

# HAZ LOC RADIO SOLUTIONS

## DATASHEET

B00021-05

## EXPLOSION PROOF CELLULAR ROUTER AND ACCESS POINT



The Solexy SWA/SWS R\*\* is a compact, cost-effective and secure industrial 4G/LTE and 5G Red Cap router for installation in harsh environments and hazardous locations. It is used to provide connection through a WiFi hotspot or ethernet port based on the cellular network. External N type or SMA/RP-SMA antenna connectors make it possible to connect desired antennas and easily find the best signal location.

SWA/SWSR\*\* Industrial routers have industry leading security features and widely used for 4G/5G backup, Remote Connection, Out-of-Band Management, Advanced VPN and tunneling services in IoT networking solutions.

With Solexy's SWA and SWS enclosures and their rugged construction combined with Atex, IECEx and North America certificates, Solexy offers a wireless device solution for installation in classified Ex areas (gas, dust and mining) and harsh environments, as zone 1, class 1, div 1.



## FEATURES



### OPERATING FUNCTIONS

WiFi access point (WiFi to LAN or to 2G/3G/4G/5G Redcap)  
WiFi client (LAN to WiFi)



### DATA RATE

5G (RedCap) up to 223 Mbps  
4G (LTE) Cat 4 up to 150 Mbps  
3G up to 42 Mbps and 2G up to 236.8 kbps



### WIRELESS

IEEE 802.11 b/g/n Access Point (AP) and Station (STA)



### SMS TOOLS

SMS status, SMS configuration, send/ read SMS via HTTP POST/GET



### HEAVY DUTY CONSTRUCTION

Explosion proof enclosure made in aluminum (SWA series) or stainless steel (SWS series) weather proof IP66/68



### 5G REDCAP

Unit available with 5G RedCap cellular connectivity

## APPROVALS



### ATEX / IECEx CERTIFICATION



Zone 1, 2, 21 & 22

I M2(M1) Ex db mb [ia Ma]

I Mb (SWS only)

II 2(I) G Ex db mb [ia Ga] IIC T6... T5 Gb

II 2(I) D Ex mb tb [ia Da] IIIC T80°C... T100°C Db

### USA & CANADA CERTIFICATION

Class I, Division 1, Groups B, C and D

Class II, Division 1, Groups E, F and G

Class I, Zone 1, Groups IIB+H2 [For U.S. only]

Zone 21, G rousps IIIC [For U.S. only]

## AVAILABLE ACCESSORIES

### MOUNTING BRACKET

KM-01: mounting kit for 2" pipe

KM-02: universal mounting kit

(see dedicated data sheet)



## CONFIGURATION



|            |            |           |             |          |           |  |
|------------|------------|-----------|-------------|----------|-----------|--|
| <b>SWA</b> | <b>R13</b> | <b>33</b> | <b>- 42</b> | <b>1</b> | <b>X0</b> |  |
| <b>a</b>   | <b>b</b>   | <b>c</b>  | <b>d</b>    | <b>e</b> | <b>f</b>  |  |

### a - Enclosure

SWA Aluminum polyester powder coated

SWS Stainless steel AISI 316 (CF8M) electropolished

### b - Device

R13 Global

R19 North America ( AT&T, Verizon, T-Mobile)

R30 5G RedCap unit Global

R1E Global e-Sim

R\*\* Special code for national telecom certification.

Contact Solexy to obtain the right code

### c - Antenna connection <sup>(1)</sup>

30 n° 3 UXN antenna coupler (N Female) <sup>(2)</sup>

33 n° 2 UXN antenna coupler (N Female) <sup>(3)</sup>

### d - Cable entries

42 n° 4 3/4" npt-f

44 n° 4 M25x1.5

### e - Approvals

X0 Atex/IECEx Gas and Dust certified <sup>(4)</sup>

M0 Atex/IECEx Gas, Dust and mining certified <sup>(4)</sup>

N0 QPS Cl. I Div. 1 and North American Zones listed

### f - Extension

-29 only cellular/no WiFi (available only for SW\*R\*\*33...)

Notes: (1) Antenna not included  
(2) Layout 4  
(3) Layout 3 (consult dimensional drawings for specific layout)  
(4) Zone 1, 2, 21 & 22



| GENERAL             |                                                                                                                                                                                                                      |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power supply        | 9 - 30 VDC, Passive PoE                                                                                                                                                                                              |
| Power consumption   | 5W                                                                                                                                                                                                                   |
| Ambient temp. range | <b>USA &amp; CANADA ATEX &amp; IECEX</b><br>SWA series -40°C (-40°F) +75°C (+167°F)<br>SWS series -40°C (-40°F) +75°C (+167°F)<br>SWA series -40°C (-40°F) +71°C (+159°F)<br>SWS series -40°C (-40°F) +66°C (+150°F) |
| Weight              | SWARxx33 & SWARxx45: 2,6 kg - SWARxx30 & SWARxx54: 2,9 kg (without antenna)<br>SWSRxx33 & SWSRxx45: 5,3 kg - SWSRxx30 & SWSRxx54: 5,6 kg (without antenna)                                                           |

