










## 1 Overview – *The perfect fit where more network throughput is key*

Designed for network intensive applications where rapid data transmission is key, Brainboxes Industrial Gigabit Ethernet Switches boast increased speed, efficiency and performance, making it easier to configure and support high-speed data transfer between devices and/or the central controls.

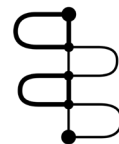
Backwards compatible; the range is available in a range of formats and specifications, can plug into older networks, and can connect to devices that are 10Mbps, Fast Ethernet (100Mbps) or Gigabit, whilst detecting the highest common speed between both ends of the connection.

### 1.1 Functionality and Features

	LIGHT INDUSTRIAL	EMBEDDED	INDUSTRIAL	HARDENED
4 PORTS		 <b>SW-114</b>	 <b>SW-514</b>	
5 PORTS	 <b>SW-015</b>	 <b>SW-115</b>	 <b>SW-515</b>	 <b>SW-715</b>
8 PORTS		 <b>SW-118</b>	 <b>SW-518</b>	 <b>SW-718</b>

Also available: [PoE+ Ethernet Switch Range](#) / [Hero Ethernet 16 Port Switch Range](#) / [Pure Embedded Range](#)

- ✓ Wide voltage input range: +5V to +30VDC - Can be powered by a variety of sources
- ✓ Industrial temperature range - Operates reliably in extreme environmental conditions
- ✓ Redundant dual power inputs - Reduces the risk of power outages, ensuring continuous operation
- ✓ Low latency - Provides quick response times, critical for real-time communication applications
- ✓ Improved network efficiency - Ensures faster data transmission and minimal network congestion

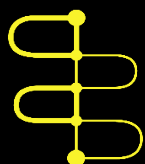


## 1.2 General Information

Model	Power Consumption	Operating Temp	Product Weight	Product Size (L x H x W)	GTIN (barcode)	Package Weight	Package Size
SW-114	3.6 Watts Max: @+5V to +30VDC	-40°C to +80°C -40°F to 176°F	0.06 kg 2.12 oz	95 x 80.8 x 19.9 mm 3.74 x 3.18 x 0.78 in	837324004939	0.14 kg 4.94 oz	160 x 135 x 49mm 6.30 x 5.31 x 1.93in
SW-514	3.6 Watts Max: @+5V to +30VDC	-40°C to +80°C -40°F to 176°F	0.11 kg 3.88 oz	92.6 x 99.0 x 22.6 mm 3.65 x 3.90 x 0.89 in	837324004854	0.19 kg 6.70 oz	160 x 135 x 49mm 6.30 x 5.31 x 1.93in
SW-015	3.6 Watts Max: @+5V to +30VDC	-10°C to +60°C 14°F to 140°F	0.12 kg 4.23 oz	101.0 x 106.9 x 26.9 mm 3.98 x 4.21 x 1.06 in	837324004366	0.20 kg 7.05 oz	160 x 135 x 49mm 6.30 x 5.31 x 1.93in
SW-115	3.6 Watts Max: @+5V to +30VDC	-40°C to +80°C -40°F to 176°F	0.07 kg 2.47 oz	94.3 x 99.0 x 19.9 mm 3.71 x 3.90 x 0.78 in	837324004304	0.15 kg 5.29 oz	160 x 135 x 49mm 6.30 x 5.31 x 1.93in
SW-515	3.6 Watts Max: @+5V to +30VDC	-40°C to +80°C -40°F to 176°F	0.11 kg 3.88 oz	94.5 x 99.0 x 22.6 mm 3.72 x 3.90 x 0.89 in	837324004281	0.21 kg 7.41 oz	160 x 135 x 49mm 6.30 x 5.31 x 1.93in
SW-715	3.6 Watts Max: @+5V to +30VDC	-40°C to +80°C -40°F to 176°F	0.28 kg 9.88 oz	95.1 x 99.3 x 29.3 mm 3.74 x 3.91 x 1.15 in	837324004298	0.36 kg 12.70 oz	160 x 135 x 49mm 6.30 x 5.31 x 1.93in
SW-118	6.5 Watts Max: @+5V to +30VDC	-40°C to +80°C -40°F to 176°F	0.10 kg 3.53 oz	94.8 x 104.2 x 25.5 mm 3.73 x 4.10 x 1.00 in	837324005134	0.18 kg 6.35 oz	160 x 135 x 49mm 6.30 x 5.31 x 1.93in
SW-518	6.5 Watts Max: @+5V to +30VDC	-40°C to +80°C -40°F to 176°F	0.18 kg 6.35 oz	116.2 x 99.0 x 45.3 mm 4.57 x 3.90 x 1.78 in	837324005097	0.26 kg 9.17 oz	160 x 135 x 49mm 6.30 x 5.31 x 1.93in
SW-718	6.5 Watts Max: @+5V to +30VDC	-40°C to +80°C -40°F to 176°F	0.38 kg 13.40 oz	114.9 x 99.3 x 41.3 mm 4.52 x 3.91 x 1.63 in	837324005110	0.46 kg 16.23 oz	160 x 135 x 49mm 6.30 x 5.31 x 1.93in



