

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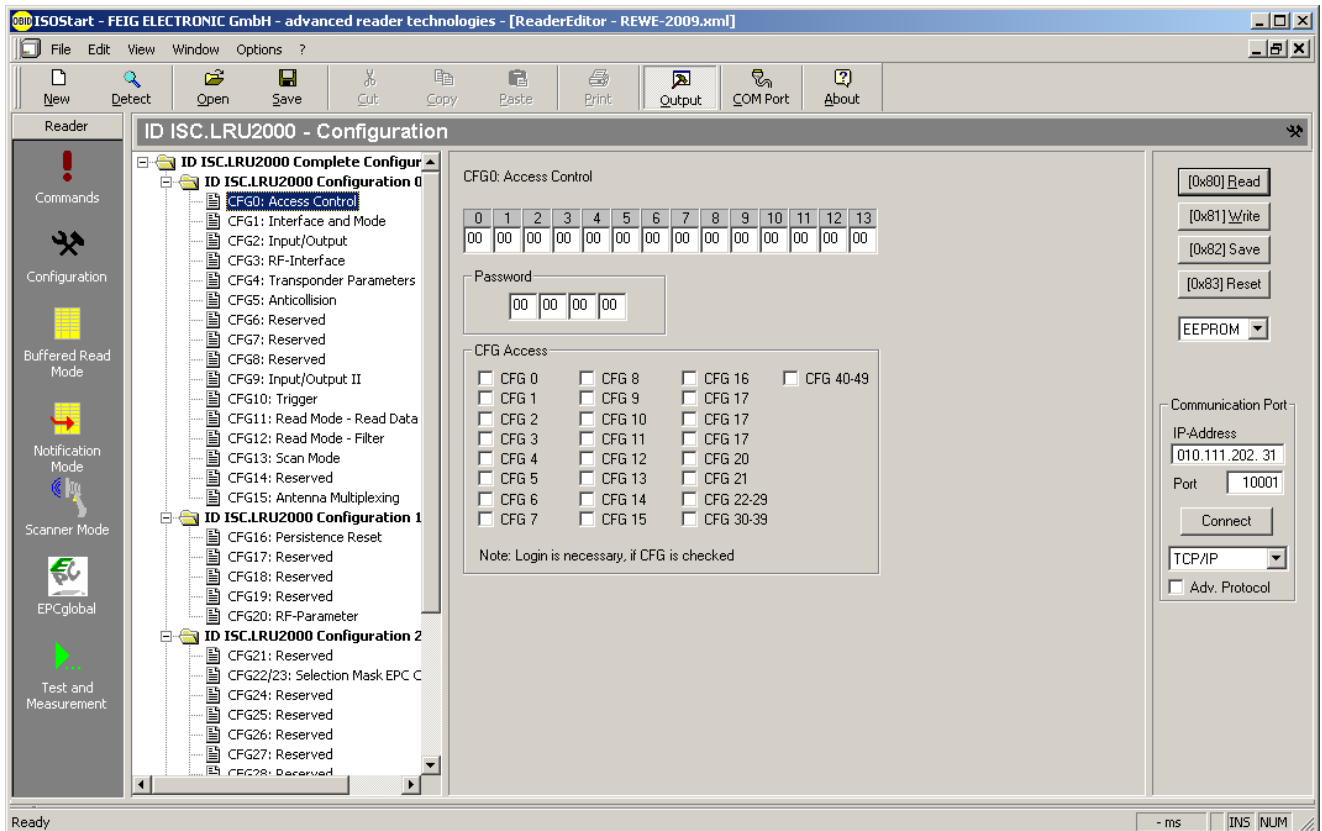
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2. Aktuelle Readerparameter

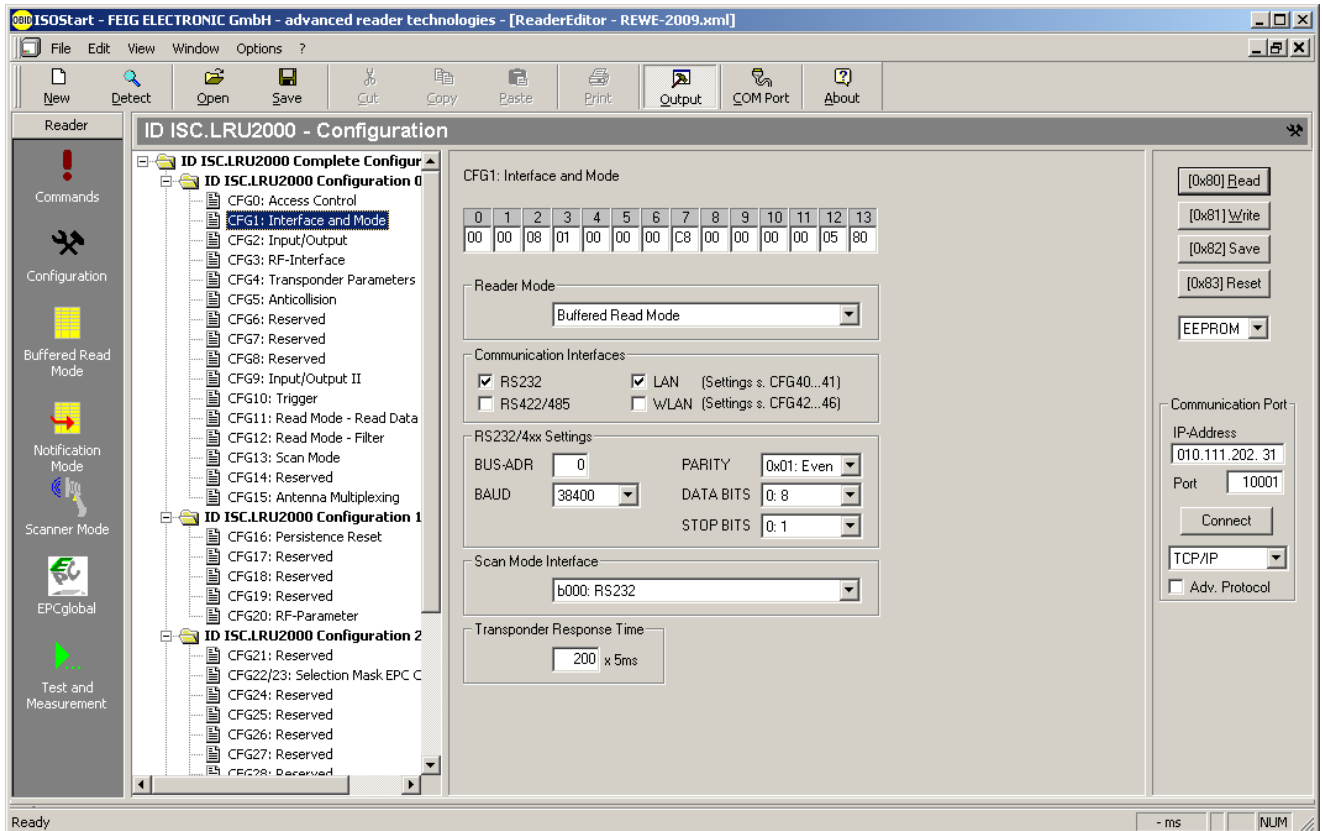
Die Readerkonfiguration wird von der Middleware auf den Reader übertragen und bei Bedarf aktualisiert. Die folgenden Einstellungen sind derzeit aktiv.

Die Einstellungen können bei Bedarf für einzelne / alle Tore geändert werden!