| HARDWARE           |                                                                                                                                                             |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU                | Atheros Hornet, MIPS 24Kc, 580 MHz                                                                                                                          |
| Memory             | RAM 128MB, DDR2, Flash 16MB SPI                                                                                                                             |
| I/O                | 1 x Digital Input, 1 x Digital Output                                                                                                                       |
| Ethernet           | 2 x RJ45 ports, 10/100 Mbps                                                                                                                                 |
| Network connection | 4G Cat 4 up to 150 Mbps 3G Up to 42 Mbps 2G Up to 236.8 kbps                                                                                                |
| Supported bands*   | 4G (LTE-FDD) B1, B2, B3, B4, B5, B7, B8, B12, B13, B18, B19, B20, B26, B28 4G (LTE-TDD) B38, B39, B40, B41 3G B1, B2, B4, B5, B6, B8, B19 2G B2, B3, B5, B8 |
| WiFi               | 802.11 b/g/n - Up to 50 simultaneous connections                                                                                                            |

| SOFTWARE                  |                                                                                                                                                                           |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating system          | RutOS (OpenWrt based Linux OS)                                                                                                                                            |
| Mobile features           | Auto APN, Band lock                                                                                                                                                       |
| Network protocols         | TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSLv3, TLS 1.3, ARP, PPP, PPPoE, DHCP, Telnet                                                               |
| Network                   | Failover (Network backup), VLAN, QoS, Load Balancing                                                                                                                      |
| Security                  | DDOS prevention (SYN flood protection, SSH attack prevention, HTTP/HTTPS attack prevention), Port scan prevention (SYN-FIN, SYN-RST, X-mas, NULL flags, FIN scan attacksw |
| VPN and tunneling         | OpenVPN, IPsec, GRE, PPTP, L2TP, Stunnel, DMVPN, SSTP                                                                                                                     |
| Monitoring and management | WEB UI, CLI, SSH, SMS, TR-069, SNMP, JSON-RPC, MQTT, RMS                                                                                                                  |
| Connection monitoring     | Ping Reboot, Wget reboot, Periodic Reboot, LCP and ICMP for link inspection                                                                                               |
| Cloud solution            | RMS, FOTA, Telenor, Azure IoT Hub, Cloud of Things, Cumulocity, ThingWorx                                                                                                 |
| SMS features              | SMS status, SMS configuration, Send/Read SMS via HTTP POST/GET, EMAIL to SMS, SMS to Email, SMS to HTTP, SMS to SMS, scheduled SMS, SMS autoreply, SMPP                   |
| Services                  | DDNS, VRRP, Wake On Lan (WOL), WEB filter, UPNP, Traffic Logging                                                                                                          |





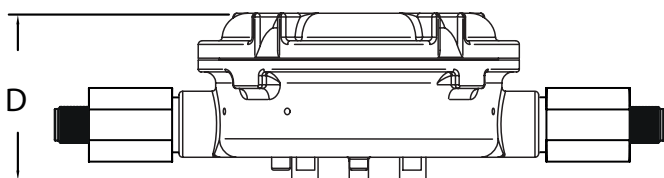
| GENERAL             |                                                                                                                                                                                                                      |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power supply        | 9 - 30 VDC, Passive PoE                                                                                                                                                                                              |
| Power consumption   | Idle < 1.5W, Max 3W                                                                                                                                                                                                  |
| Ambient temp. range | <b>USA &amp; CANADA ATEX &amp; IECEx</b><br>SWA series -40°C (-40°F) +75°C (+167°F)<br>SWS series -40°C (-40°F) +75°C (+167°F)<br>SWA series -40°C (-40°F) +71°C (+159°F)<br>SWS series -40°C (-40°F) +66°C (+150°F) |
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| HARDWARE           |                                                                                                                                                                                                                                                                                                  |
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| CPU                | Atheros Hornet, MIPS 24Kc, 580 MHz                                                                                                                                                                                                                                                               |
| Memory             | RAM 128MB, DDR2, NOR Flash 256MB                                                                                                                                                                                                                                                                 |
| I/O                | 1 x Digital Input, 1 x Digital Output                                                                                                                                                                                                                                                            |
| Ethernet           | 2 x RJ45 ports, 10/100 Mbps                                                                                                                                                                                                                                                                      |
| Network connection | 5G RedCap up to 223 Mbps 4G Up to 150 Mbps                                                                                                                                                                                                                                                       |
| Supported bands*   | 5G NR SA n1, n2, n3, n5, n7, n8, n12, n13, n14, n18, n20, n25, n26, n28, n20, n40, n41, n48, * in function of device installed 4G (LTE-FDD) B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B30, B66, B70, B71 4G (LTE-TDD) B34, B38, B39, B40, B41, B42, B43, B48 |
| WiFi               | 802.11 b/g/n - Up to 50 simultaneous connections                                                                                                                                                                                                                                                 |

