EUROPROT +

EP+DNP3
Device Profile

PROTECTA
HUNGARY

Budapest, 04. 10. 2011.

DNP3 Device Profile

Vendor name: Protecta Electronics Ltd.

Device name: EuroProt+ series

Highest DNP Level supported: for requests: DNP-L2 for response: DNP-L2	Device function: [ ] master [x] slave

Notable objects, functions, and/or qualifiers supported in addition to the Highest DNP Levels Supported (the complete list is described in the attached table): Analog Inputs reported only in single-precision float-point (g30v5) , Double-bit Binary Input types supported (g3, g4), CROB (g12): multiple object command not supported, slave address 0-254

Maximum Data Link Frame Size (octets): Transmitted: 292 (maximum, configurable) Received: 292 (maximum, configurable)	Maximum Application Fragment Size (octets): Transmitted: 2048 (maximum, configurable) Received: 2048 (maximum, configurable)

Maximum Data Link Re-tries: [ ] None [x] Fixed at 3 [ ] Configurable	Maximum Application Layer Re-tries: [x] None [ ] Fixed at [ ] Configurable

Requires Data Link Layer Confirmation: [ ] Never [ ] Always [ ] Sometimes If 'Sometimes', when? [x] Configurable If 'Configurable', how? by configuration software EuroCAP (revision 40)

Requires Application Layer Confirmation: [ ] Never [ ] Always (not recommended) [x] When reporting Event Data (Slave devices only) [x] When sending multi-fragment responses (Slave devices only) [ ] Sometimes If 'Sometimes', when? [ ] Configurable If 'Configurable', how?

Timeouts while waiting for:

Data Link Confirm	[ ] None	[x] Fixed at _1 sec_____	[ ] Variable	[ ] Configurable
Complete Appl. Fragment	[x] None	[ ] Fixed at _____	[ ] Variable	[ ] Configurable
Application Confirm	[ ] None	[ ] Fixed at _____	[ ] Variable	[x] Configurable
Complete Appl. Response	[x] None	[ ] Fixed at _____	[ ] Variable	[ ] Configurable

Sends/Executes Control Operations:

WRITE Binary Outputs	[x] Never	[ ] Always	[ ] Sometimes	[ ] Configurable
SELECT/OPERATE	[ ] Never	[x] Always	[ ] Sometimes	[ ] Configurable
DIRECT OPERATE	[ ] Never	[x] Always	[ ] Sometimes	[ ] Configurable
DIRECT OPERATE - NO ACK	[ ] Never	[x] Always	[ ] Sometimes	[ ] Configurable
Count > 1	[x] Never	[ ] Always	[ ] Sometimes	[ ] Configurable
Pulse On	[ ] Never	[x] Always	[ ] Sometimes	[ ] Configurable
Pulse Off	[x] Never	[ ] Always	[ ] Sometimes	[ ] Configurable
Latch On	[ ] Never	[x] Always	[ ] Sometimes	[ ] Configurable
Latch Off	[ ] Never	[x] Always	[ ] Sometimes	[ ] Configurable
Queue	[x] Never	[ ] Always	[ ] Sometimes	[ ] Configurable
Clear Queue	[x] Never	[ ] Always	[ ] Sometimes	[ ] Configurable

Note: all other parameters are ignored.

Reports Binary Input Change Events when no specific variation requested: [ ] Never [x] Only time-tagged [ ] Only non-time-tagged [ ] Configurable to send both, one or the other	Reports time-tagged Binary Input Change Events when no specific variation requested: [ ] Never [x] Binary Input Change With Time [ ] Binary Input Change With Relative Time [ ] Configurable (attach explanation)

Sends Unsolicited Responses: [x] Never [ ] Configurable [ ] Only certain objects [ ] Sometimes	Sends Static Data in Unsolicited Responses: [x] Never [ ] When Device Restarts [ ] When Status Flags Change

Default Counter Object/Variation: Default Object: 20 Default Variation: 01	Counters Roll Over at: 32 Bits

Sends Multi Fragment Responses: Yes

Implementation Table

Group Number	Variation Number	Description	Function Codes (dec)	Qualifier Codes (hex)	Function Codes (dec)	Qualifier Codes (hex)
		OBJECT			REQUEST	RESPONSE
1	0	Binary Input—Any Variation	1	0,1,6		
1	1	Binary Input—Packed format	1	0,1,6	129	0,1
1	2	Binary Input—With flags	1	0,1,6	129	0,1
2	0	Binary Input Event—Any Variation	1	6,7,8		
2	1	Binary Input Event—Without time	1	6,7,8	129	17,28
2	2	Binary Input Event—With absolute time	1	6,7,8	129	17,28
2	3	Binary Input Event—With relative time				
3	0	Double-bit Binary Input—Any Variation	1	0,1,6		
3	1	Double-bit Binary Input—Packed format	1	0,1,6	129	0,1
3	2	Double-bit Binary Input—With flags	1	0,1,6	129	0,1
4	0	Double-bit Binary Input Event—Any Variation	1	6,7,8		
4	1	Double-bit Binary Input Event—Without time				
4	2	Double-bit Binary Input Event—With absolute time	1	6,7,8	129	17,28
4	3	Double-bit Binary Input Event—With relative time				
10	0	Binary Output—Any Variation				
10	2	Binary Output—Output status with flags				
12	1	Binary Command (CROB)	3,4,5,6	17,28	129	echo of request
20	0	Counter—Any Variation	1	0,1,6		
20	1	Counter—32-bit with flag	1	0,1,6	129	0,1
20	2	Counter—16-bit with flag				
20	5	Counter—32-bit without flag	1	0,1,6	129	0,1
20	6	Counter—16-bit without flag				
22	0	Counter Event—Any Variation	1	6,7,8		
22	1	Counter Event—32-bit with flag	1	6,7,8	129	17,28
22	2	Counter Event—16-bit with flag				
30	0	Analog Input—Any Variation	1	0,1,6		
30	1	Analog Input—32-bit with flag				
30	2	Analog Input—16-bit with flag				
30	3	Analog Input—32-bit without flag				
30	4	Analog Input—16-bit without flag				
30	5	Analog Input—Single-precision float-point with flag	1	0,1,6	129	0,1
32	0	Analog Input Event—Any Variation	1	6,7,8		
32	1	Analog Input Event—32-bit without time				
32	2	Analog Input Event—16-bit without time				
32	5	Analog Input Event—Single-precision float-point with flag	1	6,7,8	129	17,28
40	0	Analog Output Status—Any Variation				
40	2	Analog Output Status—16-bit with flag				
41	2	Analog Output—16-bit (AOB)				
50	1	Time and Date—Absolute time	2	7 (lim. qty=1)		
60	1	Class Objects—Class 0 data	1	6		
60	2	Class Objects—Class 1 data	1	6,7,8		
60	3	Class Objects—Class 2 data	1	6,7,8		
60	4	Class Objects—Class 3 data	1	6,7,8		
80	1	Internal Indications—Packed format	2	0 (ix=7)		