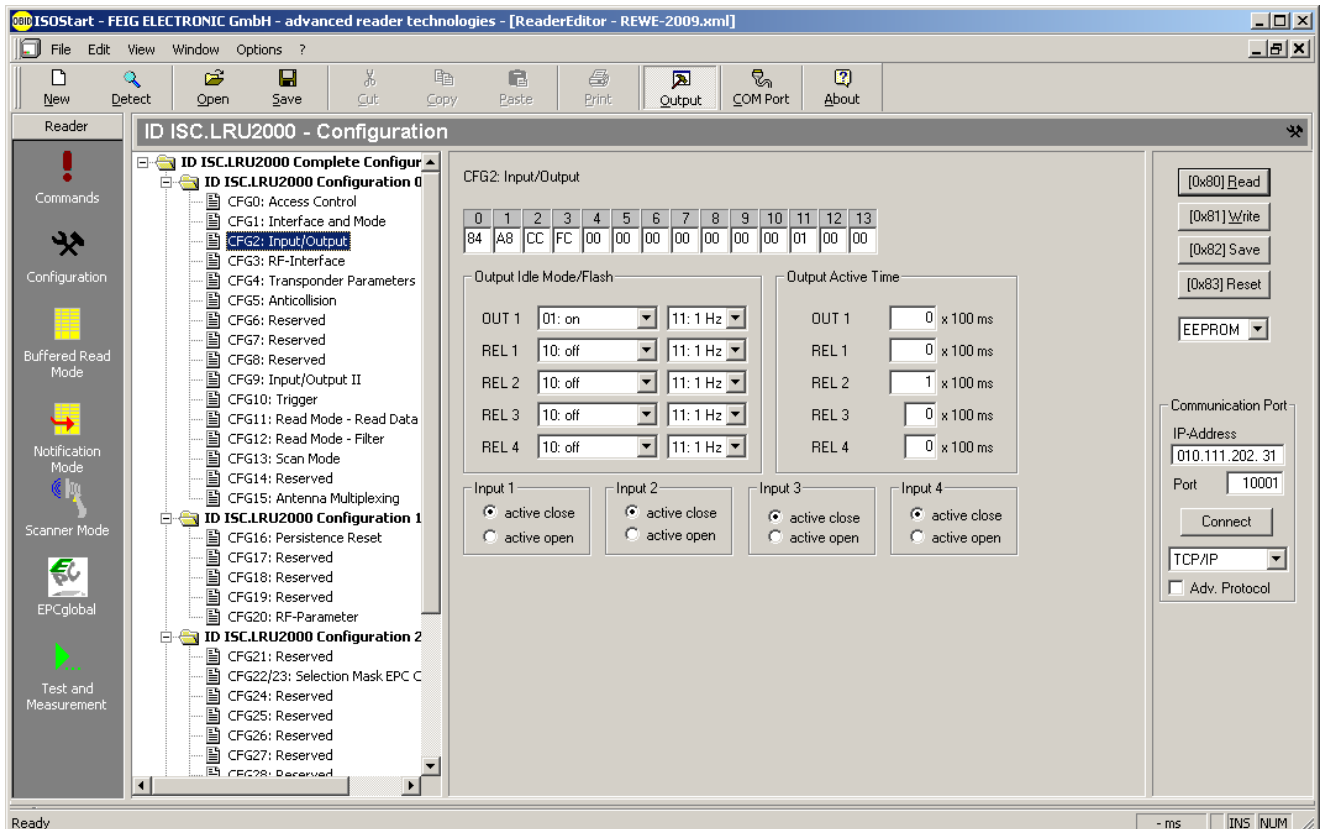
2.1. CFG0: Access Control



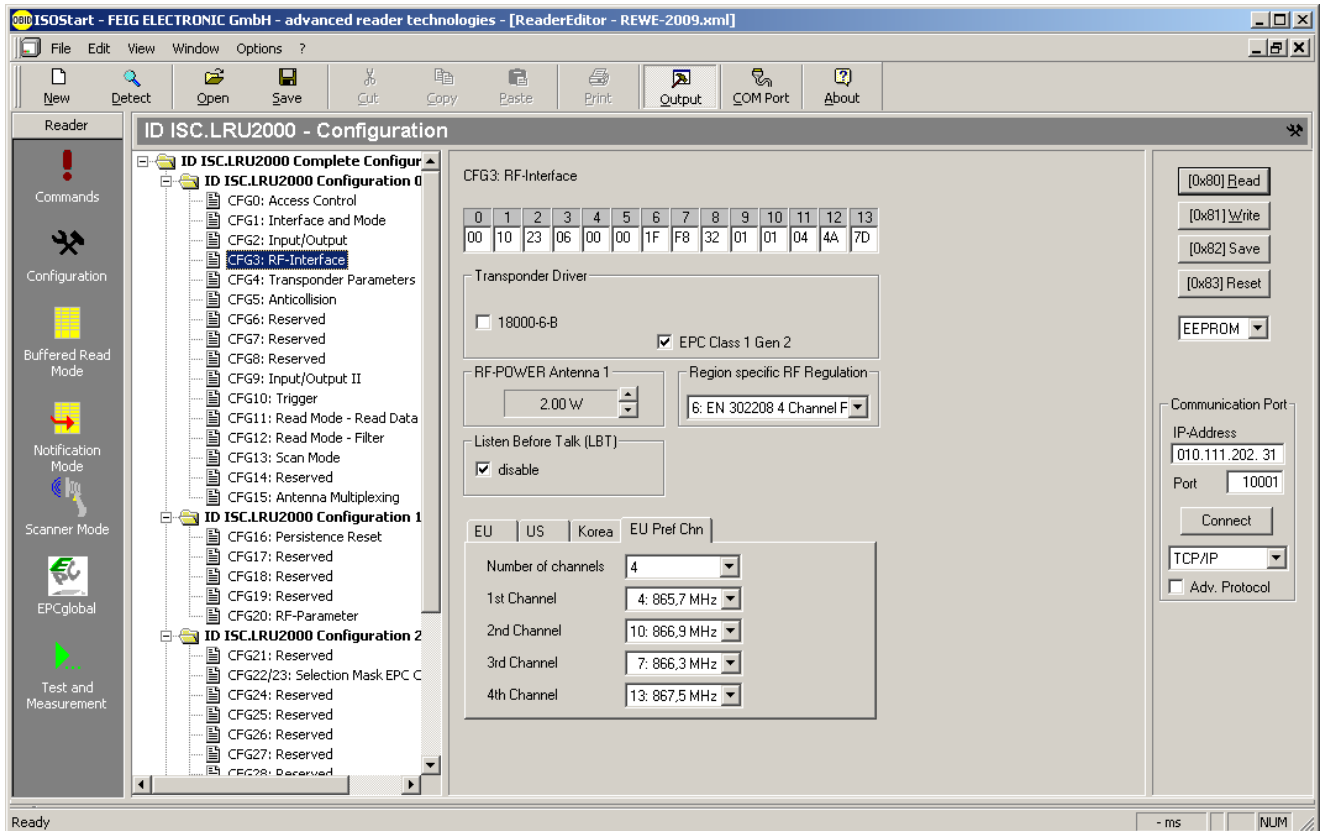
2.2. CFG1: Interface and Mode



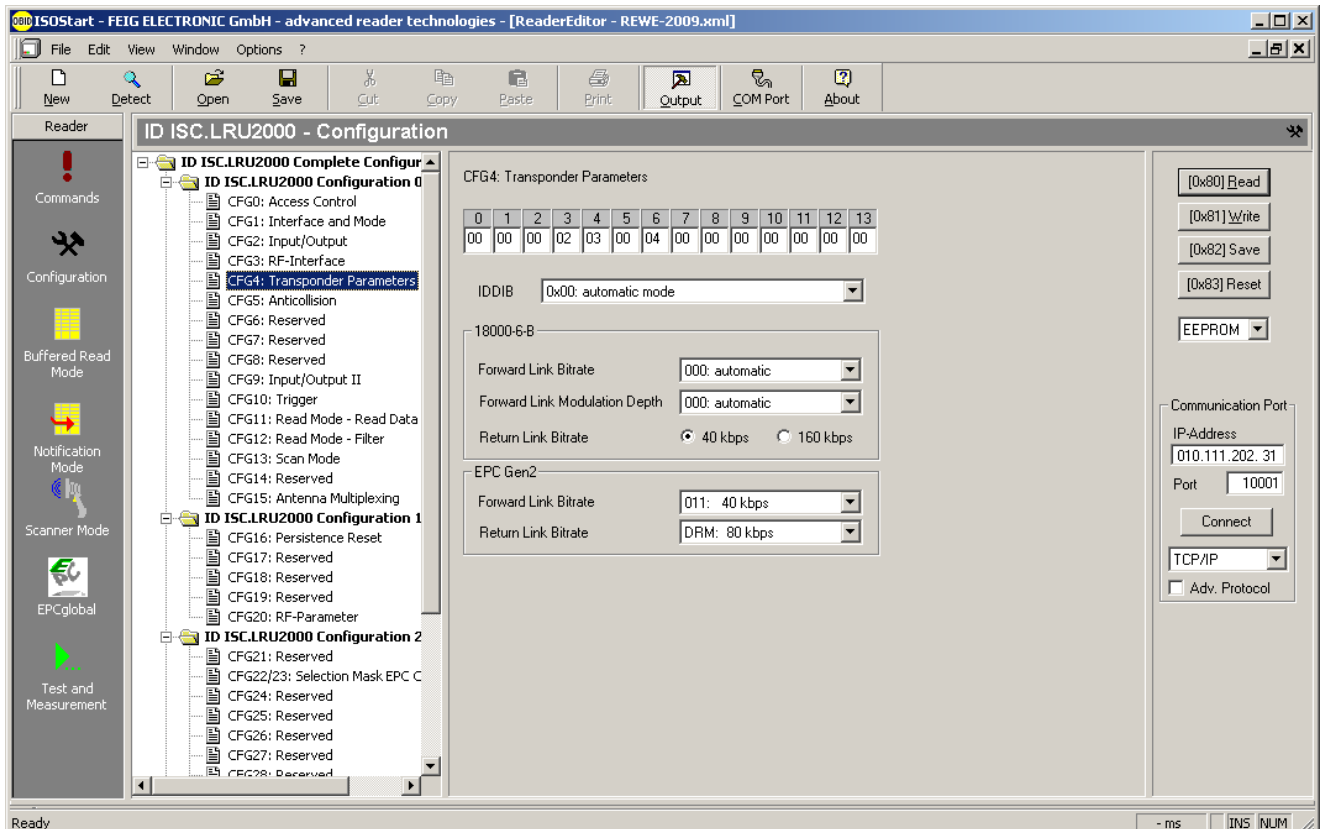
2.3. CFG2: Input/Output



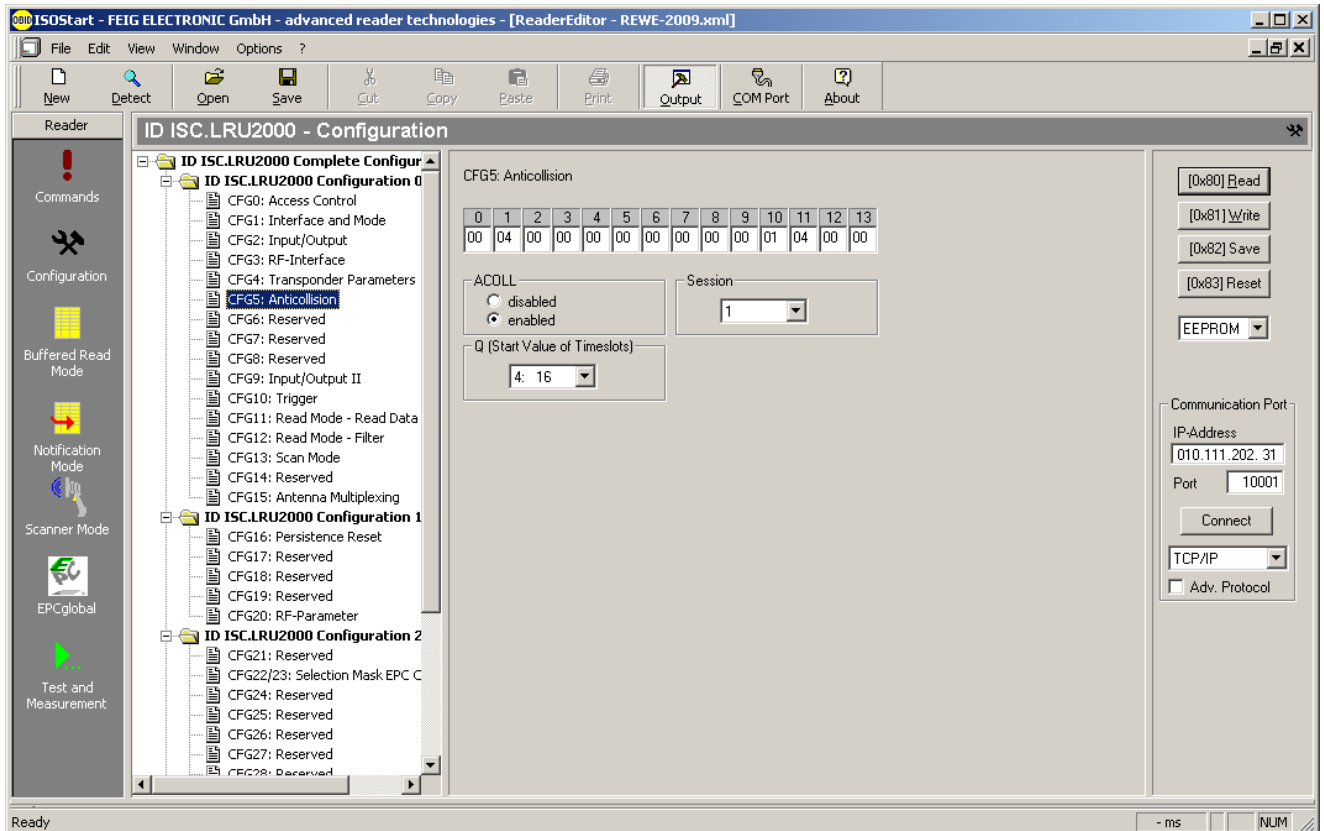
