

# Selection of GSD- and Firmware Files for IS1 Remote I/O-Systems

## Overview:

During the last 10 years the IS1 system as well as the PROFIBUS standard was extended by different new features. To support the different functionalities and to guarantee compatibility for existing installations IS1 supports different Firmware and GSD Files to optimize system integration.

## Major extensions:

- Two different parameter sets are available for the IS1 Remote I/O-System. The **extended parameter set** is recommended for new projects.
- The optional use of DPV1 Diagnosis telegrams with Status Information was invented April 2008. To use this option, the PROFIBUS Master (PLC/DCS) must support this option too !
- PROFIBUS Slave Redundancy according PNO Specification is supported by IS1 since begin of 2010.
- New IS1+ I/O module generation since begin of 2013. More details on [www.IS1easy.com](http://www.IS1easy.com)

## 1. Recommendation for new Projects:

IS1 Parameter Set	PROFIBUS diagnosis according	IS1 Documentation	GSD File	Application
Extended	DPV0	Operating Instructions IS1 DP from V2.00	from GSD V2.26	Standard solution for new projects
	DPV1  (diagnosis with status)		from GSD V3.04	New projects with DPV1 compatible DP Masters and for use with <b>PROFIsafe</b> e.g. S7-400H, S7-300F, S7-400F ...

## 2. Overview all available functions

This overview shows all available combinations of different functions, GSD Files, Firmware Revisions and other docs. which support compatibility and maintenance of the IS1 system.

IS1 Parameter Set	PROFIBUS diagnosis according	IS1 Documentation	GSD files		Application ↓	
			CPM Redundancy			
			STAHL spec.	PNO spec.		
Standard	DPV0	Operating Instruction 'Description of PROFIBUS DP Interface for IS1 field stations'	<b>GSD V1.xx</b> (File: STA_049A.gse) Firmware: all revisions	from GSD V1.25	Product maintenance (Use of IOM V1.xx) <b>Not for new projects !</b>	
Extended <small>(from IOM Firmware 2.xx)</small>		Document above + Operating Instruction 'Extended Parameter Set for IS1 Remote I/O-System'	<b>GSD V2.xx</b> (File: STA2049A.gse) Firmware from V0x-30	<b>from GSD V2.25</b>		for DP masters not supporting PNO slave redundancy
	DPV1 <small>(diagnosis with status)</small>	Operating Instruction 'Description of PROFIBUS DPV1 Interface for IS1 field stations'	<b>GSD V3.00 to V3.02</b> (File: STA3049A.gse) Firmware from V0x-40 to V0x-41	-	for masters supporting PNO slave redundancy	<b>New projects with DPV1 compatible DP Masters and for use with PROFIsafe</b> e.g. S7-400H S7-300F, S7-400F ...
			<b>GSD from V3.03 *1</b> (File: STA3049A.gse) <b>with structured parametrisation</b> Firmware from V0x-42	from GSD V3.03		



### Hint !

Single CPMs used without CPM Redundancy are supported by all GSD and Firmware Revisions.

IS1 CPM Firmware Revisions:		
V01-xx	-	DPV0 Standard Revision (without acyclic C2 channel)
V02-xx	<b>V03-xx</b>	DPV1 Version (with acyclic C2 channel, HART, DTM Support, I&M, ...)
V09-xx	-	DPV1 Version (as above, but offset backup Addr. = 0 )
Product maintenance Not for new projects !	<b>Standard solution for new projects</b>	← <b>Application</b>

### 3. System requirements for use of the Extended Parameter Set of the IS1 Remote I/O System:

#### Hardware requirements:

- CPM 9440/12-01-11 (24V Z1 Stahl) as of Revision F
- CPM 9440/15-01-11 (24V Z2 Stahl) as of Revision F
- CPM 9440/22-01-11 (24V Z1 PNO) all Revisions
- CPM 9440/22-01-21 (230V Z1 PNO) all Revisions

#### Software requirements:

	IOM FW	DPV0 operation without C2 communication		DPV1 operation with C2 communication	
		DPV0 Diagnosis	DPV1 Diagnosis	DPV0 Diagnosis	DPV1 Diagnosis
IS1 IOM	from 02-00	CPM FW from V01-32	CPM FW from V01-41	CPM FW from V02-41, 03-41 or 09-41	
		GSD from V2.00	GSD from V3.00	GSD from V2.00	GSD from V3.00
IS1+ IOM (94xx/3x....)	from 03-01	CPM FW from V01-44		CPM FW from V02-44, 03-44 or 09-44	
		GSD from V2.26	GSD from V3.04	GSD from V2.26	GSD from V3.04

### IMPORTANT

If using older hardware or firmware versions, GSD files with Version V1.xx (less than V2.00) with Standard Parameter Set must be used with PROFIBUS DP.

### 4. System requirements for use of DPV1 conform Diagnosis telegrams with Status Information

#### Software requirements:

- IOM Firmware from Revision 2.00
- GSD from Revision V3.00
- CPM Firmware from Revision V0x-40
- **PROFIBUS class 1 master (PLC/DCS) must support DPV1 diagnosis telegrams !**

**Note:** Max. 15 I/O Modules are supported using GSD V3.xx  
 Max. 16 I/O Modules are supported using GSD V2.xx  
 Further engineering rules and limits see operating instructions IS1 PROFIBUS

### 5. System requirements for use of PNO Slave Redundancy

#### Software requirements for DP Masters supporting PNO Slave Redundancy

- CPM Firmware DPV1 Revision V03-xx
- IOM Firmware from Revision 2.00
- PROFIBUS GSD File from Revision V3.03

#### Software requirements for DP Masters not supporting PNO Slave Redundancy

- CPM Firmware PROFIBUS Revision V03-xx
- IOM Firmware all Revisions (1.xx und 2.xx)
- PROFIBUS GSD Files from Revisions V1.25, V2.25, V3.03



## Support address

e-Mail:	<b>R. Stahl Schaltgeräte GmbH</b>
Support information:	Instrumentation Competence Centre
Service Hotline IS1:	<a href="mailto:support.instrumentation@stahl.de">support.instrumentation@stahl.de</a>
Fax :	<a href="http://www.stahl.de">http://www.stahl.de</a>
	+49 ((0)7942) 943-4123
	+49 ((0)7942) 943-40 4123