

# *Web Application Gateway IGW/935*

## *with eSOM/3517*

# Hardware Reference



## **SSV Embedded Systems**

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# 1 INTRODUCTION

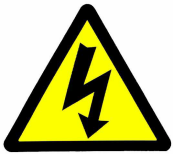
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This document describes the hardware components and the necessary cable connections of the Web Application Gateway IGW/935.

## 1.1 Safety Guidelines

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Please read the following safety guidelines carefully! In case of property or personal damage by not paying attention to this document and/or by incorrect handling, we do not assume liability. In such cases any warranty claim expires.



**ATTENTION:** Observe precautions for handling – electrostatic sensitive device!

- Discharge yourself before you work with the device, e.g. by touching a heater of metal, to avoid damages.
- Stay grounded while working with the device to avoid damage through electrostatic discharge.

## 1.2 Conventions

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Convention	Usage
<b>bold</b>	Important terms
<i>italic</i>	Filenames, user inputs and command lines
monospace	Pathnames, internet addresses and program code

**Table 1: Conventions used in this document**

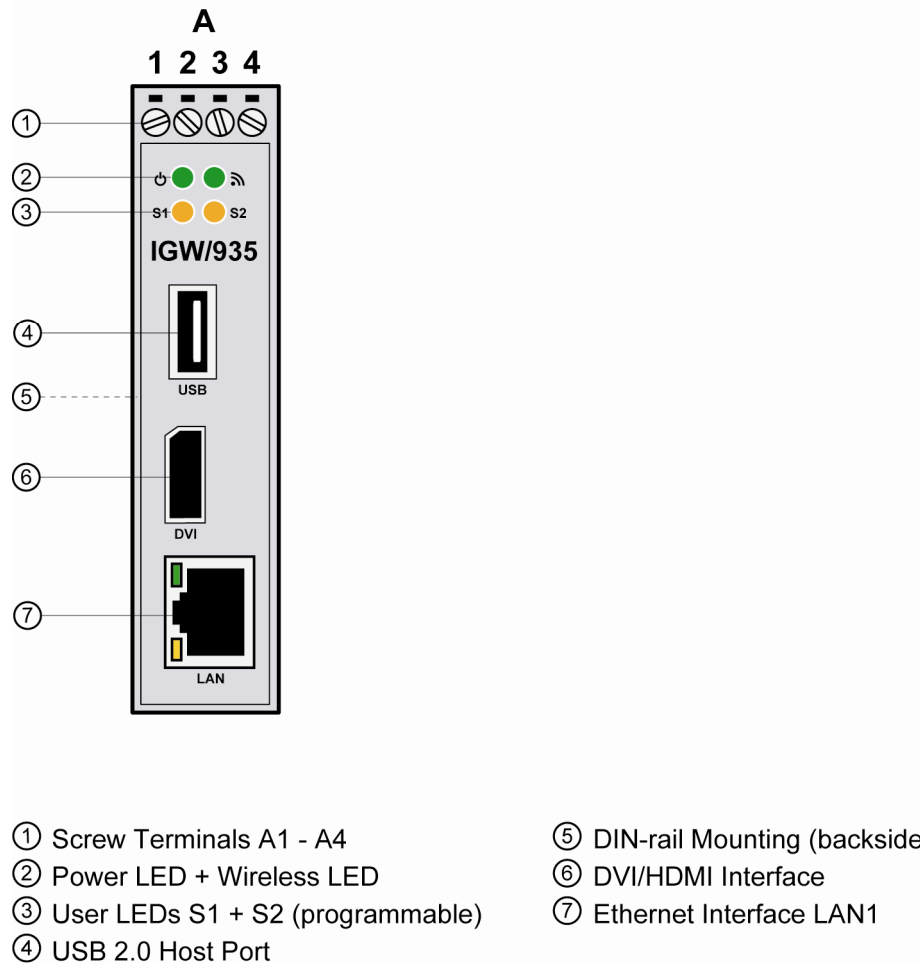
## 1.3 Features and Technical Data

<b>Processor</b>	
<b>Manufacturer / Type</b>	Texas Instruments AM3517 32-bit ARM Cortex-A8 SoC (eSOM/3517)
<b>Clock speed</b>	600 MHz
<b>Memory</b>	
<b>RAM</b>	256 MB SDRAM
<b>Flash</b>	1 GB NAND memory, 8 MB NOR memory
<b>Interfaces</b>	
<b>Ethernet</b>	1x 10/100 Mbps (RJ45)
<b>USB</b>	1x USB 2.0 Host
<b>Serial I/Os</b>	1x RS485 serial port (screw terminal)
<b>HMI</b>	1x DVI/HDMI
<b>Special Functions</b>	
<b>RTC</b>	1x Real Time Clock with internal supercapacitor (backup time ~125 h)
<b>Watchdog</b>	1x Timer watchdog (hardware-based, software-configurable) 1x Power supervisor (hardware-based)
<b>Displays / Control Elements</b>	
<b>LEDs</b>	1x Power 1x Wireless (not used) 1x System status (programmable) 1x VPN status (programmable) 1x LAN LED for Ethernet interface
<b>Electrical Characteristics</b>	
<b>Power supply</b>	12 .. 24 VDC (typ. 24 VDC) from external power supply
<b>Power consumption</b>	< 5 W
<b>Mechanical Characteristics</b>	
<b>Protection class</b>	IP20 industrial case for 35 mm DIN-rail mounting
<b>Mass</b>	< 150 g