2.4. CFG3: RF-Interface



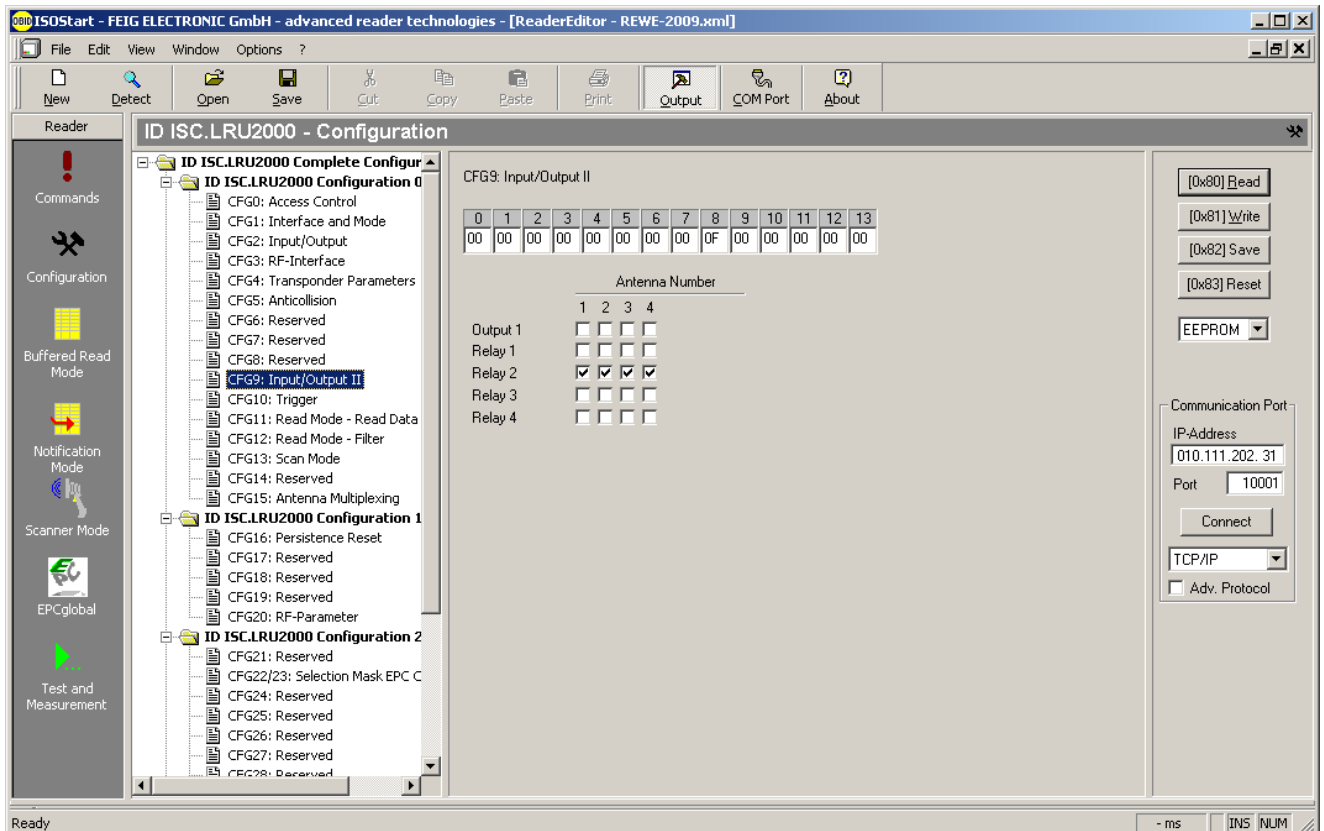
2.5. CFG4: Transponder Parameters



2.6. CFG5: Anticollision



2.7. CFG9: Input/Output II



2.8. CFG10: Trigger

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File Edit View Window Options ?

