












# Connected industry

WiFi communication solutions  
for industrial applications






**ACKSYS**  
COMMUNICATIONS & SYSTEMS





Access points, clients, repeaters and routers										
										
Typical applications	<ul style="list-style-type: none"><li>Harsh environments</li><li>Railway</li></ul>			<ul style="list-style-type: none"><li>Mobile applications (bus, heavy vehicle...)</li><li>Outdoor</li></ul>	<ul style="list-style-type: none"><li>Explosive environment, zone 1 &amp; 21</li></ul>	<ul style="list-style-type: none"><li>Critical industrial automation</li></ul>	<ul style="list-style-type: none"><li>Machine manufacturers</li><li>Automation</li><li>Mobile applications (AGVs...)</li></ul>	<ul style="list-style-type: none"><li>Equipment manufacturers</li></ul>		<ul style="list-style-type: none"><li>Schneider Electric M340 &amp; M580 PLCs</li></ul>
WiFi interface	<ul style="list-style-type: none"><li>3 radios</li><li>802.11 a/b/g/n/ac</li><li>2.4/5 GHz</li><li>3 x 1.3 Gbps</li></ul>	<ul style="list-style-type: none"><li>1 or 2 radios</li><li>802.11 a/b/g/n/ac</li><li>2.4/5 GHz</li><li>1 or 2 x 1.3 Gbps</li></ul>	<ul style="list-style-type: none"><li>1 radio</li><li>802.11 a/b/g/n</li><li>2.4/5 GHz</li><li>300 Mbps</li></ul>	<ul style="list-style-type: none"><li>1 radio</li><li>802.11 a/b/g/n</li><li>2.4/5 GHz</li><li>450 Mbps</li></ul>	<ul style="list-style-type: none"><li>1 radio</li><li>802.11 a/b/g/n/ac</li><li>2.4/5 GHz*</li><li>1.3 Gbps</li></ul>	<ul style="list-style-type: none"><li>1 radio (or 2 radios)</li><li>802.11n (+ 802.11ac)</li><li>2.4/5 GHz</li><li>300 Mbps (+ 1.3 Gbps)</li></ul>	<ul style="list-style-type: none"><li>1 radio</li><li>802.11 a/b/g/n</li><li>2.4/5 GHz</li><li>300 Mbps</li></ul>	<ul style="list-style-type: none"><li>2 radios</li><li>802.11n + 802.11ac</li><li>2.4/5 GHz</li><li>300 Mbps + 1.3 Gbps</li></ul>	<ul style="list-style-type: none"><li>1 radio</li><li>802.11 a/b/g/n</li><li>2.4/5 GHz</li><li>300 Mbps</li></ul>	<ul style="list-style-type: none"><li>1 radio</li><li>802.11 a/b/g</li><li>2.4/5 GHz</li><li>54 Mbps</li></ul>
Option : cellular interface + GPS**	N/A	<ul style="list-style-type: none"><li>Dual SIM LTE category 4</li><li>3GPP E-UTRA release 11</li><li>150 Mbps ↓ &amp; 50 Mbps ↑</li><li>LTE, UMTS/HSPA+, GSM/GPRS/EDGE (worldwide)</li><li>Multi-constellation GNSS</li></ul>	N/A	N/A	N/A	<ul style="list-style-type: none"><li>Dual SIM LTE category 4</li><li>3GPP E-UTRA release 11</li><li>150 Mbps ↓ &amp; 50 Mbps ↑</li><li>LTE, UMTS/HSPA+, GSM/GPRS/EDGE (worldwide)</li><li>Multi-constellation GNSS</li></ul>	N/A	N/A	N/A	N/A
Security	<ul style="list-style-type: none"><li>SSID broadcast enable/disable</li><li>Filtering, Firewall, VPN pass-through</li><li>DoS</li><li>https</li><li>802.11i, WiFi Protected Access 2 (WPA2) &amp; WPA</li><li>802.1X authentication (EAP, EAP-PEAP, EAP-TLS, EAP-TTLS, LEAP)</li><li>Layer 2 tunneling protocol (L2TP)</li><li>MAC address filtering</li><li>SSID broadcast enable/disable</li><li>Filtering</li><li>WEP, WPA /WPA2-Personal</li></ul>									
Mesh 802.11s	✓*	✓*	✓	✓	✓	✓*	✓	Consult us	✓	N/A
Fast roaming	N/A	< 30 ms	< 30 ms	< 30 ms	< 30 ms	< 30 ms	< 30 ms	< 30 ms	< 30 ms	< 50 ms
Ethernet ports Connectors	<ul style="list-style-type: none"><li>2 x 10/100/1000 (M12)</li><li>2 x fiber (SFP cage)</li><li>PoE+ PSE injector*</li></ul>	<ul style="list-style-type: none"><li>2 x 10/100/1000</li><li>M12</li></ul>	<ul style="list-style-type: none"><li>2 x 10/100</li><li>M12</li></ul>	<ul style="list-style-type: none"><li>1 x 10/100/1000</li><li>RJ45 (or custom)</li></ul>	<ul style="list-style-type: none"><li>1 x 10/100/1000</li><li>M20 cable gland</li></ul>	<ul style="list-style-type: none"><li>1 x 10/100/1000</li><li>RJ45</li></ul>	<ul style="list-style-type: none"><li>1 x 10/100/1000</li><li>RJ45</li></ul>	<ul style="list-style-type: none"><li>1 x 10/100/1000</li><li>RJ45 or HE10 (TTL)</li></ul>	<ul style="list-style-type: none"><li>1 x 10/100</li><li>RJ45 or HE10 (TTL)</li></ul>	<ul style="list-style-type: none"><li>3 x 10/100</li><li>RJ45</li></ul>