<b>Dimensions</b>	112 mm x 100 mm x 22.5 mm
<b>Operating temperature</b>	0 .. 60 °C
<b>Standards and Certifications</b>	
<b>EMC</b>	CE
<b>Environmental standards</b>	RoHS, WEEE

## 1.4 Main Applications

- (Web) Application Gateway
- Industrial Firewall
- Proxy Server
- VPN Gateway / Router
- Linux Device Server

## 2 OVERVIEW



- ① Screw Terminals A1 - A4
- ② Power LED + Wireless LED
- ③ User LEDs S1 + S2 (programmable)
- ④ USB 2.0 Host Port
- ⑤ DIN-rail Mounting (backside)
- ⑥ DVI/HDMI Interface
- ⑦ Ethernet Interface LAN1

**Figure 1: Overview Web Application Gateway IGW/935**

## 3 PINOUTS

### 3.1 Ethernet Interface

The Ethernet interface offers one green LED. It is on when there is a LAN link established and blinks when there is traffic. The yellow LED is not connected.

Pin	Name	Function
1	TX+	10/100 Mbps LAN, TX+ Pin
2	TX-	10/100 Mbps LAN, TX- Pin
3	RX+	10/100 Mbps LAN, RX+ Pin
4	---	Not Connected
5	---	Not Connected
6	RX-	10/100 Mbps LAN, RX- Pin
7	---	Not Connected
8	---	Not Connected

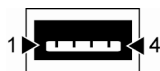
Table 2: Pinout Ethernet interface



### 3.2 USB 2.0 Host Port

Pin	Name	Function
1	VCC5	5 VDC Power Output
2	DATA-	USB Host -
3	DATA+	USB Host +
4	GND	Ground

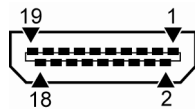
Table 3: Pinout USB host port



### 3.3 DVI/HDMI Interface

Pin	Name	Function
1	DVID5	DVI Data Bit 5
2	GND	Ground
3	DVID4	DVI Data Bit 4
4	DVID3	DVI Data Bit 3
5	GND	Ground
6	DVID2	DVI Data Bit 2
7	DVID1	DVI Data Bit 1
8	GND	Ground
9	DVID0	DVI Data Bit 0
10	DVID7	DVI Data Bit 7
11	GND	Ground
12	DVID6	DVI Data Bit 6
13	---	Reserved. Do not use.
14	---	Reserved. Do not use.
15	DVISCL	DVI Clock Signal
16	DVISDA	DVI Data Signal
17	GND	Ground
18	VCC5	5 VDC Power Output
19	---	Not Connected

Table 4: Pinout DVI/HDMI interface



### 3.4 Screw Terminal

Terminal	Signal
A1	COM1 RS485 Serial Port RX /TX+
A2	COM1 RS485 Serial Port RX /TX-
A3	Vin (11 .. 28 VDC)
A4	Ground

Table 5: Pinout screw terminal

## 4 HELPFUL LITERATURE

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- eSOM/3517 hardware reference
- SSV Web ConfigTool User Manual

## CONTACT

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## DOCUMENT HISTORY

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Revision	Date	Remarks	Name
1.0	2013-03-08	First version	WBU
1.1	2015-08-26	edited chapter 1.3	WBU

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