New Detect Open Save Cut Copy Paste Print Output COM Port About

Reader

Commands

Configuration

Buffered Read Mode

Notification Mode

Scanner Mode

EPCglobal

Test and Measurement

ID ISC.LRU2000 - Configuration

- ID ISC.LRU2000 Complete Configur
 - ID ISC.LRU2000 Configuration 0
 - CFG0: Access Control
 - CFG1: Interface and Mode
 - CFG2: Input/Output
 - CFG3: RF-Interface
 - CFG4: Transponder Parameters
 - CFG5: Anticollision
 - CFG6: Reserved
 - CFG7: Reserved
 - CFG8: Reserved
 - CFG9: Input/Output II
 - CFG10: Trigger**
 - CFG11: Read Mode - Read Data
 - CFG12: Read Mode - Filter
 - CFG13: Scan Mode
 - CFG14: Reserved
 - CFG15: Antenna Multiplexing
 - ID ISC.LRU2000 Configuration 1
 - CFG16: Persistence Reset
 - CFG17: Reserved
 - CFG18: Reserved
 - CFG19: Reserved
 - CFG20: RF-Parameter
 - ID ISC.LRU2000 Configuration 2
 - CFG21: Reserved
 - CFG22/23: Selection Mask EPC C
 - CFG24: Reserved
 - CFG25: Reserved
 - CFG26: Reserved
 - CFG27: Reserved
 - CFG28: Reserved

CFG10: Trigger

0	1	2	3	4	5	6	7	8	9	10	11	12	13
81	05	00	1E	00	1E	00	05	00	05	00	00	00	00

TRIGGER

Enable

Unlimit Valid Time (Valid Time will be applicable for more than one Trigger Period)

Input 1 is: b01: Start-Trigger for max. 30 x 100ms

Input 2 is: b01: Start-Trigger for max. 30 x 100ms

Input 3 is: b00: not used for max. 5 x 100ms

Input 4 is: b00: not used for max. 5 x 100ms

[0x80] Read

[0x81] Write

[0x82] Save

[0x83] Reset

EEPROM

Communication Port

IP-Address: 010.111.202.31

Port: 10001

Connect

TCP/IP

Adv. Protocol

Ready

2.9. CFG11: Read Mode - Read Data

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File Edit View Window Options ?

New Detect Open Save Cut Copy Paste Print Output COM Port About

Reader

Commands

Configuration

Buffered Read Mode

Notification Mode

Scanner Mode

EPCglobal

Test and Measurement

ID ISC.LRU2000 - Configuration

- ID ISC.LRU2000 Complete Configur
 - ID ISC.LRU2000 Configuration 0
 - CFG0: Access Control
 - CFG1: Interface and Mode
 - CFG2: Input/Output
 - CFG3: RF-Interface
 - CFG4: Transponder Parameters
 - CFG5: Anticollision
 - CFG6: Reserved
 - CFG7: Reserved
 - CFG8: Reserved
 - CFG9: Input/Output II
 - CFG10: Trigger
 - CFG11: Read Mode - Read Data**
 - CFG12: Read Mode - Filter
 - CFG13: Scan Mode
 - CFG14: Reserved
 - CFG15: Antenna Multiplexing
 - ID ISC.LRU2000 Configuration 1
 - CFG16: Persistence Reset
 - CFG17: Reserved
 - CFG18: Reserved
 - CFG19: Reserved
 - CFG20: RF-Parameter
 - ID ISC.LRU2000 Configuration 2
 - CFG21: Reserved
 - CFG22/23: Selection Mask EPC C
 - CFG24: Reserved
 - CFG25: Reserved
 - CFG26: Reserved
 - CFG27: Reserved
 - CFG28: Reserved

CFG11: Read Mode - Read Data

0	1	2	3	4	5	6	7	8	9	10	11	12	13
81	01	00	00	00	00	00	00	00	01	00	00	00	04

TR-DATA

Serial Number

Data Block

MSB first LSB first

No. of Antenna

Time

Date

Input

CDM-Prefix (only for Scan Mode)

Ant Store

Data Location Definition

Bank: b00: reserved (BRM and Scan M.)

DB-ADR: 0 (for Buffered Read and Scan Mode)

DB-N: 1 (for Buffered Read Mode)

D-START: 0 (for Scan Mode)

D-LGT: 4 (for Scan Mode)

[0x80] Read

[0x81] Write

[0x82] Save

[0x83] Reset

EEPROM

Communication Port

IP-Address: 010.111.202.31

Port: 10001

Connect

TCP/IP

Adv. Protocol

Ready

2.10. CFG12: Read Mode - Filter

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File Edit View Window Options ?

New Detect Open Save Cut Copy Paste Print Output COM Port About

Reader

Commands

Configuration

Buffered Read Mode

Notification Mode

Scanner Mode

EPCglobal

Test and Measurement

ID ISC.LRU2000 - Configuration

- ID ISC.LRU2000 Complete Configur
 - ID ISC.LRU2000 Configuration 0
 - CFG0: Access Control
 - CFG1: Interface and Mode
 - CFG2: Input/Output
 - CFG3: RF-Interface
 - CFG4: Transponder Parameters
 - CFG5: Anticollision
 - CFG6: Reserved
 - CFG7: Reserved
 - CFG8: Reserved
 - CFG9: Input/Output II
 - CFG10: Trigger
 - CFG11: Read Mode - Read Data
 - CFG12: Read Mode - Filter
 - CFG13: Scan Mode
 - CFG14: Reserved
 - CFG15: Antenna Multiplexing
 - ID ISC.LRU2000 Configuration 1
 - CFG16: Persistence Reset
 - CFG17: Reserved
 - CFG18: Reserved
 - CFG19: Reserved
 - CFG20: RF-Parameter
 - ID ISC.LRU2000 Configuration 2
 - CFG21: Reserved
 - CFG22/23: Selection Mask EPC C
 - CFG24: Reserved
 - CFG25: Reserved
 - CFG26: Reserved
 - CFG27: Reserved
 - CFG28: Reserved

CFG12: Read Mode - Filter

0	1	2	3	4	5	6	7	8	9	10	11	12	13
00	37	01	00	00	01	03	00	00	00	00	00	00	00

VALID-TIME
55 x 100 ms

TR-ID
 Data Block DB-ADR 0 DB-N 1
 Serial Number

Event Filter
 Input 1 Input 3 change of BRM status
 Input 2 Input 4 BRM process timed-out

[0x80] Read
 [0x81] Write
 [0x82] Save
 [0x83] Reset
 EEPROM

Communication Port
 IP-Address 010.111.202.31
 Port 10001
 Connect
 TCP/IP
 Adv. Protocol

Ready - ms NUM

2.11. CFG13: Scan Mode

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File Edit View Window Options ?

