



GRAND-DUCHÉ DE LUXEMBOURG

Ministère du Développement durable  
et des Infrastructures  
Département des Transports

L-2938 Luxembourg

SOCIÉTÉ NATIONALE DE  
CERTIFICATION ET D'HOMOLOGATION

s.à r.l.

Registre de Commerce: B 27180



L-5201 Sandweiler

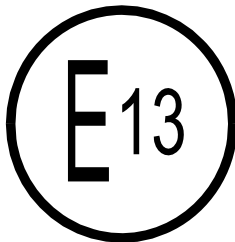
Référence: E13\*10R00\*10R03\*10361\*00

Annexes: - Rapport Technique  
- Fiche de Renseignements du constructeur

Sandweiler, le 08 octobre 2010

Communication concernant:<sup>(2)</sup>

Communication concerning:



- la délivrance d'une homologation

approval granted

- l'extension d'homologation

approval extended

- le refus d'homologation

approval refused

- le retrait d'homologation

approval withdrawn

- l'arrêt définitif de la production

production definitely discontinued

d'un type de sous-ensemble électrique/électronique<sup>(2)</sup> en ce qui concerne le Règlement N° 10

of a type of electrical/electronic sub-assembly with regard to Regulation N° 10


Numéro d'homologation par type:

Approval number:

E13\*10R00\*10R03\*10361\*00

Marque d'homologation:

Approval mark:

 10R - 03 10361

1. Fabricant (marque commerciale du constructeur):

Make (trade name of manufacturer):

HIRSCHMANN

2. Type:

Type:

SPIDER II 8TX PoE

Dénomination(s) commerciale(s) générale(s):

General commercial description(s):

Industrial ETHERNET Rail Switch

Version(s)/Variante(s):

Version(s)/Variant(s):

None

3. Moyens d'identification du type, s'ils sont marqués sur le véhicule / composant / entité technique<sup>(2)</sup>:

Means of identification of type, if marked on the vehicle / component / separate technical unit:

SPIDER II 8TX PoE

3.1. Emplacement de ce marquage:

Location of that marking:

On the top of the main unit

4. **Catégorie du véhicule:**  
Category of vehicle: Not applicable
5. **Nom et adresse du constructeur:**  
Name and address of manufacturer: Hirschmann Automation and Control GmbH  
Stuttgarterstr. 45-51,  
D-72654 Neckartenzlingen
6. **Dans le cas de composants ou d'entités techniques, emplacement et procédé de fixation de la marque d'homologation CEE:**  
In the case of components and separate technical units, location and method of affixing of the ECE approval mark: Label fixed on the bottom of the main unit
7. **Adresse(s) de l' (des) usine(s) d'assemblage:**  
Address(es) of assembly plant(s): Advantech Co., Ltd.  
3F, No. 5, 7 & 9, Lane 130, Ming-Chuan Rd,  
Shing-Tien City, Taipei Hsien, Taiwan,  
R.O.C.
8. **Informations supplémentaires (s'il y a lieu):**  
Additional informations (where applicable): See appendix
9. **Autorité déléguée:**  
Assigned authority: *Société Nationale de Certification et d'Homologation*  
L-5230 Sandweiler
- Service technique responsable de l'exécution des essais:**  
Technical service responsible for carrying out the tests: TÜV Rheinland Luxemburg GmbH  
2a, Kalchesbruck  
L-1852 Luxembourg
10. **Date du rapport d'essai:**  
Date of test report: 07.10.2010
11. **Numéro du rapport d'essai:**  
Number of test report: 84-R10-00908/10
12. **Remarques (s'il y a lieu):**  
Remarks (if any): Not applicable
13. **Lieu:**  
Place: Sandweiler
14. **Date:**  
Date: 08 octobre 2010
15. **Signature:**  
Signature:

Pour le Département des Transports



Marco FELTES  
Inspecteur Principal

Pour la SNCH



Claude LIESCH  
Directeur



**16. L'index de l'ensemble des renseignements déposé chez l'autorité de réception, qui peut être obtenu sur demande, est joint.**

The index to the information package lodged with the approval authority, which may be obtained on request, is attached.

See index to type-approval report

**17. Raison(s) de l'extension:**

Not applicable

Reason(s) for extension:

## Appendice

Appendix

**au certificat d'homologation par type N° E13\*10R00\*10R03\*10361\*00**  
to type-approval certificate N° E13\*10R00\*10R03\*10361\*00  
**concernant l'homologation par type d'un sous ensemble électrique/électronique selon le Règlement N° 10.**  
concerning the type-approval of an electrical/electronic sub-assembly under Regulation N° 10.

- |               |  |   |
|---------------|--|---|
| <b>1.</b>     | <b>Informations supplémentaires.</b><br>Additional information.  |   |
| <b>1.1.</b>   | <b>Tension nominale du système électrique [V]:</b><br>Electrical system rated voltage [V]:   | 18 to 32V DC  |
|               | <b>Masse:</b><br>Ground:   | <del>Positive</del> /Negative <sup>(2)</sup>                              |
| <b>1.2.</b>   | <b>Ce SEEE peut être utilisé sur n'importe quel type de véhicule avec les restrictions suivantes:</b><br>This ESA can be used on any vehicle type with the following restrictions:   | - Operating temperature: 0 to 60°C<br>- Operating humidity: 10% to 95% RH |
| <b>1.2.1.</b> | <b>Conditions d'installation, s'il y a lieu:</b><br>Installation conditions, if any:   | Not applicable  |
| <b>1.3.</b>   | <b>Ce SEEE peut seulement être utilisé sur les types de véhicules suivants:</b><br>This ESA can be used only on the following vehicle types:   | Not applicable  |
| <b>1.3.1.</b> | <b>Conditions d'installation, s'il y a lieu:</b><br>Installation conditions, if any:   | Not applicable  |
| <b>1.4.</b>   | <b>La (les) méthode(s) spécifique(s) d'essais utilisée(s) et les bandes de fréquences couvertes pour déterminer l'immunité étai(ent): (indiquez s'il vous plaît à partir de l'annexe 9 la méthode précise utilisée).</b><br>The specific test method(s) used and the frequency ranges covered to determine immunity were: (Please specify precise method used from annex 9). | Not applicable  |
| <b>1.5.</b>   | <b>Laboratoire accrédité au titre de la norme ISO 17025 et reconnu par l'autorité d'homologation chargé d'effectuer les essais:</b><br>Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests:   | Not applicable  |
| <b>2.</b>     | <b>Commentaires:</b><br>Remarks:   | Not applicable  |