Dimensions (mm) Format Mounting	<ul style="list-style-type: none"><li>305 x 200 x 75</li><li>Rugged housing</li><li>Fixing points</li></ul>	<ul style="list-style-type: none"><li>80 x 175 x 57</li><li>Rugged housing</li><li>Fixing plate</li></ul>	<ul style="list-style-type: none"><li>80 x 175 x 57</li><li>Rugged housing</li><li>Fixing plate</li></ul>	<ul style="list-style-type: none"><li>185 x 64 x 35</li><li>Rugged housing</li><li>Universal</li></ul>	<ul style="list-style-type: none"><li>300 x 200 x 220</li><li>ATEX aluminum enclosure</li></ul>	<ul style="list-style-type: none"><li>141.2 x 99 x 35</li><li>Compact</li><li>Universal / DIN rail</li></ul>	<ul style="list-style-type: none"><li>127 x 78 x 24</li><li>Compact</li><li>Universal / DIN rail</li></ul>	<ul style="list-style-type: none"><li>89 x 51 x 28</li><li>Mezzanine card</li></ul>	<ul style="list-style-type: none"><li>89 x 51 x 28</li><li>Mezzanine card</li></ul>	<ul style="list-style-type: none"><li>Module for M340 &amp; M580 racks (Schneider Electric)</li></ul>
Power supply	<ul style="list-style-type: none"><li>110 to 230 VAC (50/60 Hz)</li><li>Isolated</li></ul>	<ul style="list-style-type: none"><li>Redundant</li><li>24 to 110 VDC*</li><li>Isolated*</li><li>PoE+*</li></ul>	<ul style="list-style-type: none"><li>Redundant</li><li>9 to 48 VDC</li><li>PoE</li></ul>	<ul style="list-style-type: none"><li>9 to 36 VDC</li></ul>	<ul style="list-style-type: none"><li>230 VAC or 24 VDC</li></ul>	<ul style="list-style-type: none"><li>9 to 48 VDC</li></ul>	<ul style="list-style-type: none"><li>9 to 48 VDC</li><li>PoE</li></ul>	<ul style="list-style-type: none"><li>5 VDC</li></ul>	<ul style="list-style-type: none"><li>5 VDC</li></ul>	<ul style="list-style-type: none"><li>Backplane powered (Hot Plug)</li></ul>
Inputs / Outputs	1 alarm output	1 alarm output	N/A	N/A	N/A	2 inputs & 2 outputs (isolated)	N/A	N/A	N/A	N/A
Backup key	✓	✓	N/A	N/A	N/A	N/A	N/A	✓	N/A	N/A
Environment: Operating temperature IP rating	<ul style="list-style-type: none"><li>-25°C to +70°C</li><li>Option -40°C to +85°C</li><li>IP66</li></ul>	<ul style="list-style-type: none"><li>-25°C to +70°C</li><li>Option -40°C to +85°C</li><li>IP66</li></ul>	<ul style="list-style-type: none"><li>-20°C to +60°C</li><li>IP66</li></ul>	<ul style="list-style-type: none"><li>-25°C to +70°C</li><li>IP66</li></ul>	<ul style="list-style-type: none"><li>-20°C to +50°C class T5</li><li>IP66</li></ul>	<ul style="list-style-type: none"><li>-20°C to +60°C</li><li>IP30</li></ul>	<ul style="list-style-type: none"><li>-20°C to +60°C</li><li>IP30</li></ul>	<ul style="list-style-type: none"><li>-40°C to +75°C</li></ul>	<ul style="list-style-type: none"><li>-20°C to +60°C</li></ul>	<ul style="list-style-type: none"><li>-25°C to +70°C</li><li>IP20</li></ul>
Specific standards	<ul style="list-style-type: none"><li>EN50121-4 (EMC)</li><li>EN60068-2 (climatic tests)</li></ul>	EN50155 [IEC60571] (railway) <ul style="list-style-type: none"><li>EN50121-3-2, EN50121-4 (EMC)</li><li>EN61373 (shocks &amp; vibrations)</li><li>EN60068-2 (climatic tests)</li><li>EN45545-2 (smoke-fire rolling stock)</li></ul>		<ul style="list-style-type: none"><li>E-marked (vehicles)</li><li>EN501373 (shocks &amp; vibrations)</li><li>EN60068-2 (climatic tests)</li></ul>	<ul style="list-style-type: none"><li>II 2G Ex d IIB+H2 T3-T6 Gb</li><li>II 2D Ex tb IIIC T85°C-T150°C</li><li>Intrinsically safe RF outputs</li></ul>	<ul style="list-style-type: none"><li>E-marked (vehicles)</li><li>EN61373 (shocks &amp; vibrations)</li></ul>	<ul style="list-style-type: none"><li>EN61373 (shocks &amp; vibrations)</li></ul>			