New Detect Open Save Cut Copy Paste Print Output COM Port About

Reader

Commands

Configuration

Buffered Read Mode

Notification Mode

Scanner Mode

EPCglobal

Test and Measurement

ID ISC.LRU2000 - Configuration

- ID ISC.LRU2000 Complete Configur
 - ID ISC.LRU2000 Configuration 0
 - CFG0: Access Control
 - CFG1: Interface and Mode
 - CFG2: Input/Output
 - CFG3: RF-Interface
 - CFG4: Transponder Parameters
 - CFG5: Anticollision
 - CFG6: Reserved
 - CFG7: Reserved
 - CFG8: Reserved
 - CFG9: Input/Output II
 - CFG10: Trigger
 - CFG11: Read Mode - Read Data
 - CFG12: Read Mode - Filter
 - CFG13: Scan Mode
 - CFG14: Reserved
 - CFG15: Antenna Multiplexing
 - ID ISC.LRU2000 Configuration 1
 - CFG16: Persistence Reset
 - CFG17: Reserved
 - CFG18: Reserved
 - CFG19: Reserved
 - CFG20: RF-Parameter
 - ID ISC.LRU2000 Configuration 2
 - CFG21: Reserved
 - CFG22/23: Selection Mask EPC C
 - CFG24: Reserved
 - CFG25: Reserved
 - CFG26: Reserved
 - CFG27: Reserved
 - CFG28: Reserved

CFG13: Scan Mode

0	1	2	3	4	5	6	7	8	9	10	11	12	13
02	20	2C	01	0D	00	00	00	00	00	00	00	00	00

Format Characters User defined characters

DB-Use
 Transmit Format
 0010: ASCII-formatted hex data

[0x80] Read
 [0x81] Write
 [0x82] Save
 [0x83] Reset
 EEPROM

Communication Port
 IP-Address 010.111.202.31
 Port 10001
 Connect
 TCP/IP
 Adv. Protocol

Ready - ms INS NUM

2.12. CFG15: Antenna Multiplexing

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File Edit View Window Options ?

New Detect Open Save Cut Copy Paste Print Output COM Port About

Reader

Commands

Configuration

Buffered Read Mode

Notification Mode

Scanner Mode

EPCglobal

Test and Measurement

ID ISC.LRU2000 - Configuration

- ID ISC.LRU2000 Complete Configur
 - ID ISC.LRU2000 Configuration 0
 - CFG0: Access Control
 - CFG1: Interface and Mode
 - CFG2: Input/Output
 - CFG3: RF-Interface
 - CFG4: Transponder Parameters
 - CFG5: Anticollision
 - CFG6: Reserved
 - CFG7: Reserved
 - CFG8: Reserved
 - CFG9: Input/Output II
 - CFG10: Trigger
 - CFG11: Read Mode - Read Data
 - CFG12: Read Mode - Filter
 - CFG13: Scan Mode
 - CFG14: Reserved
 - CFG15: Antenna Multiplexing**
 - ID ISC.LRU2000 Configuration 1
 - CFG16: Persistence Reset
 - CFG17: Reserved
 - CFG18: Reserved
 - CFG19: Reserved
 - CFG20: RF-Parameter
 - ID ISC.LRU2000 Configuration 2
 - CFG21: Reserved
 - CFG22/23: Selection Mask EPC C
 - CFG24: Reserved
 - CFG25: Reserved
 - CFG26: Reserved
 - CFG27: Reserved
 - CFG28: Reserved

CFG15: Antenna Multiplexing

0	1	2	3	4	5	6	7	8	9	10	11	12	13
01	04	00	14	00	14	00	14	00	14	00	00	00	00

Enable

Multiplexing

Switching Condition

b0: after no response

Number of Output Channels

4

MUX-VALID-TIME

Antenna 1 20 x 5 ms

Antenna 2 20 x 5 ms

Antenna 3 20 x 5 ms

Antenna 4 20 x 5 ms

[0x80] Read

[0x81] Write

[0x82] Save

[0x83] Reset

EEPROM

Communication Port

IP-Address

010.111.202.31

Port 10001

Connect

TCP/IP

Adv. Protocol

Ready

2.13. CFG16: Persistence Reset

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File Edit View Window Options ?

New Detect Open Save Cut Copy Paste Print Output COM Port About

Reader

Commands

Configuration

Buffered Read Mode

Notification Mode

Scanner Mode

EPCglobal

Test and Measurement

ID ISC.LRU2000 - Configuration

- ID ISC.LRU2000 Complete Configur
 - ID ISC.LRU2000 Configuration 0
 - CFG0: Access Control
 - CFG1: Interface and Mode
 - CFG2: Input/Output
 - CFG3: RF-Interface
 - CFG4: Transponder Parameters
 - CFG5: Anticollision
 - CFG6: Reserved
 - CFG7: Reserved
 - CFG8: Reserved
 - CFG9: Input/Output II
 - CFG10: Trigger
 - CFG11: Read Mode - Read Data
 - CFG12: Read Mode - Filter
 - CFG13: Scan Mode
 - CFG14: Reserved
 - CFG15: Antenna Multiplexing
 - ID ISC.LRU2000 Configuration 1**
 - CFG16: Persistence Reset**
 - CFG17: Reserved
 - CFG18: Reserved
 - CFG19: Reserved
 - CFG20: RF-Parameter
 - ID ISC.LRU2000 Configuration 2
 - CFG21: Reserved
 - CFG22/23: Selection Mask EPC C
 - CFG24: Reserved
 - CFG25: Reserved
 - CFG26: Reserved
 - CFG27: Reserved
 - CFG28: Reserved

CFG16: Persistence Reset

0	1	2	3	4	5	6	7	8	9	10	11	12	13
00	00	00	28	00	28	00	28	00	28	00	00	00	00

MODE

b0: all antenna ports act as one reading point (time 1 is used)

RESET-TIME

Antenna 1 40 x 5 ms

Antenna 2 40 x 5 ms

Antenna 3 40 x 5 ms

Antenna 4 40 x 5 ms

[0x80] Read

[0x81] Write

[0x82] Save

[0x83] Reset

EEPROM

Communication Port

IP-Address

010.111.202.31

Port 10001

Connect

TCP/IP

Adv. Protocol

Ready

2.14. CFG20: RF-Parameter

The screenshot shows the 'ID ISC.LRU2000 - Configuration' window. The left sidebar contains navigation options: Commands, Configuration, Buffered Read Mode, Notification Mode, Scanner Mode, EPCglobal, and Test and Measurement. The main area displays a tree view of configurations, with 'CFG20: RF-Parameter' selected under 'ID ISC.LRU2000 Configuration 2'. The right pane shows the configuration details for CFG20: RF-Parameter.

CFG20: RF-Parameter

0	1	2	3	4	5	6	7	8	9	10	11	12	13
00	00	00	00	00	00	00	00	11	00	23	23	23	00

Type of Antenna: b0: External Antenna

RF-POWER: ANT2: 2.00 W, ANT3: 2.00 W, ANT4: 2.00 W

Antenna Gain: 8.5 dBi

Communication Port: IP-Address: 010.111.202.31, Port: 10001, TCP/IP, Adv. Protocol:

2.15. CFG22/23: Selection Mask EPC Class 1 Gen 2 (not used)

The screenshot shows the 'ID ISC.LRU2000 - Configuration' window. The left sidebar is the same as in the previous screenshot. The main area displays a tree view with 'CFG22/23: Selection Mask EPC Class 1 Gen 2' selected under 'ID ISC.LRU2000 Configuration 2'. The right pane shows the configuration details for CFG22/23: Selection Mask EPC Class 1 Gen 2.

CFG22/23: Selection Mask EPC Class 1 Gen 2

0	1	2	3	4	5	6	7	8	9	10	11	12	13
00	01	00	10	30	00	00	00	00	00	00	00	00	00

CFG 22: [00 01 00 10 30 00 00 00 00 00 00 00 00 00]

CFG 23: [00 00 00 00 00 00 00 00 00 00 00 00 00 00]