<sup>2</sup> **Biffer la mention inutile**  
Strike out what does not apply



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L-5201 Sandweiler

**Référence:** E13\*10R00\*10R03\*10361\*00

**Annexes:** - Rapport Technique  
- Fiche de Renseignements du constructeur

Sandweiler, le 08 octobre 2010

## Index du dossier d'homologation

Index to type-approval report

<b>Numéro d'homologation:</b> Approval number:	E13*10R00*10R03*10361*00
<b>Révision:</b> Revision:	00
<b>Marque de fabrication ou de commerce:</b> Trade name or mark:	HIRSCHMANN
<b>Type:</b> Type:	SPIDER II 8TX PoE
<b>1. Procès-verbal d'essai:</b> Test report:	No. 84-R10-00908/10
- Technical report:	Page 1 to 7;
- Technical informations:	Appendix L - Page 8 & 9;
- List of modifications:	Appendix 0 - Page 10.
<b>2. Dossier du constructeur:</b> Report of the manufacturer:	No. SPIDER II 8TX PoE-00
- Information Document:	Page 1;
- List of Annexes:	Page 2;
- Annexes:	Refer to List of Annexes.
<b>3. Autres documents annexés:</b> Other documents annexed:	Not applicable
<b>4. Date de délivrance de l'homologation initiale:</b> Date of issue of initial type approval:	08.10.2010
<b>5. Date de la dernière délivrance de pages révisées:</b> Date of last issue of revised pages:	Not applicable
<b>6. Date de la dernière délivrance d'une homologation révisée:</b> Date of last extension:	Not applicable

Manufacturer : Hirschmann Automation and Control GmbH  
Type : SPIDER II 8TX PoE

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## TEST REPORT

according to ECE-Regulation

### Uniform provisions concerning the approval of vehicles with regard to electromagnetic compatibility

No.: **ECE-R10**

including

No.: **03 series of amendments, corrigendum 1**

Previously granted	
ECE-type approval	: --

Structure of report:


0. General information
1. Test object(s) and general test information
2. Test minutes
3. Remark concerning tested object(s)
4. Appendices
5. Statement of conformity

The Test Report shall be reproduced and published in full by the client only. It shall however be reproduced partially with the written permission of the Testing Laboratory only.

**Manufacturer** : **Hirschmann Automation and Control GmbH**  
**Type** : **SPIDER II 8TX PoE**

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## 0. General information

- 0.1. Trade mark or trade name of type :  **HIRSCHMANN**  
A BELDEN BRAND
- 0.2. Manufacturer's name for the type of the ESA : SPIDER II 8TX PoE
- 0.3. Name and address of manufacturer : Hirschmann Automation and Control GmbH  
Stuttgarterstr. 45-51, 72654 Neckartenzlingen Germany
- 0.4. Name and address of authorised representative, if any : Not applicable
- 0.5. No. of information document : SPIDER II 8TX PoE-00  
date of issue : October 1, 2010  
date of last amendment : --

Manufacturer : Hirschmann Automation and Control GmbH  
Type : SPIDER II 8TX PoE

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## 1. Test object(s) and general test information

### 1.1. Test object(s)

Identification no. : Not applicable  
Model : SPIDER II 8TX PoE  
Remark : Industrial ETHERNET Rail Switch

### 1.2. General test information

1.2.1 Order issued by : --  
(if different from manufacturer)  
1.2.2 Test object received on : --  
1.2.3 Test date : August 31, 2010  
1.2.4 Test site : SPORTON International Inc., Taipei and Taoyuan,  
Taiwan  
1.2.5 Remark : The results of the test refer exclusively to the objects  
mentioned under point 1.1. of this report.



Manufacturer : Hirschmann Automation and Control GmbH  
Type : SPIDER II 8TX PoE

## 2. Test minutes

- 2.1. Test facilities** : The measurement equipment used was in compliance with the test requirements.
- 2.2. Test data of the tested ESA** : See Appendix L
- 2.3. Type approval tests conducted** : Radiated narrowband electromagnetic emissions  
Radiated broadband electromagnetic emissions  
~~Immunity to electromagnetic radiation~~  
Immunity to transient disturbances  
Emission of conducted disturbances
- 2.4. Test results** : ~~The ESA type has been tested according to the amendments mentioned in appendix O.~~
- 2.4.1. Radiated narrowband electromagnetic emissions : Antenna position horizontal and vertical

No.	frequency MHz		measured data dB( $\mu$ V/m)		correction factor dB( $\mu$ V/m)		corrected data dB( $\mu$ V/m)		limit value dB( $\mu$ V/m)	
	horiz.	vertic.	horiz.	vertic.	horiz.	vertic.	horiz.	vertic.	horiz.	vertic.
1	43.5	43.5	53.8	57.6	-15.5	-15.5	38.2	42.1	47.9	47.9
2	54.6	55.4	59.8	61.3	-19.5	-19.7	40.4	41.6	45.5	45.3
3	124.8	124.8	54.7	51.0	-15.1	-15.1	39.6	35.9	45.3	45.3

Except for the point(s) mentioned above, the radiated narrowband emissions according to Annex 8, in any of the 13 frequency bands identified in paragraph 4.3 were 10 dB below the reference limit.