Complies with  
UL60950-1  
E112324 CSA C22.2 No. 60950-1



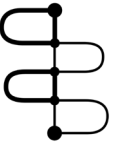
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CAGE  
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NCAGE  
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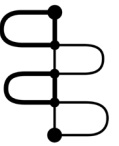
AEO  
UK Authorised Economic Operator





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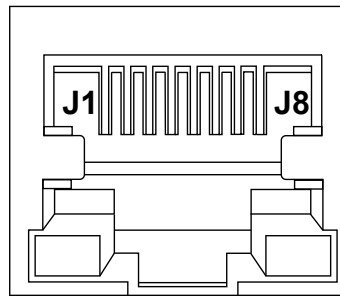
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## 2 Pinouts

### 2.1 Ethernet Ports

PIN	10/100/1000 ETHERNET
1	TxRx A+
2	TxRx A-
3	TxRx B+
4	TxRx C+
5	TxRx C-
6	TxRx B-
7	TxRx D+
8	TxRx D-

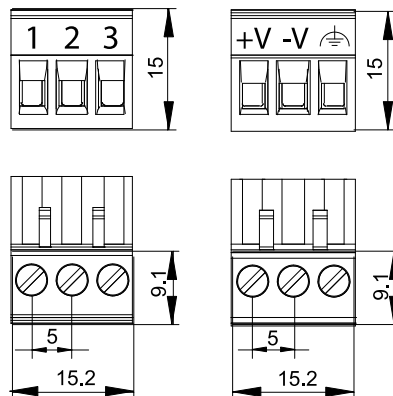


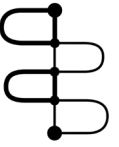
### 2.2 Power Terminal

#### 2.2.1 Light Industrial Only 3 Pin Power

Pin	Function
1	+V
2	-V
3	FUNC EARTH

Screw Terminals	Wire Thickness	
3 Pin 5mm Pitch	Wire Cross Section	1.0mm – 2.5mm
	AWG Value	#28 – #12
	Stripping Length	7mm / 0.27in
	Tightening Torque	0.28Nm – 0.39Nm

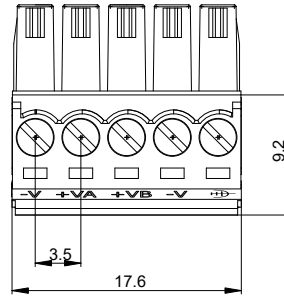
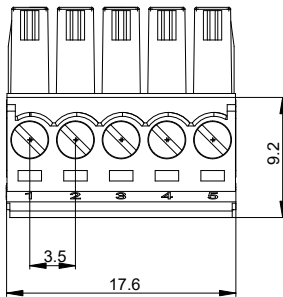
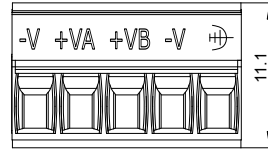
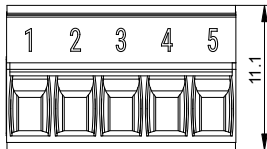


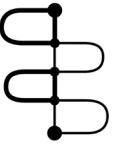


### 2.2.2 5 Pin Power

Pin	Function
1	-V
2	+VA
3	+VB
4	-V
5	FUNC EARTH

Screw Terminals	Wire Thickness	
5 Pin 3.5mm Pitch	Wire Cross Section	0.14mm – 1.5mm
	AWG Value	#28 – #16
	Stripping Length	7mm / 0.27in
	Tightening Torque	0.22Nm – 0.25Nm