Start Bit: 16

Number of Bits: 0

Bank: b01: EPC memory

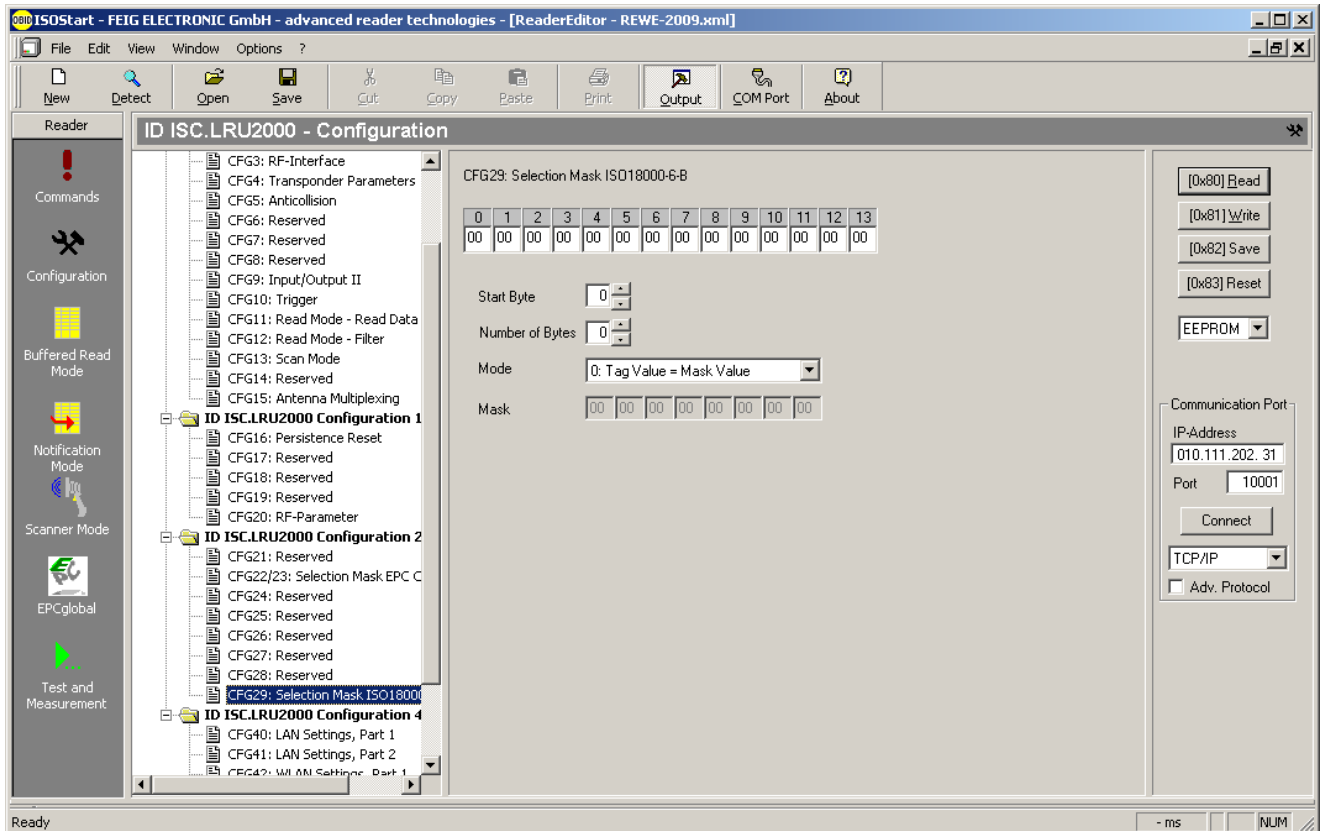
Truncate EPC: Note: only, if Bank = EPC memory and Start Bit = 16 and Number of Bits > 16

Mask (MSB): [30 00 00 00 00 00 00 00 00 00 00 00 00 00]

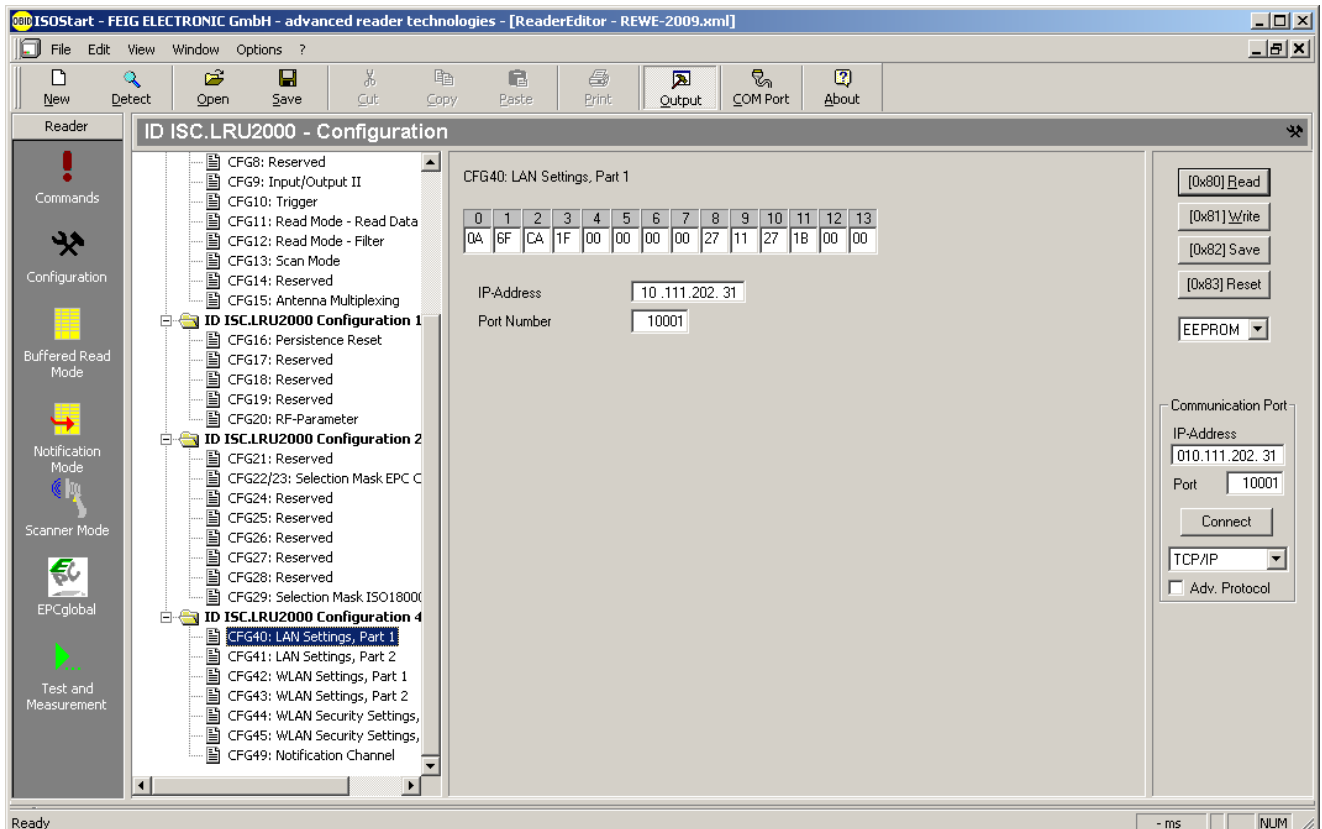
(LSB): [00 00 00 00 00 00 00 00 00 00 00 00 00 00]

Communication Port: IP-Address: 010.111.202.31, Port: 10001, TCP/IP, Adv. Protocol:

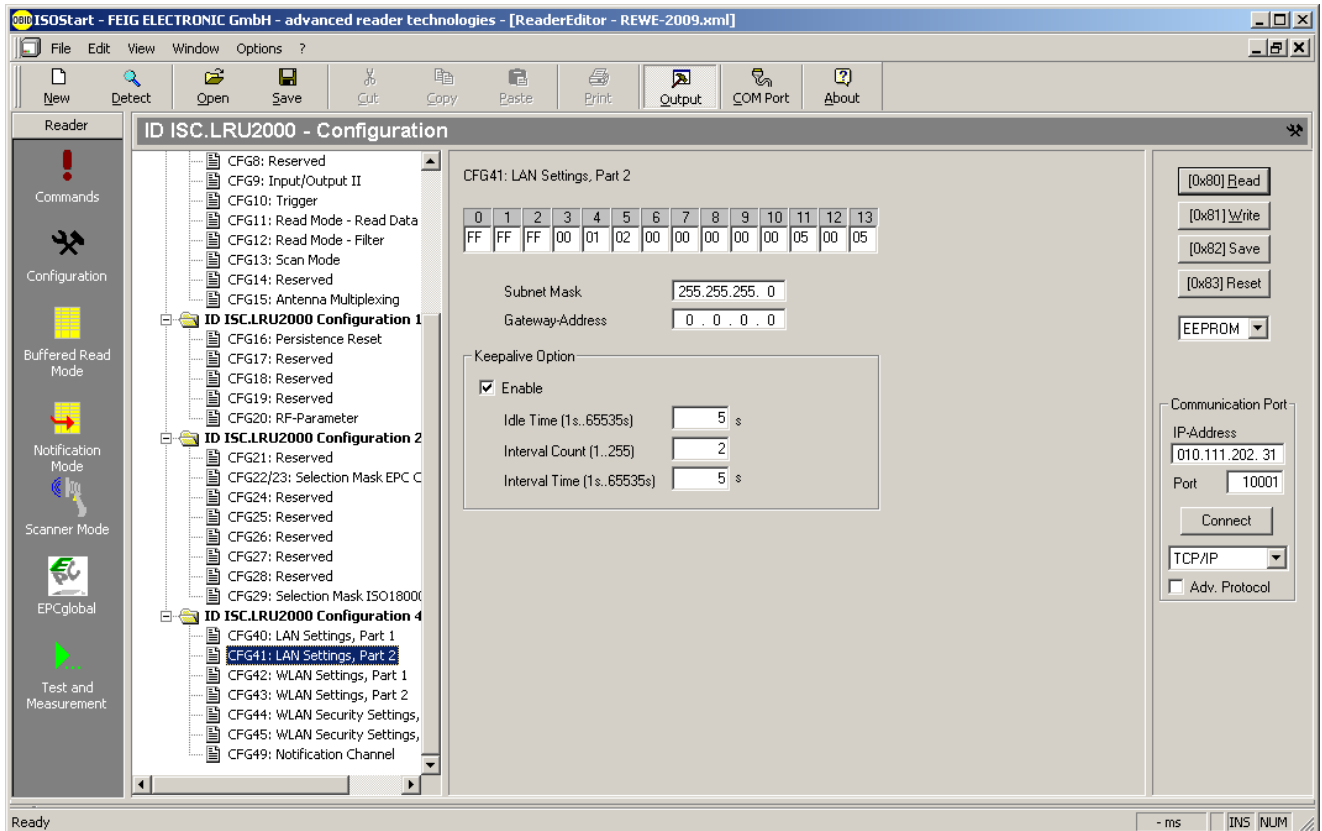
2.16. CFG29: Selection Mask ISO 18000-6-B (not used)