- 2.4.2. Radiated broadband electromagnetic emissions : Antenna position horizontal and vertical
- The radiated broadband emissions according to annex 7, in any of the 13 frequency bands identified in paragraph 4.3 were 10 dB below the reference limit.
- 2.4.3. Immunity Test : Not applicable. The ESA is not related to immunity-related functions (2.12)
- Test method : ~~Absorber chamber test~~

Manufacturer : Hirschmann Automation and Control GmbH  
Type : SPIDER II 8TX PoE

Specified frequency range : 20–2000 MHz

Tested frequency points : 27/45/65/90/120/150/190/230/280/380/450/600/750/900  
/1300/1800 MHz

Field strength : 30 V/m

~~At the above mentioned frequency points the ESA did not exhibit any malfunction which would cause any degradation of performance which could cause confusion to other road users or any degradation in the driver's direct control of a vehicle fitted with the system which could be observed by the driver or other road user.~~

2.4.4. Immunity to transient disturbances

: The tests were conducted by the method according to ISO 7637-2: 2004 as described in Annex 10, and the functional status of the ESA after the tests complied with the levels shown in Table 1 of Paragraph 6.

Test pulse number	Immunity test level	Functional status for systems		
		Related to immunity-related functions	Not related to immunity-related functions	Test results
1	III	€	D	C
2a	III	B	D	A
2b	III	€	D	C
3a	III	A	D	A
3b	III	A	D	A
4	III	€	D	A

**Manufacturer** : **Hirschmann Automation and Control GmbH**  
**Type** : **SPIDER II 8TX PoE**

2.4.5. Emission of conducted disturbances : The tests were conducted by the method according to ISO 7637-2: 2004 as described in Annex 10, and the pulse amplitudes were within the limits specified in Table 2 of Paragraph 6.

Polarity of pulse amplitude	Maximum allowed pulse amplitude for vehicles with 24V system	Test results	
		Slow pulses	Fast pulses
Positive	+150	23.80	24.40
Negative	-450	-1.60	-2.20

2.4.6. Markings : The approval mark is marked clearly legible and indelible on the bottom of main unit.

**2.5. Variants and components** : Not applicable

Manufacturer : Hirschmann Automation and Control GmbH  
Type : SPIDER II 8TX PoE

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### 3. Remark concerning tested object(s)

All versions of the ESA type as stated in the information document are covered with the tested version(s) and test object(s) respectively.

### 4. Appendices

- L**     **Technical information about the separate technical unit (ESA) according to Annex 3B of the communication concerning the ECE-type approval**
- 0**     **List of modifications**
- 1**     **Information folder No. : SPIDER II 8TX PoE-00 (2 pages)**  
          **(excluding apps.)**

### 5. Statement of conformity

The above mentioned information folder and the type described in that comply with the requirements mentioned on page 1.

Luxemburg, date see Appendix L  
KWU/BL




B.S.E.E. B. Liu

Manufacturer : Hirschmann Automation and Control GmbH  
Type : SPIDER II 8TX PoE

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**Technical information about the separate technical unit (ESA) according to Annex 3B of the communication concerning the ECE-type approval**

**Appendix L**

1. **Make (trade name of manufacturer)** :  **HIRSCHMANN**  
A BELDEN BRAND
2. **Type and general commercial description(s)** : SPIDER II 8TX PoE  
commercial description(s) : Industrial ETHERNET Rail Switch  
version(s) : Not applicable
3. **Means of identification of type, if marked on the component/~~separate technical unit~~** : SPIDER II 8TX PoE
  - 3.1. Location of that marking : On the top of the main unit
4. **Category of vehicle** : Not applicable
5. **Name and address of manufacturer** : Hirschmann Automation and Control GmbH  
Stuttgarterstr. 45-51, 72654 Neckartenzlingen Germany  
Name and address of authorized representative, if any : Not applicable
6. **In the case of components and separate technical units, location and method of affixing of the ECE approval mark** : Label fixed on the bottom of main unit
7. **Address(es) of the assembly plant(s)** : Advantech Co., Ltd.  
3F, No. 5, 7 & 9, Lane 130, Ming-Chuan Rd,  
Shing-Tien City, Taipei Hsien, Taiwan, R.O.C.
8. **Additional information** : See Information Folder No. SPIDER II 8TX PoE-00
10. **Date of Report** : October 7, 2010
12. **Remarks (if any)** : Not applicable
17. **Reasons for extension** : Not applicable

**Manufacturer** : Hirschmann Automation and Control GmbH  
**Type** : SPIDER II 8TX PoE

---

## Appendix

1. **Additional information** :
- 1.1. Electrical system rated voltage : 18 ~ 32V DC  
Ground : Negative
- 1.2. This ESA can be used on any vehicle type with the following restrictions :
  - Operating temperature: 0 ~ 60°C
  - Operating humidity: 10% ~ 95% RH
- 1.2.1. Installation conditions, if any : Not applicable
- 1.3. This ESA can be used only on the following vehicle types : Not applicable
- 1.3.1. Installation conditions, if any : Not applicable
- 1.4. The specific test method(s) used and the frequency ranges covered to determine immunity were (please specify precise method used from Annex 9) : ~~Free field, 20 ~ 1000 MHz~~  
Not applicable
- 1.5. Approved/recognised laboratory (for the purpose of this Regulation) responsible for carrying out the test : TÜV Rheinland Luxemburg GmbH
2. **Remarks** : Not applicable