\* Depending on the model

\*\* Replacing the 2nd radio

Serial to WiFi gateways		
		
Typical applications	<ul style="list-style-type: none"><li>Mobile applications (bus, heavy vehicle...)</li><li>Outdoor</li></ul>	<ul style="list-style-type: none"><li>Industrial automation</li></ul>
WiFi interface	<ul style="list-style-type: none"><li>1 radio</li><li>802.11 a/b/g</li><li>2.4/5 GHz</li><li>54 Mbps</li></ul>	<ul style="list-style-type: none"><li>1 radio</li><li>802.11 a/b/g</li><li>2.4/5 GHz</li><li>54 Mbps</li></ul>
Security	<ul style="list-style-type: none"><li>SSID broadcast enable/disable</li><li>Filtering</li><li>WEP, WPA /WPA2-Personal</li></ul>	
Fast roaming	< 50 ms	< 50 ms
Serial interface	<ul style="list-style-type: none"><li>RS232, RS422 or RS485</li><li>SubD9 (or custom)</li><li>250 Kb/s</li></ul>	<ul style="list-style-type: none"><li>RS232, RS422 or RS485</li><li>SubD9 or terminal block</li><li>250 Kb/s</li></ul>
Dimensions (mm) Format Mounting	<ul style="list-style-type: none"><li>115 x 64 x 35</li><li>Rugged housing</li><li>Universal</li></ul>	<ul style="list-style-type: none"><li>110 x 50 x 120</li><li>DIN rail</li></ul>
Power supply	<ul style="list-style-type: none"><li>9 to 50 VDC</li></ul>	<ul style="list-style-type: none"><li>Redundant</li><li>9 to 36 VDC</li></ul>
Inputs / Outputs	N/A	1 alarm output
Backup key	N/A	✓
Environment: Operating temperature IP rating	<ul style="list-style-type: none"><li>-25°C to +70°C</li><li>IP65</li></ul>	<ul style="list-style-type: none"><li>-25°C to +70°C</li><li>IP30</li></ul>
Specific standards	<ul style="list-style-type: none"><li>E-marked (vehicles)</li><li>EN61373 (shocks &amp; vibrations)</li><li>EN60068-2 (climatic tests)</li></ul>	