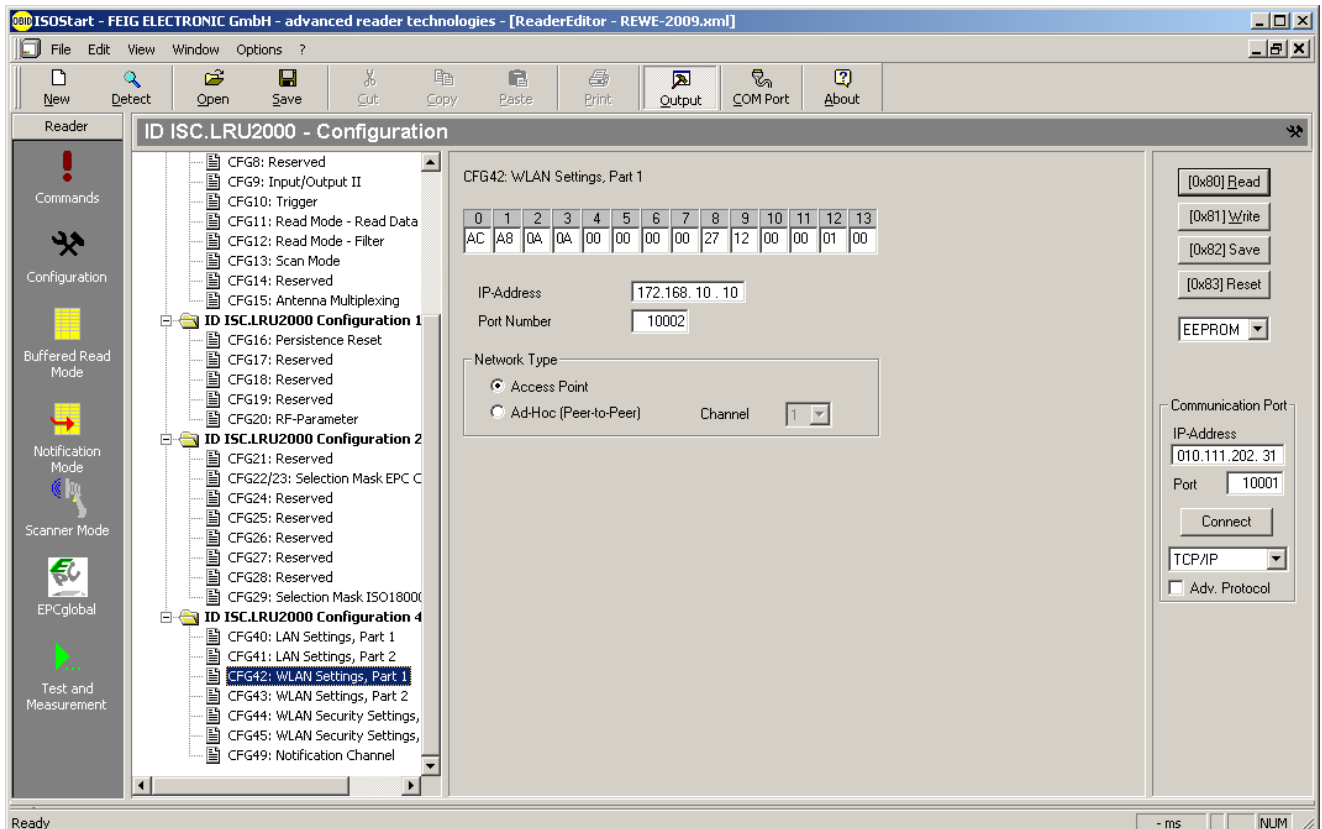
2.17. CFG40: LAN Settings, Part 1



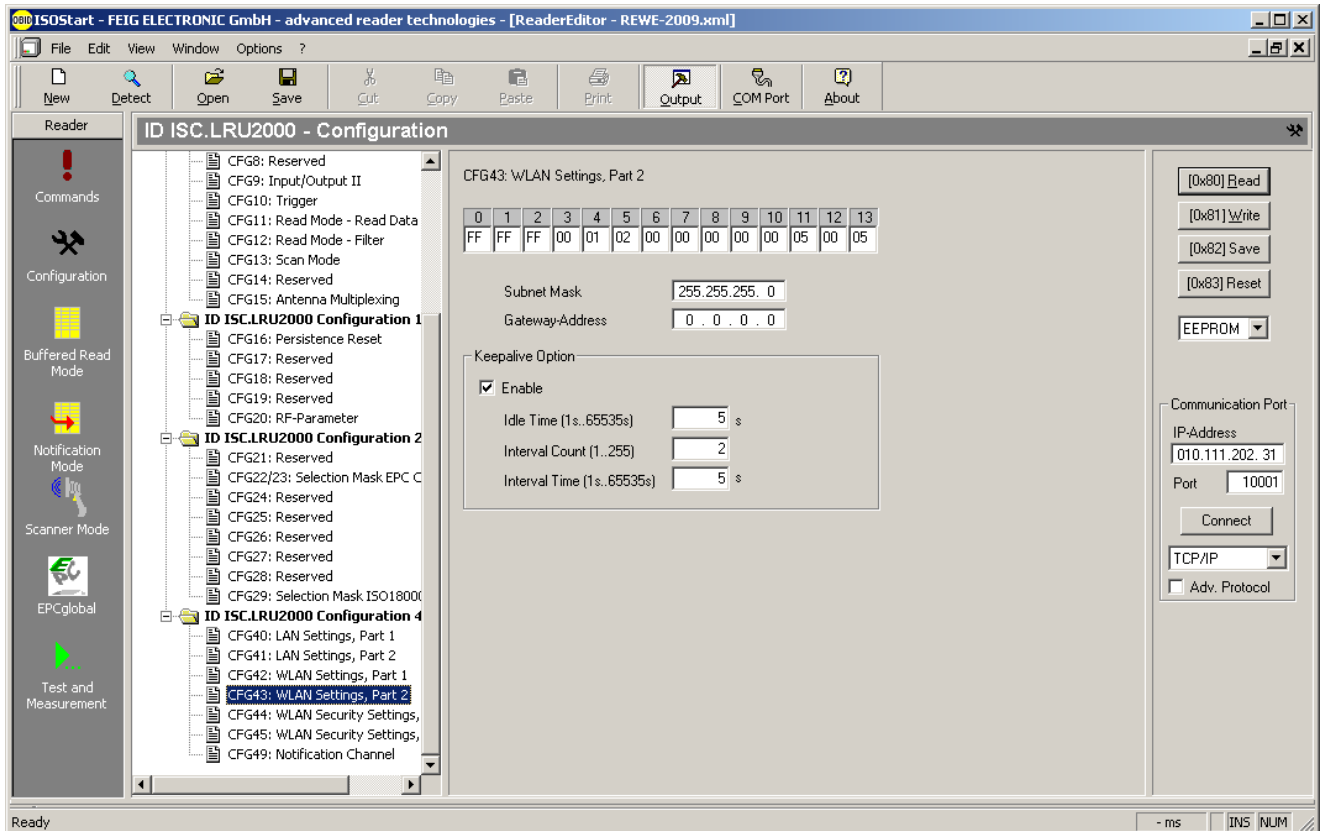
2.18. CFG41: LAN Settings, Part 2



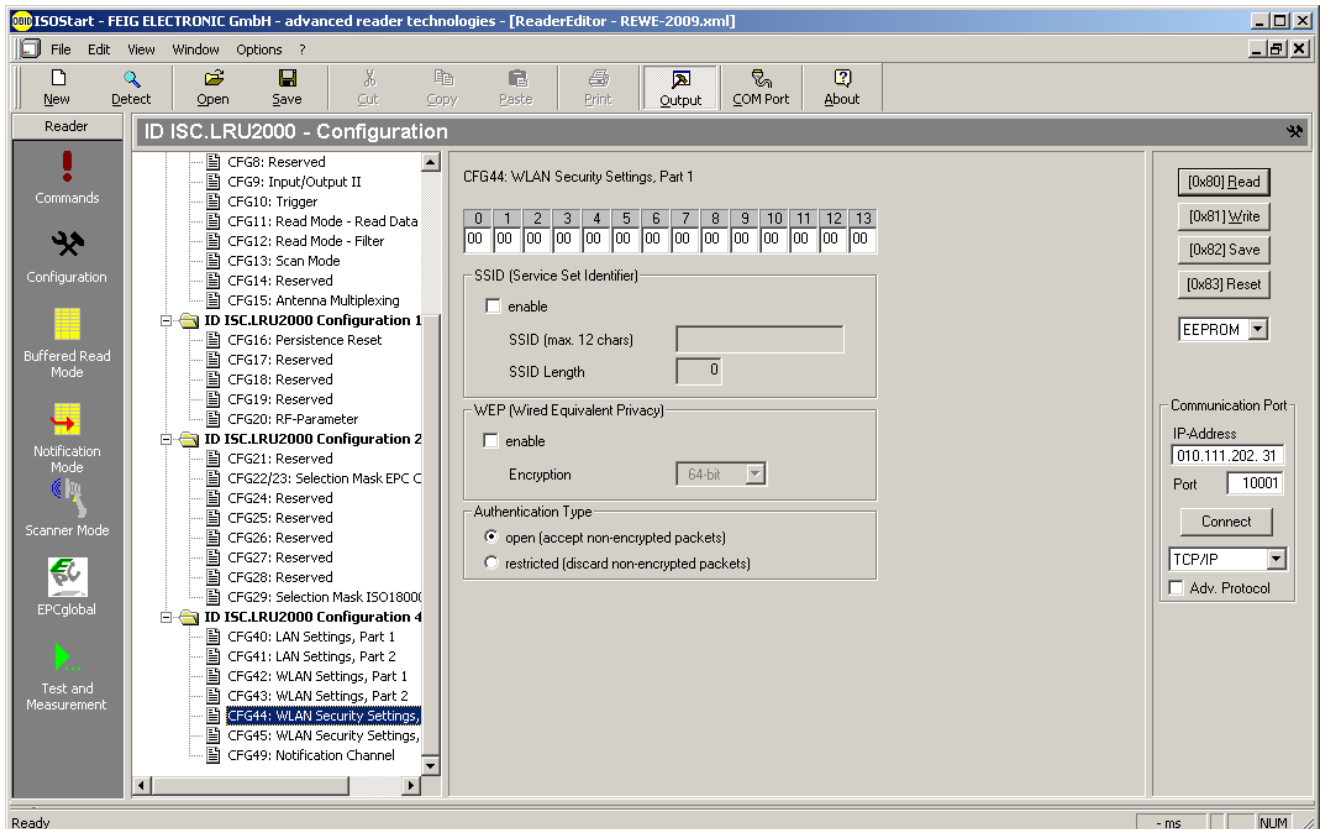
2.19. CFG42: WLAN Settings, Part 1 (not used)



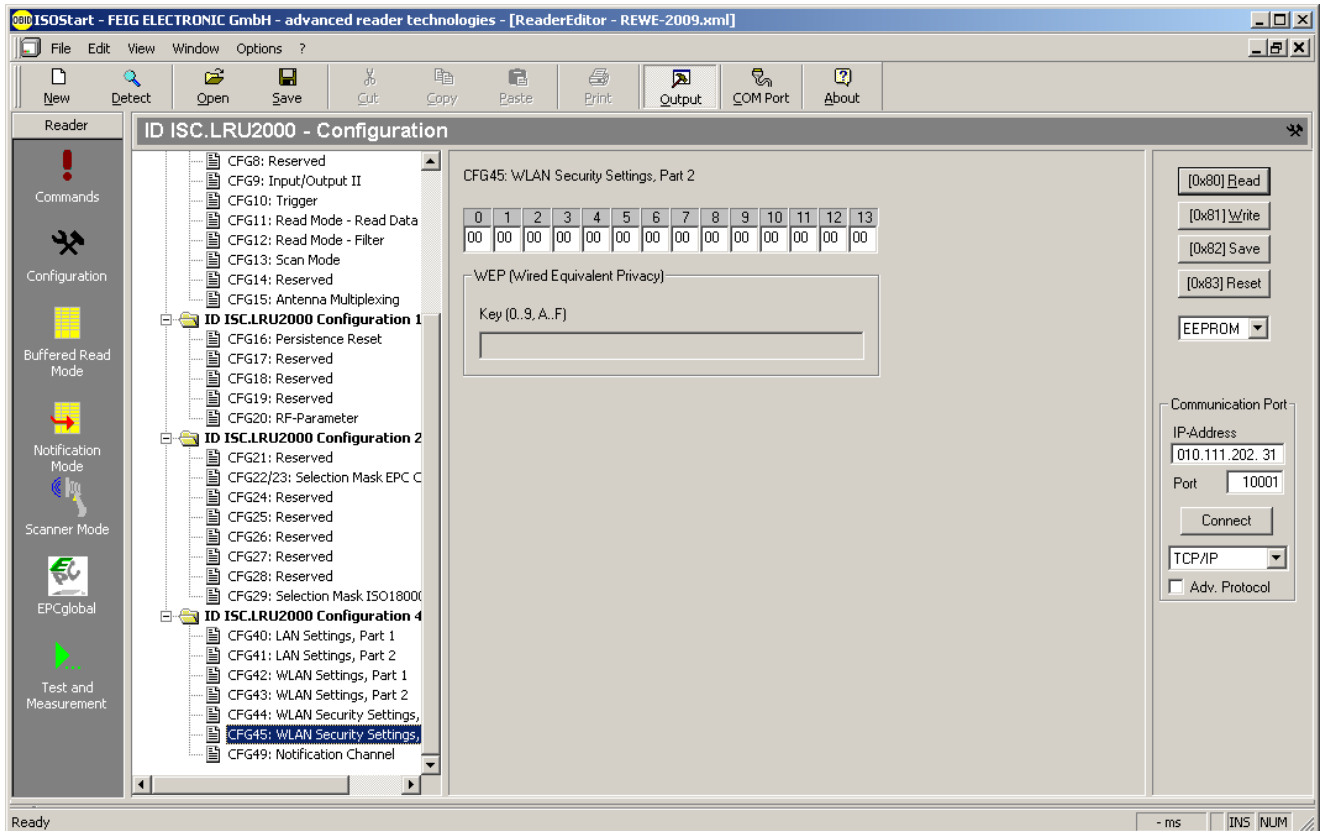
2.20. CFG43: WLAN Settings, Part 2 (not used)



2.21. CFG44: WLAN Security Settings, Part 1 (not used)



2.22. CFG45: WLAN Security Settings, Part 2 (not used)



2.23. CFG49: Notification Channel (not used)