**Manufacturer** : Hirschmann Automation and Control GmbH  
**Type** : SPIDER II 8TX PoE

---

**List of modifications**

**Appendix 0**

**Correction of** : --


**Modification of** : --

**Addition of** : --

**Deletion of** : --

Information Document No.: SPIDER II 8TX PoE-00  
for type approval of an ESA with respect to  
electromagnetic compatibility according to  
the ECE Regulation R10, 03 series of amendments

Date: October 1, 2010

- 
1. Make (trade name of manufacturer) :  **HIRSCHMANN**  
A BELDEN BRAND
  2. Type : SPIDER II 8TX PoE
  3. Means of identification of type, if marked on the component / ~~separate technical unit~~ : SPIDER II 8TX PoE
    - 3.1. Location of that marking : On the top of the main unit
  4. Name and address of manufacturer : Hirschmann Automation and Control GmbH  
Stuttgarterstr. 45-51, 72654 Neckartenzlingen  
Germany  
  
Name and Address of authorized representative, if any : Not applicable
  5. In the case of components and separate technical units, location and method of affixing of the ECE approval mark : Label fixed on the bottom of main unit
  6. Address(es) of the assembly plant(s) : Advantech Co., Ltd.  
3F, No. 5, 7 & 9, Lane 130, Ming-Chuan Rd,  
Shing-Tien City, Taipei Hsien, Taiwan, R.O.C.
  7. This ESA shall be approved as a : Component/ ~~STU~~
  8. Any restrictions of use and conditions for fitting : Not applicable
  9. Electrical system rated voltage : 18 ~ 32V DC, ~~positive/~~ negative ground



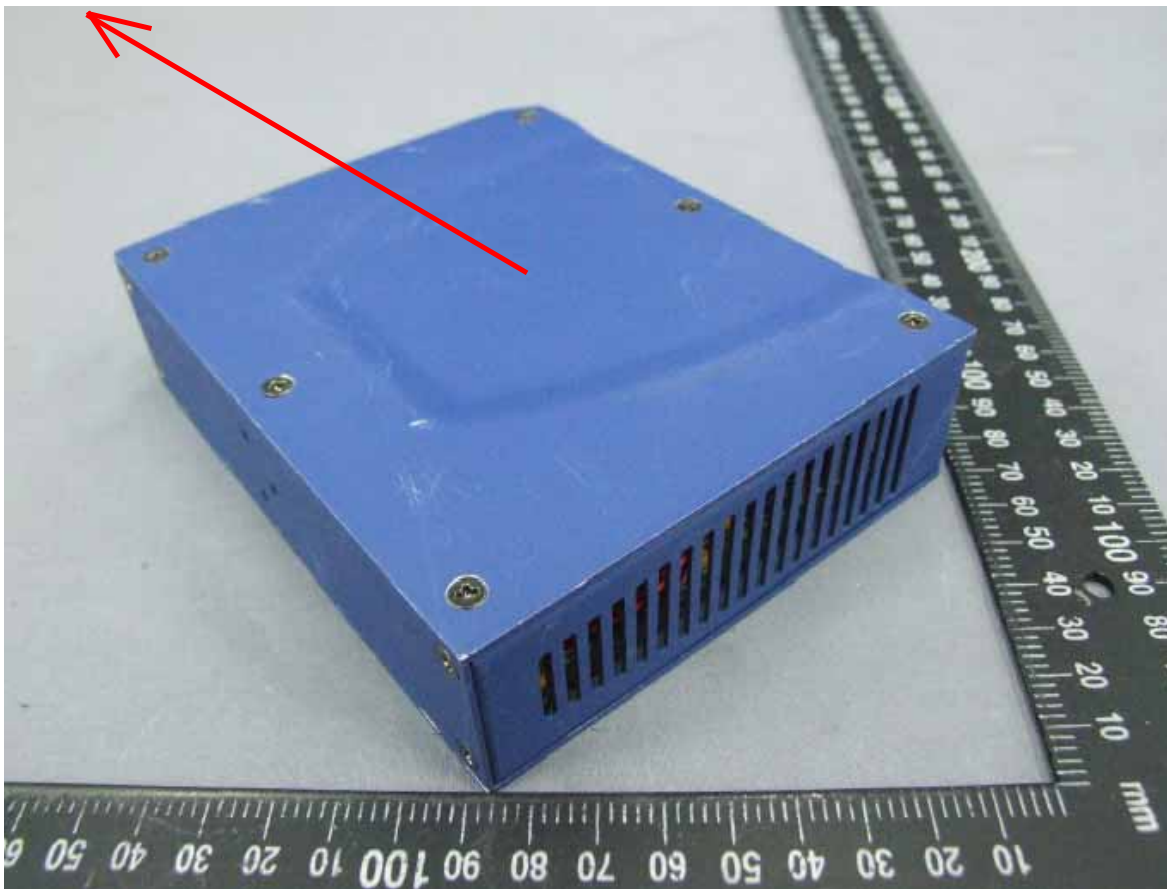
## List of Annexes

<b>Annex</b>	<b>Page</b>
A Drawing or photo of the ESA	A1 ~ A3
B Specification	B1
C System layout and block diagram	C1 ~ C4