	Ethernet switches + WiFi		Point-to-point
	 <b>WLg-SWITCH</b>	 <b>WLg-4LAN</b>	 <b>AirPack</b>
<b>Typical applications</b>	<ul style="list-style-type: none"> <li>• Mobile applications (bus...)</li> <li>• Industrial automation</li> </ul>	<ul style="list-style-type: none"> <li>• Machine manufacturers</li> <li>• Automation</li> <li>• Mobile applications (AGVs...)</li> </ul>	<ul style="list-style-type: none"> <li>• Industrial point-to-point communications</li> </ul>
<b>WiFi interface</b>	<ul style="list-style-type: none"> <li>• 1 radio</li> <li>• 802.11 a/b/g</li> <li>• 2.4/5 GHz</li> <li>• 54 Mbps</li> </ul>	<ul style="list-style-type: none"> <li>• 1 radio</li> <li>• 802.11 a/b/g</li> <li>• 2.4/5 GHz</li> <li>• 54 Mbps</li> </ul>	<ul style="list-style-type: none"> <li>• 1 radio per product</li> <li>• 802.11 a/b/g/n</li> <li>• 5 GHz</li> <li>• 300 Mbps</li> </ul>
<b>Option : cellular interface + GPS**</b>	N/A	N/A	N/A
<b>Security</b>	<ul style="list-style-type: none"> <li>• SSID broadcast enable/disable</li> <li>• Filtering</li> <li>• WEP, WPA /WPA2-Personal</li> </ul>		<ul style="list-style-type: none"> <li>• Filtering, Firewall, VPN pass-through</li> <li>• Dos</li> <li>• https</li> <li>• 802.11i (WPA2)/WPA, 802.1x, AES/TKIP</li> </ul>
<b>Mesh 802.11s</b>	N/A	N/A	N/A
<b>Fast roaming</b>	< 50 ms	< 50 ms	N/A
<b>Ethernet ports Connectors</b>	<ul style="list-style-type: none"> <li>• 8 x 10/100</li> <li>• RJ45</li> <li>• PoE PSE injector</li> </ul>	<ul style="list-style-type: none"> <li>• 4 x 10/100</li> <li>• RJ45</li> </ul>	<ul style="list-style-type: none"> <li>• 1 x 10/100/1000 per product</li> <li>• RJ45</li> </ul>
<b>Dimensions (mm) Format Mounting</b>	<ul style="list-style-type: none"> <li>• 110 x 50 x 151</li> <li>• DIN rail</li> </ul>	<ul style="list-style-type: none"> <li>• 91 x 122 x 24</li> <li>• Compact</li> <li>• Universal / DIN rail</li> </ul>	<ul style="list-style-type: none"> <li>• 127 x 78 x 24</li> <li>• Compact housings</li> <li>• Universal / DIN rail</li> </ul>
<b>Power supply</b>	<ul style="list-style-type: none"> <li>• Redundant</li> <li>• 9 to 75 VDC</li> </ul>	<ul style="list-style-type: none"> <li>• 9 to 48 VDC</li> </ul>	<ul style="list-style-type: none"> <li>• 9 to 48 VDC</li> <li>• PoE</li> </ul>
<b>Inputs / Outputs</b>	1 alarm output	N/A	N/A
<b>Backup key</b>	✓	N/A	N/A
<b>Environment:</b> Operating temperature IP rating	<ul style="list-style-type: none"> <li>• -25°C to +70°C</li> <li>• IP30</li> </ul>	<ul style="list-style-type: none"> <li>• -20°C to +70°C</li> <li>• IP30</li> </ul>	<ul style="list-style-type: none"> <li>• -20°C to +60°C</li> <li>• IP30</li> </ul>
<b>Specific standards</b>	<ul style="list-style-type: none"> <li>• E-marked (vehicles)</li> <li>• EN61373 (shocks &amp; vibrations)</li> </ul>	<ul style="list-style-type: none"> <li>• EN61373 (shocks &amp; vibrations)</li> </ul>	



# Why choose ACKSYS ?

## > RELIABILITY AND ROBUSTNESS

ACKSYS' products are designed to be used in harsh environment, this is why their manufacturing components are carefully selected, controlled and submitted to endurance tests. They come with a 5-year or lifetime warranty.

## > LONG LASTING PRODUCTS

In order to provide long lasting solutions to its customers, ACKSYS works closely with its suppliers to foresee any eventual obsolete products and thus back-up its product line to avoid any stock rupture. ACKSYS also pay attention to develop products compatible with existing solutions.

## > RELEVANT SOLUTIONS

ACKSYS develops tailored solutions designed to fit its customers' specific business needs or unique application environment and is also able to adapt its products upon request. All ACKSYS' products are compliant with the standards in the various targeted markets.

## > CUSTOMER SERVICE COMMITMENT

ACKSYS has developed a solid pre-sales and after-sales process to ensure that customers receive the highest level of support at every stage of their projects. ACKSYS commits to provide state-of-the-art technology, products and training to keep its customers, distributors and VARs in the forefront of the communication age.

**ACKSYS**  
COMMUNICATIONS & SYSTEMS

Since 1984, ACKSYS Communications & Systems has acquired a strong know-how in designing and manufacturing industrial data communication solutions (WLAN / LAN / serial).

Its expertise and high quality standards allows it to meet the most severe requirements in transportation (rail & road), industrial (SCADA, automation), military (marine, land, air), aeronautics, mining (underground and above ground), oil & gas and environment (renewable energy, water, waste water).

Its inbuilt engineering, technical and commercial teams are able to meet accurately the expectations of its customers and assist them from the definition of their needs to the deployment. Thanks to a qualified and structured distribution network, ACKSYS is present on the five continents and can therefore meet any industrial application need, any time.

### ACKSYS Communications & Systems

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