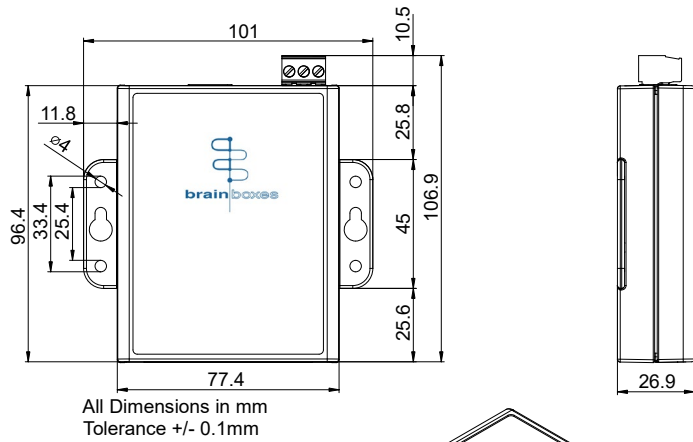




### 3 Enclosures (3D Models Available)

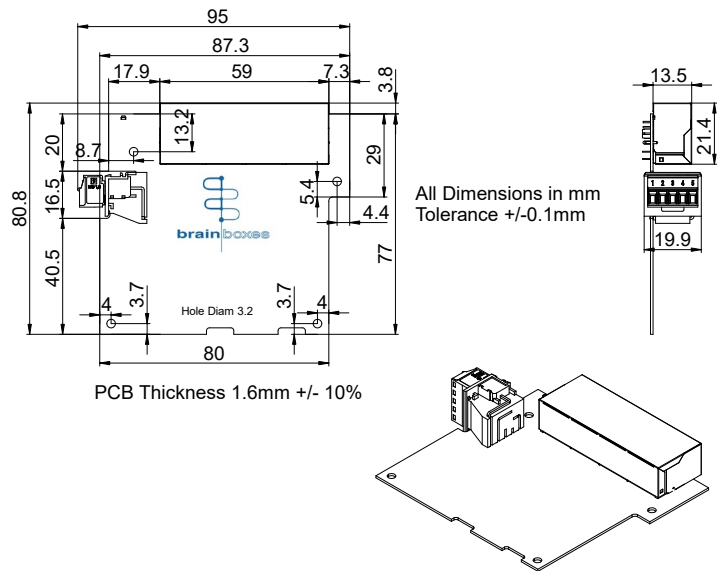
#### 3.1 Light Industrial

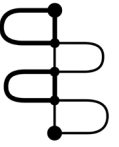
##### 3.1.1 SW-015



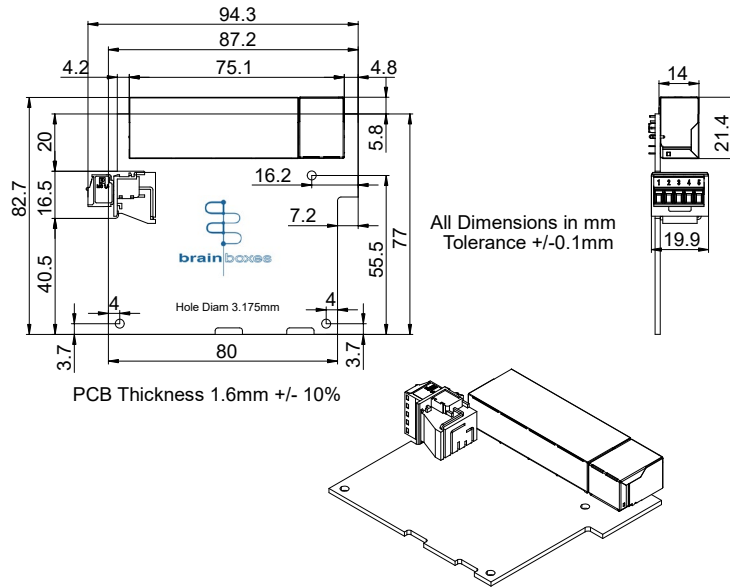