ESA Photo

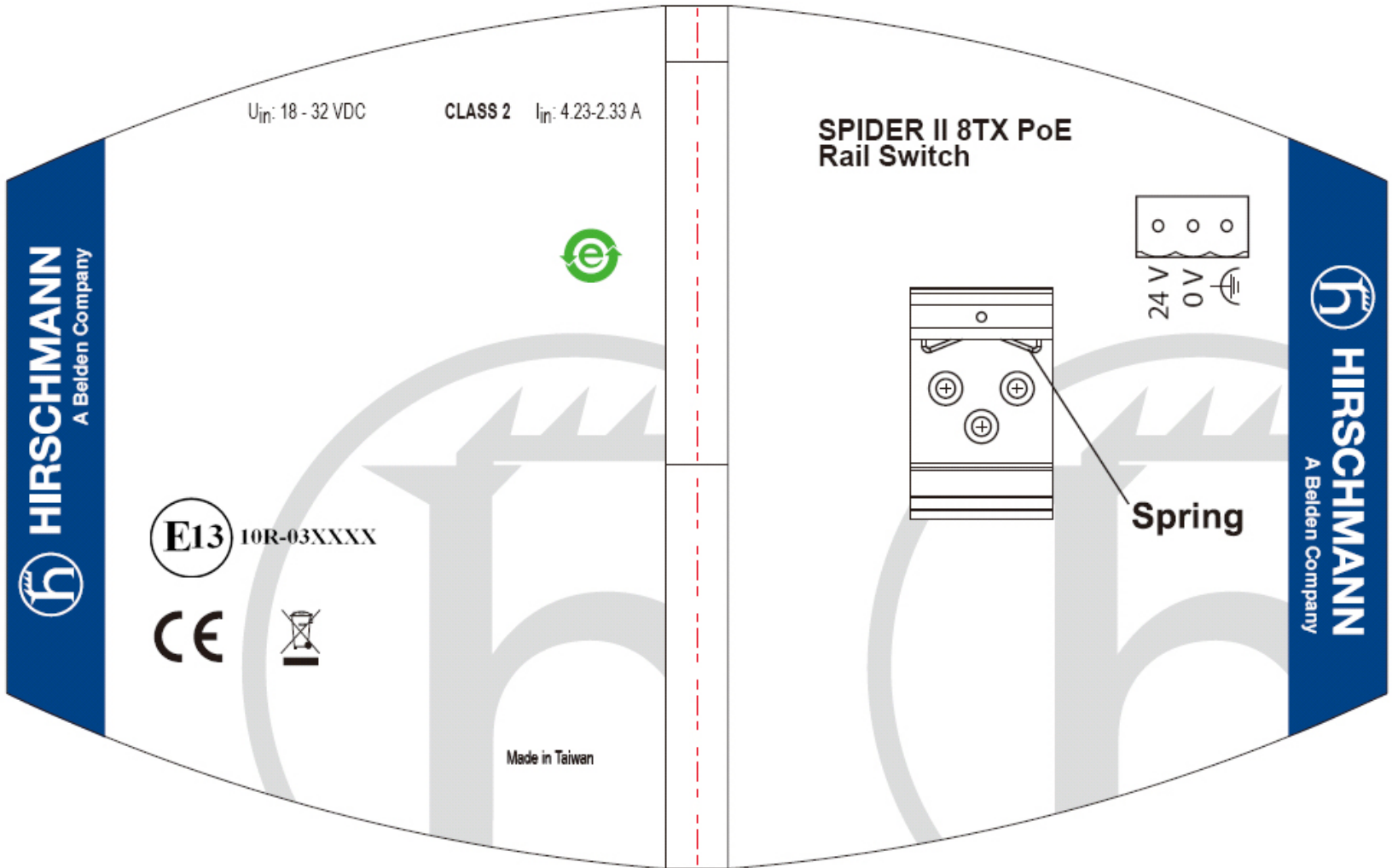


Label Location





# Label



## Specification

# SPIDER II 8TX PoE

8 Port Switch with 8 x TX ports there  
from 4 x PoE ports



### Features

- Store-and-Forward Switching Architecture
- Supports PoE Function on port 5 ~ 8
- Supports 24VDC Power input
- Provides 56Kbytes Packet Buffer
- Provides 2K MAC Address Table
- IP-30, metal with aluminum shell
- Installation in a Pollution Degree 2 environment

### Introduction

The SPIDER II 8TX PoE is unmanaged industrial switch supports PoE (Power over Ethernet) function on port 5~8, the switch can compliant IEEE 802.3af and provide up to 15.4 watts power output per port. The switch support IEEE802.3/802.3u/802.3x with 10/100M, full/half-duplex, MDI/MDI-X auto-negotiation and provide a power fault relay warning function when power failures occur.

