

## groov PRODUCT COMPARISON CHART

|   | <i>groov</i> EPIC®   | <i>groov</i> RIO®   | <i>groov</i> Box  | <i>groov</i> Server for Windows   |
|---|--|---|---|---|
| Description   | Edge programmable industrial controller  | Edge I/O  | Edge appliance  | Server for <i>groov</i> View HMI  |
| Industrially hardened device  | x  | x   | x   | (Depends on PC)   |
| Software that runs on Windows PC  |  |   |   | x   |
| Field I/O   | 0–16 <i>groov</i> I/O modules can be placed on same chassis  | Built-in, software-configurable I/O   |   |   |
| <b>Purpose</b>  |  |   |   |   |
| Real-time industrial control  | x  |   |   |   |
| I/O   | x  | x   |   |   |
| Data processing   | x  |   |   |   |
| Data communication  | x  | x   | x   |   |
| IIoT connectivity   | x  | x   | x   |   |
| Visualization (HMI)   | x  |   | x   | x   |
| <b>Software</b>   |  |   |   |   |
| Control programming   | <ul style="list-style-type: none"> <li>• PAC Control software</li> <li>• CODESYS Development System (all IEC 611310-3 compliant languages)</li> <li>• Custom programs run via secure shell access (SSH)</li> </ul> | n/a   | n/a   | n/a   |
| Node-RED (data flows)   | x  | x   | x   |   |
| Ignition from Inductive Automation® (additional cost)   | x  |   |   |   |
| Ignition Edge® (additional cost; drivers for Allen-Bradley® & Siemens® PLCs, Modbus®/TCP devices & software; MQTT communications) | x  |   | x   |   |
| <i>groov</i> View (HMIs for mobile devices, PCs, any device with a web browser)   | x  |   | x   | x   |
| <i>groov</i> Manage (configuration)   | x  | x   |   |   |
| <i>groov</i> Admin (configuration)  |  |   | x   |   |
| Secure shell access (SSH)   | x  | x   |   |   |
| <b>IIoT Connectivity</b>  |  |   |   |   |
| OPC UA  | x  |   | x   | x   |
| MQTT with Sparkplug B   | x  | x   | (only via Node-RED or Ignition Edge)  |   |
| Node-RED  | x  | x   | x   |   |
| RESTful APIs  | <ul style="list-style-type: none"> <li>• PAC Control variables</li> <li>• <i>groov</i> Manage (to I/O)</li> <li>• <i>groov</i> View Data Stores</li> </ul>   | <ul style="list-style-type: none"> <li>• <i>groov</i> Manage (to I/O)</li> <li>• <i>groov</i> View Data Stores</li> </ul> | <ul style="list-style-type: none"> <li>• <i>groov</i> View Data Stores</li> </ul> | <ul style="list-style-type: none"> <li>• <i>groov</i> View Data Stores</li> </ul> |

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|--|---|--|---|--------------------------|
| <b>Data Handling</b>                                   |   |  |   |                          |
| Data acquisition                                       | x   | x  |   |                          |
| Data storage   | x   | x  |   |                          |
| Data processing  | x   |  |   |                          |
| Data communication                                     | x   | x  | x   |                          |
| <b>Security and Networking</b>                         |   |  |   |                          |
| Data encryption (HTTPS/TLS)                            | x   | x  | x   | x                        |
| User authentication                                    | x   | x  | x   | x                        |
| Self-signed or Certificate Authority certificates      | x   | x  | x   |                          |
| Device firewall, configurable                          | x   | x  |   |                          |
| LDAP support   | x   | x  |   |                          |
| VPN client   | x   | x  |   |                          |
| Two independent Ethernet NICs (different IP addresses) | x   |  | x   | (Depends on PC)          |
| Two switched Ethernet NICs (same IP address)           |   | x  |   |                          |
| IP address format                                      | IPV4/IPV6   | IPV4/IPV6  | IPV4  | IPV4/IPV6                |
| HDMI ports   | One (for external monitor)  |  |   |                          |
| USB ports  | Two USB 2.0 (for external keyboard/mouse, WiFi adapter, serial adapter, or USB memory stick to 32 GB) | One USB 2.0 (for WiFi adapter, serial adapter, or USB memory stick to 32 GB) | Three USB 2.0 (for USB memory stick backups up to 2GB, WiFi adapter, or serial adapter) |                          |
| <b>General</b>   |   |  |   |                          |
| Built-in, high-resolution color touchscreen display    | x   |  |   |                          |
| Mounting   | Requires <i>groov</i> EPIC chassis<br>Chassis: DIN-rail or panel mounted                              | Self-contained; DIN-rail or panel mounted                                    | Self-contained, DIN-rail or panel mounted   | n/a                      |
| Power  | AC, DC, or pass-through power supply options on chassis   | Power over Ethernet or 10-32 VDC input                                       | 8–32 VDC (power supply included)  | n/a                      |
| Operating temperature                                  | -20 °C to +70 °C  | -20 °C to +70 °C   | 0-70 °C   | n/a                      |
| Storage temperature                                    | -40 °C to +85 °C  | -40 °C to +85 °C   | -20 to +80 °C   | n/a                      |
| Relative humidity, non-condensing (operating)          | 5 to 95%  | 5 to 95%   | 10 to 90%   | n/a                      |
| Agency approvals                                       | UL/cUL (Class 1 Div. 2), CE, ATEX (Category 3, Zone 2), RoHS, DFARS                                   | UL/cUL(Class 1 Div. 2); CE, ATEX(Category 3, Zone 2), RoHS; DFARS; CB Scheme | CE, RoHS, DFARS   | n/a                      |
| Warranty   | Processor: 30 months<br>Most I/O modules: lifetime warranty   | 30 months  | 30 months   | n/a                      |