#### 3.2 Embedded

##### 3.2.1 SW-114

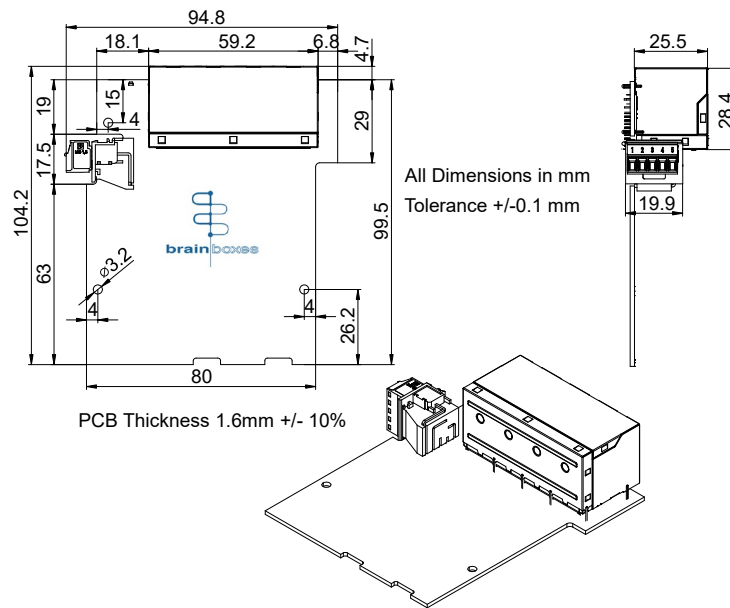


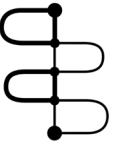


### 3.2.2 SW-115



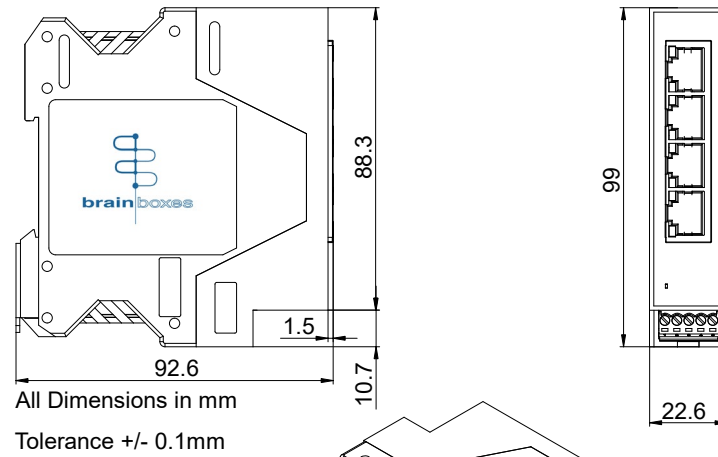
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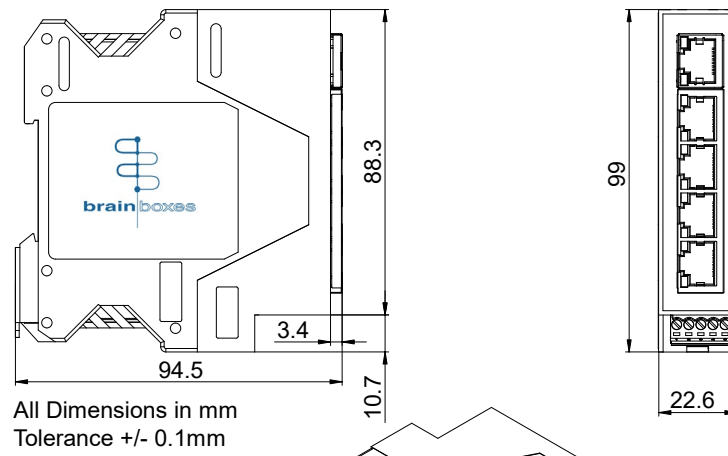