### Communications

**Standard:** IEEE802.3、IEEE802.3u、IEEE802.3x、IEEE802.3af

### Interface

**Connector** RJ-45 × 8

**LED** Power, Link/Activity, Speed

### PoE

**Standard** IEEE-802.3af with internal isolation

**Ports** 5 ~ 8

**Power Output** 48V<sub>DC</sub>

**Supply Watts** 15.4 Watts max per port

**RJ-45 Pin** Positive (Vcc+): 1, 2  
Negative (Vcc-): 3, 6

### Mechanism

**Enclosure** IP-30, metal with aluminum shell

**Dimensions** 35mm(W) x 110mm(D) x 138mm(H)

**Mounting** DIN-rail

### Power

**Connector** 3-pole terminal block (Black)

**Power Input** 24VDC (18 ~ 32VDC)

**Power consumption** 74.9 Watts max @ 24VDC

### Environment

**Operating Temperature** 0 ~ 60°C (32 ~ 140°F)

**Storage Temperature** -20 ~ 70°C (-4 ~ 185°F)

**Operating Humidity** 10 ~ 95% (non-condensing)

**Storage Humidity** 10 ~ 95% (non-condensing)

**MBTF** 196,554 hrs

### Certification

**Standard** ■ UL/cUL 508 ■ UL 1604 ■ C-Ticker ■ E13

**CE** ■ EN55022 ■ EN61000-3-2/3 ■ EN61131-2  
■ EN61000-6-2/4 ■ EN61000-4-2/3/4/5/6

**FCC** CFR47 :2005, Part 15 Class A

**Shock** IEC60068-2-27

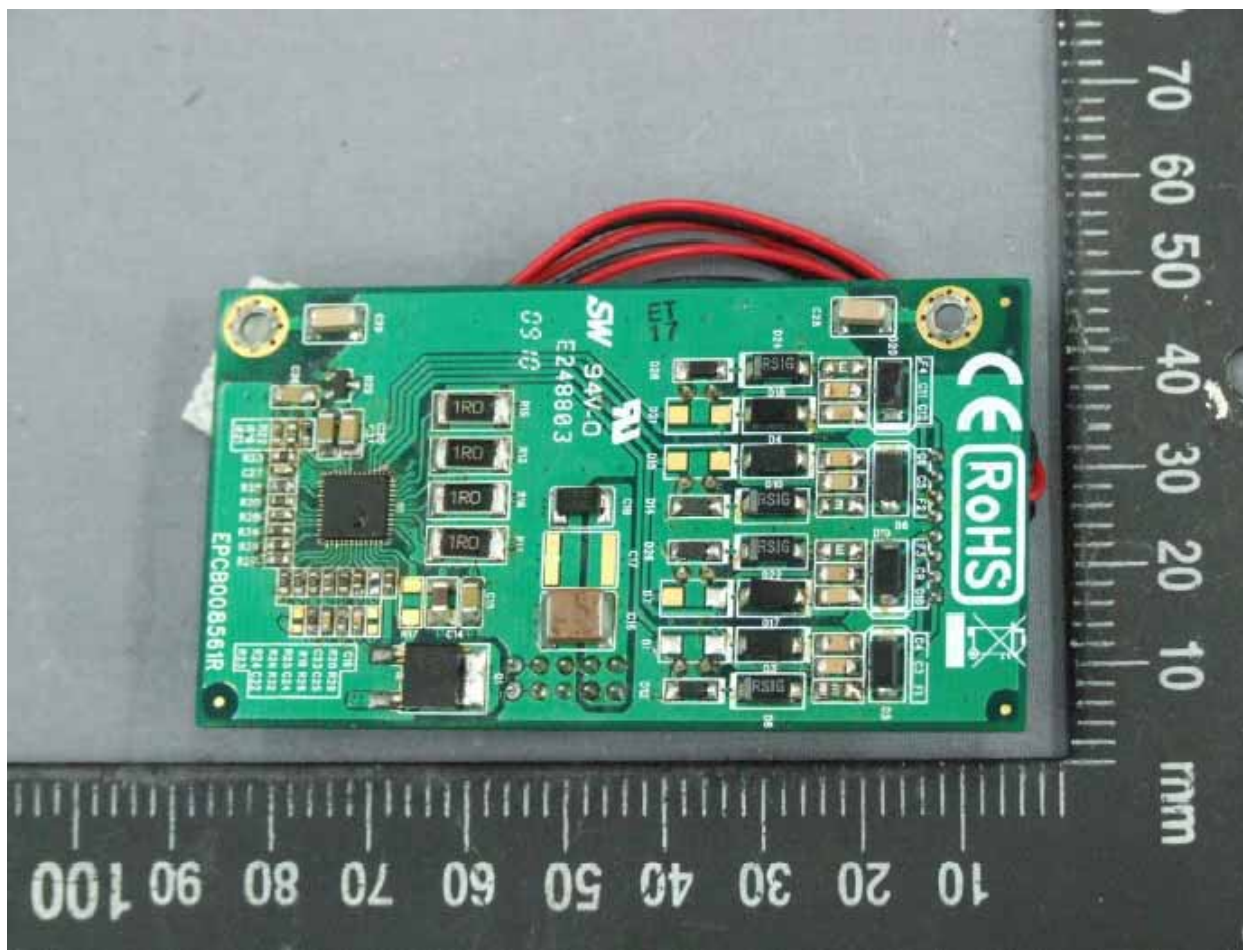
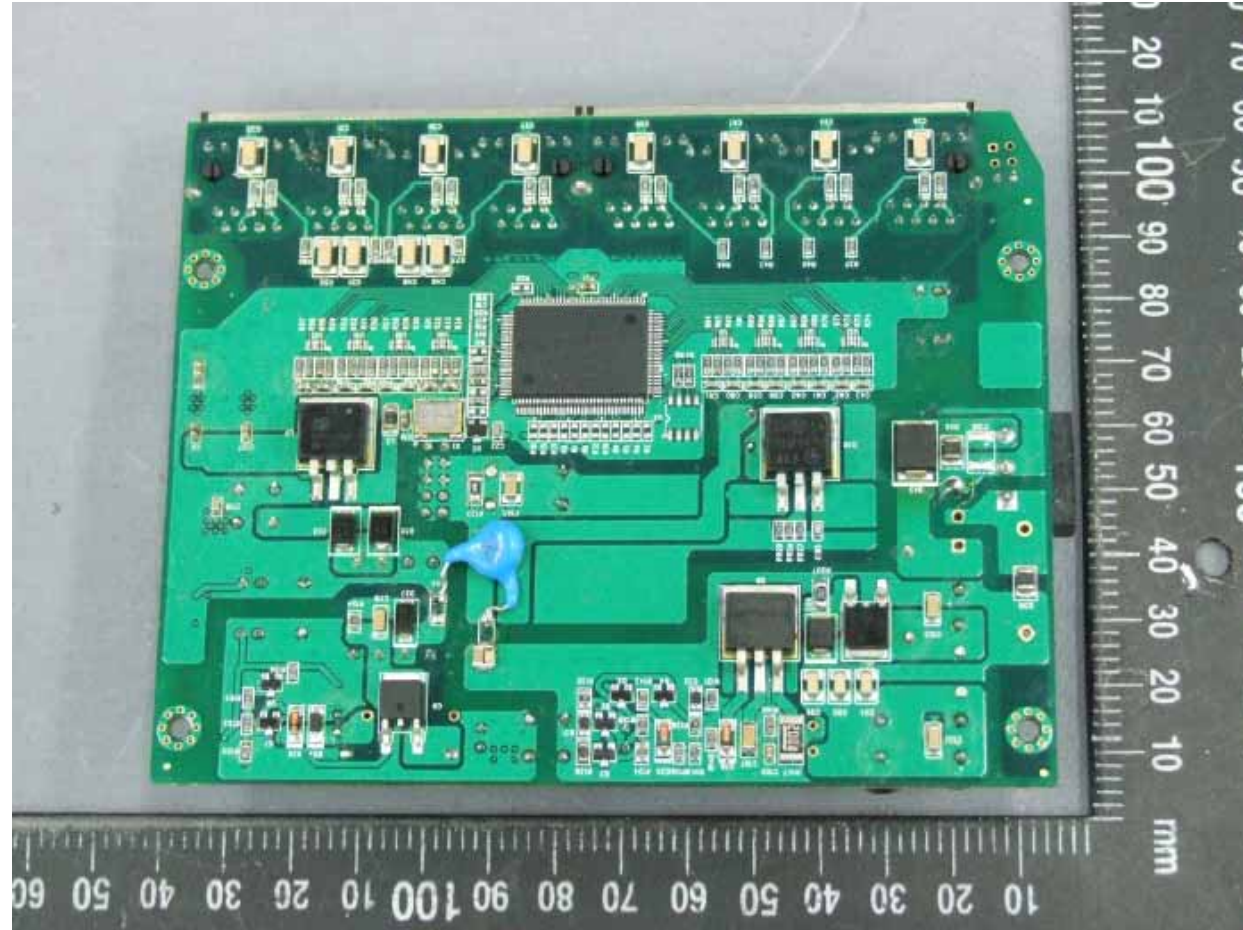
**Freefall** IEC60068-2-32

