

**BALLUFF**

**Software- Description**

**BIS VU-**

**Sample Program S7-1200/1500**





**Sample Program description for BIS VU**

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## Sample Program description for BIS VU

### 1 BIS VU SAMPLE

The S7 project **BIS VU Sample** contains in FB10 an example call of FB42 for BIS V-6108-048-Cxxx. Configured is a S7-1200 CPU 1214C. I/O module length 64 Byte, Periphery HW start address: E/A 256. All input parameters are set suitable to hardware configuration. The is initialized automatically by the program. The data bit "DB\_Call\_VU".Init is set in the OB100 at PLC startup. For controlling the example, the variable table "VAT\_BIS\_VU\_IBN" is available.

#### 1.1 Sample functions

The following commandos are supported in the demo program:

- Read data carrier (USER-data)
- Write data carrier (USER-data)
- Store Auto Read start address
- Type and serial number
- Copy data between data carrier
- Initialize CRC\_16 data check
- Write constant value to data carrier
- Select tag
- Unselect tag
- Read EPC
- Write EPC
- Read TID
- Write antenna power
- Read antenna power
- Read multiple tags
- Write parameter
- Read parameter
- Bulk read
- Bulk write
- Read number of tags
- Get RSSI
- Lock tag
- Activate custom parameter

#### ATTENTION

**Please test carefully if the used commandos are supported by the BIS V processor and the read/write head!** The maximum read/write length of the FB is 65,534 byte.

## Sample Program description for BIS VU

### 1 BIS VU SAMPLE

#### 1.2 General data

Program name:	BIS_VU_Sample
Invoked blocks:	FB10, FB42
Reserved memory bits:	MB0 clock memory, MB1 system memory
Reserved Timers:	none
Reserved Counters:	none
Configured I/O Range	64 Byte
Invoke:	absolute
Device compatibility:	Siemens Simatic® S7 1200/1500
Software version:	Siemens Simatic® S7-1200 CPU 1214C V4.1 with TIA-Portal V13 SP1

#### 1.3 Control and watch options with the variable table

Description of FB input parameters:

- "DB\_Call\_VU".Init - function block initialization
- "DB\_Call\_VU".Start - start commando.
- "DB\_Call\_VU".ProcReset - reset processor and FB
- "DB\_Call\_VU".HeadOff - head deactivation
- "DB\_Call\_VU".Dynamic - dynamic mode
- "DB\_Call\_VU".BIS\_Default - set FB parameters to default values
- "DB\_Call\_VU".Command - pretends the actual command
- "DB\_Call\_VU".TAG\_StartAddr\_ParN - pretends start address or parameter number
- "DB\_Call\_VU".TAG\_NumbOfByte\_ParB - pretends number of bytes to read or parameter length
- "DB\_Call\_VU".SEL\_EPC\_NO - pretends EPC for select tag function
- "DB\_Call\_VU".Type\_EPC\_TID\_Sel - pretends the selection type
- "DB\_Call\_VU".CopTargetAddr - Copy target data carrier address
- "DB\_Call\_VU".CopRW\_HeadNo - Copy head number

## Sample Program description for BIS VU

### 1 BIS VU SAMPLE

...LC_1 [CPU 1214C DC/DC/DC] ▶ Beobachtungs- und Forcetabellen ▶ VAT_BIS_VU_IBN					
	Name	Adresse	Anzeigef...	Beobachtungswert	Steuerwert
1	// FB input parameter bit				
2	*DB_Call_VU".Init		BOOL		FALSE
3	*DB_Call_VU".Start		BOOL		TRUE
4	*DB_Call_VU".ProcReset		BOOL		FALSE
5	*DB_Call_VU".HeadOff		BOOL		FALSE
6	*DB_Call_VU".Dynamic		BOOL		FALSE
7	*DB_Call_VU".BIS_Default		BOOL		FALSE
8	// FB input parameter				
9	*DB_Call_VU".Command		Hex		16#0042
10	*DB_Call_VU".Offset_DBSend		DEZ+/-		0
11	*DB_Call_VU".Offset_DBReceive		DEZ+/-		0
12	*DB_Call_VU".TAG_StartAddr_...		Hex		16#0000_0000
13	*DB_Call_VU".TAG_NumbOfb...		DEZ+/-		8
14	*DB_Call_VU".SEL_EPC_NO		DEZ+/-		5
15	*DB_Call_VU".Type_EPC_TID_Sel		Hex		16#01
16	*DB_Call_VU".CopTargetAddr		DEZ+/-		0
17	*DB_Call_VU".CopRW_HeadNo		DEZ+/-		0
18	// FB output parameter bit				
19	*DB_Call_VU".Ready		BOOL		FALSE
20	*DB_Call_VU".Error		BOOL		FALSE
21	*DB_Call_VU".HeadOff		BOOL		
22	*DB_Call_VU".DatCarrPresent		BOOL		FALSE
23					
24	// FB output parameter int				
25	*DB_Call_VU".ErrorCode		Hex		
26	*DB_Call_VU".TagsFound		Hex		

Description of FB output parameters:

- "DB\_Call\_VU".Ready - Job done
- "DB\_Call\_VU".Error - Job done with errors
- "DB\_Call\_VU".ErrorCode - Error number processor and FB
- "DB\_Call\_VU".DatCarrPresent - Data carrier present
- "DB\_Call\_VU".TagsFound - for Bulk write commando
- "DB\_Call\_VU".ActiveWrite - for Bulk write commando

## 1 BIS VU SAMPLE

### 1.4 Disclaimer of Liability sample program

This demo program is free of charge and is a universal application example. This demo program shall help program and configure PLC applications and shall provide possible solutions.

The user is not entitled to claim for warranty, error correction and updates. In particular there is excluded any claims against Balluff GmbH for damages that might result from the use of this demo program. Excluded from this limitation of liability shall be (a) those damages that are based on injury to life, limb or health, (b) a liability according to the Produkthaftungsgesetz (German Product Liability Law) and (c) cases of willful intent.

Please check if the demo program is intended for your application before adapting it in plants and machineries.

By using the S7 sample, made available free of charge you accept the limitation of warranty and liability!

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