### 3.3 Industrial

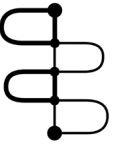
#### 3.3.1 SW-514



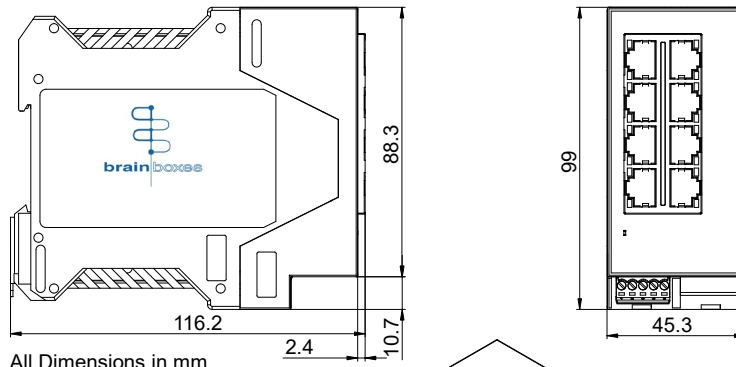
#### 3.3.2 SW-515



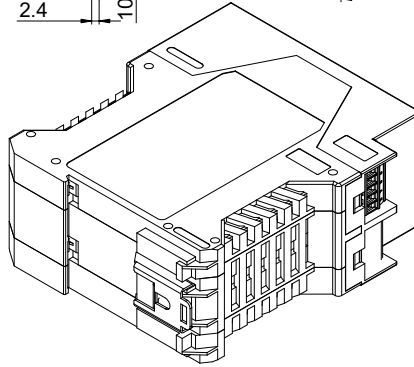




### 3.3.3 SW-518

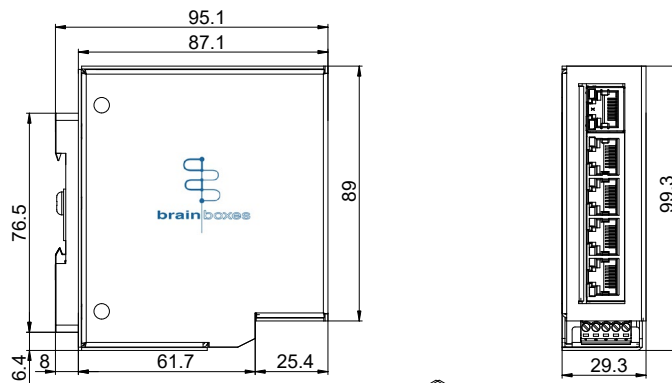


All Dimensions in mm  
Tolerance +/- 0.1mm

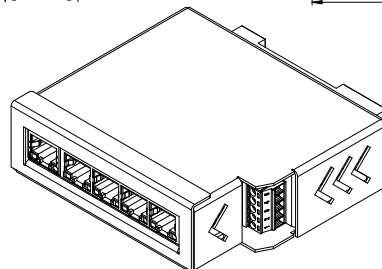


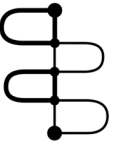
## 3.4 Hardened

### 3.4.1 SW-715

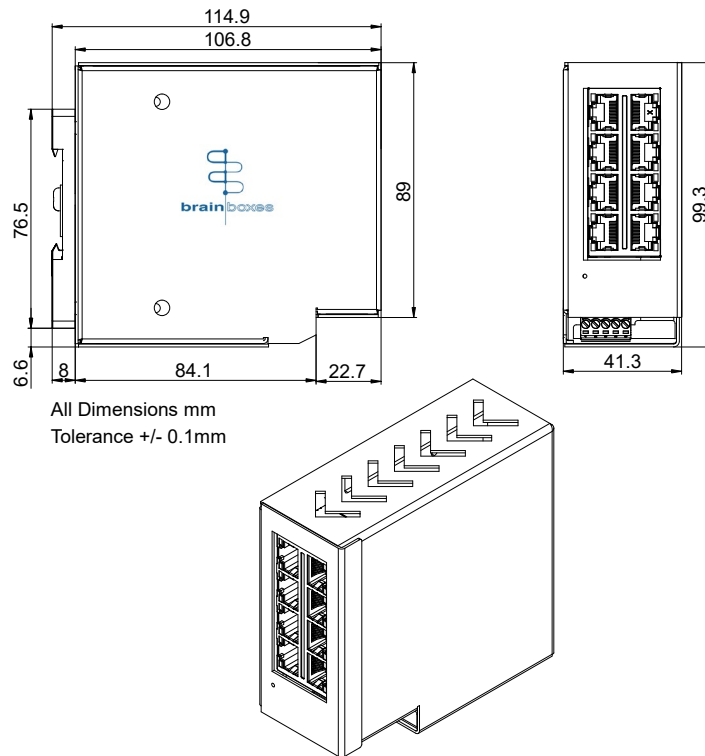


All Dimensions in mm  
Tolerance +/- 0.1mm





### 3.4.2 SW-718



## 4 Data

<b>Gigabit Ethernet</b>	Jumbo Frame support
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### 4.1 Power Supply