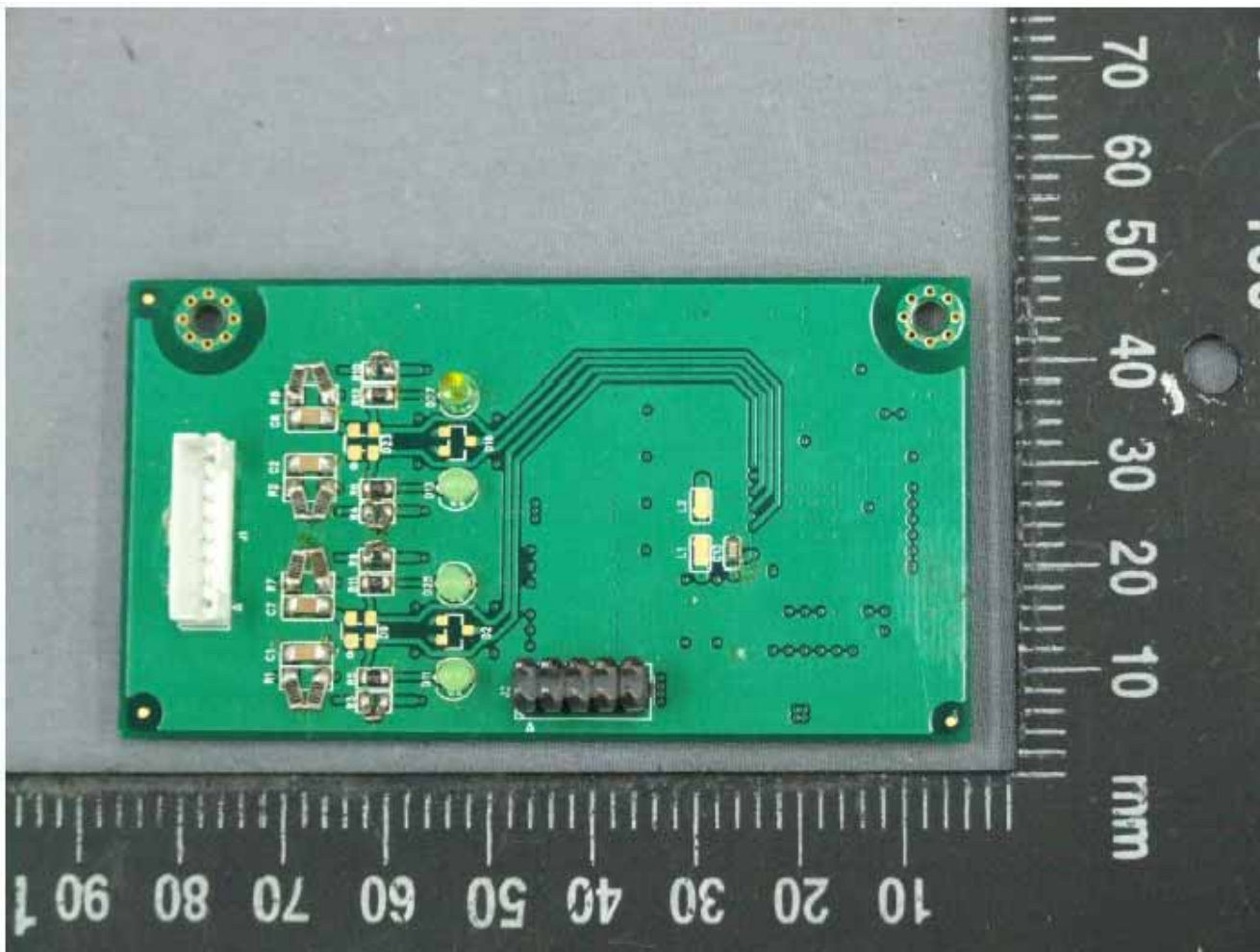
**Vibration** IEC60068-2-6

### Order information

■ SPIDER II 8TX PoE 8450-570RHIR 8 Port Switch with 8 x TX ports there from 4 x PoE ports







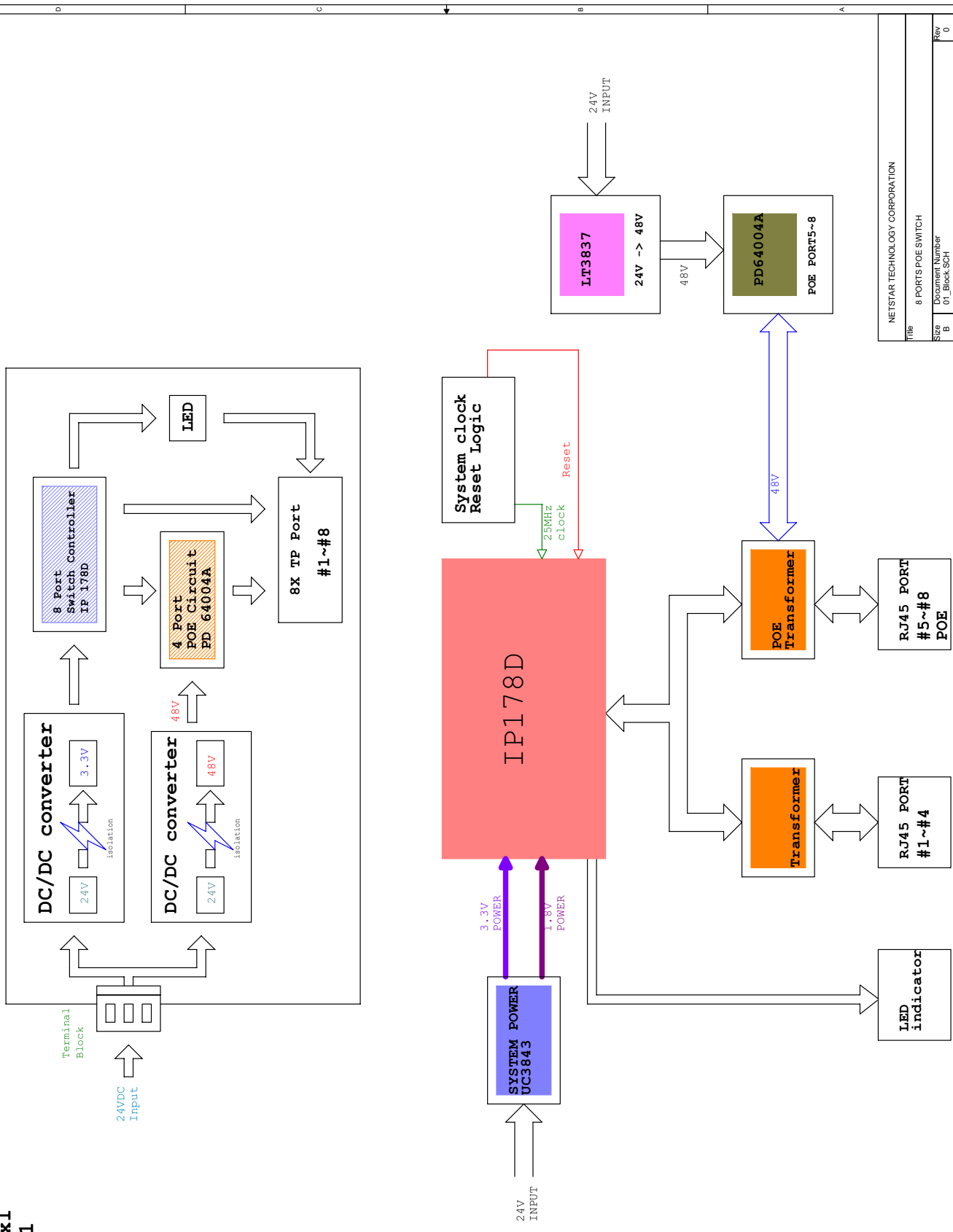


# Block Diagram

## 8 ports 10/100 POE Switch

- IP 178D x1
- PD64004A x1
- LT3837 x1
- UC3843 x1

SPIDER II 8TX/4PoE



NETSTAR TECHNOLOGY CORPORATION			
Title	8 PORTS POE SWITCH		
Size	Document Number	Rev	0
B	01_BlockSCH		
Date:	Thursday, June 18, 2009	Sheet	2 of 3