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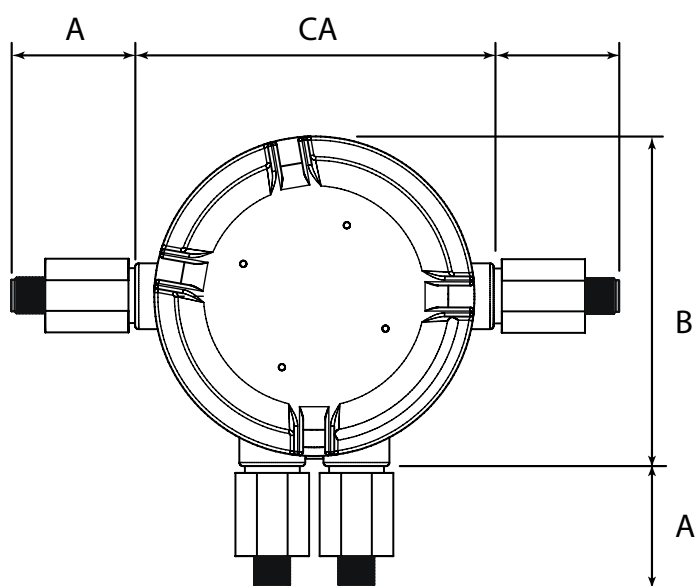
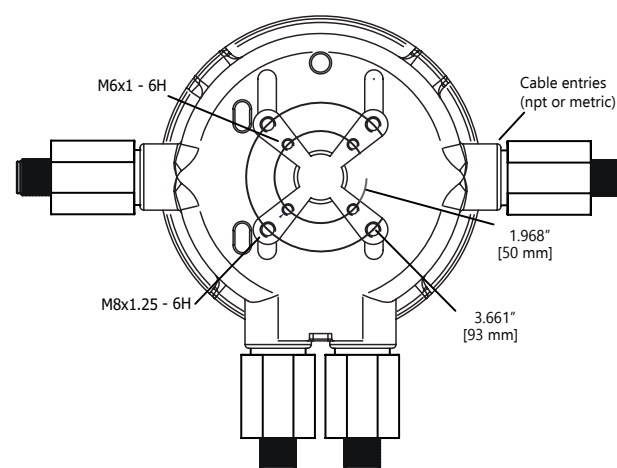
Data contained in this specification are subject to change without notice





In order to determine overall dimension of a specific unit pls follow instructions:

- 1) Select the specific layout (you can find it in the product nomenclature)
- 2) Consider only the antenna coupler dimension (A) that you find in the layout

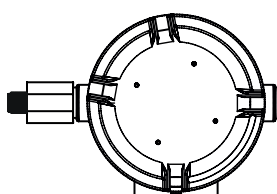


| MODEL      | A (*)                                                       | B                | C              | D               |
|------------|-------------------------------------------------------------|------------------|----------------|-----------------|
| SWA<br>HWA | 58,5 mm [2.30"] metric coupler<br>70 mm [2.76"] npt coupler | 179,8 mm [7.08"] | 180 mm [7.09"] | 89,5 mm [3.52"] |
| SWS<br>HWS | 58,5 mm [2.30"] metric coupler<br>70 mm [2.76"] npt coupler | 180,5 mm [7.11"] | 196 mm [7.72"] | 90 mm [3.54"]   |

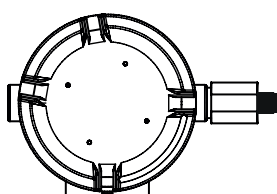
(\*) max dimension related to RX or SX coupler with N female antenna connector

## TYPICAL LAYOUTS \*\*

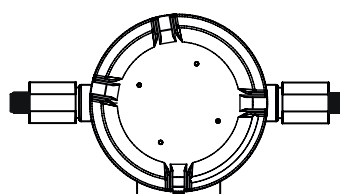
Layout 1



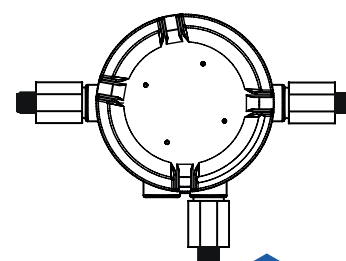
Layout 2



Layout 3



Layout 4



(\*\*) layout type specified in device datasheet





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