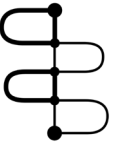
<b>Power Consumption</b>	See Table: 1.2 General Information
<b>Power Supply Input</b>	Unregulated +5V to +30 Volts DC, reverse polarity protection

### 4.2 Environment

<b>Operating Temperature</b>	-40°C to +80°C / -40°F to +176°F
<b>Storage Temperature</b>	-40°C to +85°C / -40°F to +185°F
<b>Ambient Relative Humidity</b>	5 to 95% (non-condensing)

### 4.3 RJ45 LEDs

<b>RJ45 LED</b>	<b>Green</b>	100M Activity
	<b>Yellow</b>	1G Activity



## 4.4 Ethernet

<b>Ethernet Port</b>	Up to 8x 10/100/1000BASE-T RJ45 ports All Ports Work Concurrently
<b>Protection</b>	1500VRMS Magnetic Isolation Between RJ45 (Copper Twisted Pair Only)

## 5 Approvals & Support

### 5.1 Industry Approvals

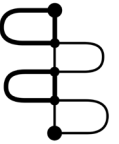
<b>General</b>	WEEE, RoHS, CE, UKCA
<b>UL</b>	METL Complies with UL62368-1
<b>HTS</b>	8517620000
<b>ECCN</b>	5A991.b

### 5.2 Company Approvals

<b>General</b>	ISO9001, ISO14001, Microsoft Certified Gold Partner, AEO (C-TPAT)
<b>CAGE</b>	8QCY6
<b>NCAGE</b>	U0Q96
<b>GSA Contract Number</b>	47QTCA23D009X
<b>Sustainability Rating</b>	Ecovardis Bronze Medal

### 5.3 Support

<b>Warranty</b>	<a href="#">Lifetime warranty registration</a>
<b>Support</b>	Email: <a href="mailto:support@brainboxes.com">support@brainboxes.com</a> Phone: +44(0) 151 220 2500 Brainboxes (USA): +1 (919) 241 8487
<b>OEM option</b>	Available for bulk buy OEM
<b>COO (Country of Origin)</b>	Made in GB, United Kingdom of Great Britain & Northern Ireland
<b>Customisable</b>	Perfect Fit Custom Design policy for volume users



## 6 Ordering Information

Part Number	Description
SW-114	Embedded Industrial 4 Port Gigabit Ethernet Switch <a href="https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-114">https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-114</a>
SW-514	Industrial 4 Port Gigabit Ethernet Switch DIN Rail Mountable <a href="https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-514">https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-514</a>
SW-015	Light Industrial 5 Port Gigabit Ethernet Switch Wall Mountable <a href="https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-015">https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-015</a>
SW-115	Embedded Industrial 5 Port Gigabit Ethernet Switch <a href="https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-115">https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-115</a>
SW-515	Industrial 5 Port Gigabit Ethernet Switch DIN Rail Mountable <a href="https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-515">https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-515</a>
SW-715	Hardened Industrial 5 Port Gigabit Ethernet Switch DIN Rail Mountable <a href="https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-715">https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-715</a>
SW-118	Embedded Industrial 8 Port Gigabit Ethernet Switch <a href="https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-118">https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-118</a>
SW-518	Industrial 8 Port Gigabit Ethernet Switch DIN Rail Mountable <a href="https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-518">https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-518</a>
SW-718	Hardened Industrial 8 Port Gigabit Ethernet Switch DIN Rail Mountable <a href="https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-718">https://www.brainboxes.com/product/industrial-ethernet-switches/gigabit-ethernet/sw-718</a>

## 7 Accessories

Part Number	Max. Power Requirement	Compatible Power Accessory
SW-114, SW-514	3.6 W	<a href="#">PW-245</a> , <a href="#">PW-400</a> , <a href="#">PW-600</a>
SW-015, SW-115, SW-515, SW-715		
SW-118, SW-518, SW-718	6.5W	<a href="#">PW-245</a> , <a href="#">PW-400</a>