# AccurET VHP 100
## Very high performance controller

**EA-H2M-100-xxxxxA controller**

| CONTROLLERS | | UNIT | EA-H2M-100-07/15A | EA-H2M-100-10/30A |
|---|---|---|---|---|
| Number of axes | | - | 2 | 2 |
| Current range | Continuous current (per axis) | Arms | 7 | 10 |
| | Max. overload current (per axis) | Arms | 15 | 30 |
| Current loop SNR (Signal to Noise Ratio) | | dB | 100 | 100 |
| Power input | DC voltage | VDC | 30 - 100 | 30 - 100 |
| | Max. current | Arms | 12 | 12 |
| Weight | | kg | 3.65 | 3.65 |
| PWM frequency | | Hz | N/A | N/A |

| CONTROL FEATURES | | UNIT | |
|---|---|---|---|
| General | Motion profile and command management sampling time | µs | 400 (down to 200) |
| | Current loop sampling time | µs | 12.5 |
| | Position loop sampling time | µs | 50 |
| | Basic motion profiles | - | Trapezoidal, S-curve, Sine, look-up table, …, interpolated (refer to UltimET) |
| | Advanced motion profiles | - | Refer to UltimET motion controller |
| Communication interface | USB 2.0 (for setting only) | - | Full speed (12 Mbps) |
| | ETEL real-time bus / cycle time | - | TransnET at 1 Gbps / 100 µs (down to 50 µs) |
| | Ethernet (TCP/IP) | - | 10 / 100 MHz |
| Position encoder interface | Analog 1 Vpp | - | Max. 500 kHz input frequency |
| | | - | Max. 6 MHz input frequency (on HSEI encoders) |
| | Digital (TTL) | - | Max. 10 MHz input frequency |
| | EnDat 2.1 and 2.2 | - | RS485 |
| User's inputs / outputs | Digital inputs | - | 4 DINs (per axis) |
| | Fast digital inputs | - | 6 FDINs (common to both axes) |
| | Digital outputs | - | 2 DOUTs (per axis) |
| | Fast digital outputs | - | 4 FDOUTs (common to both axes) |
| | Analog inputs | - | 4 AINs (common to both axes), ±10V, 16 bits |
| | Analog outputs | - | 4 AOUTs (common to both axes), ±20V, 16 bits |
| Software / programmability | ComET commissioning software | - | For setting / monitoring (for software compatibility, refer to the ComET manual) |
| | ETEL Device Interface (EDI) | - | DLL files for C / C++ / .NET (for software compatibility, refer to the EDI manual) |
| | Firmware update | - | USB, Ethernet TCP/IP and TransnET |

| ADVANCED FEATURES | |
|---|---|
| Fast triggers (1D and 2D) | Fast trigger based on theoretical or real position with less than 20ns reaction time. |
| Force control | Precise force control with or without sensor. Zero stop time for outstanding troughput. |
| Identification tools | Powerfull indentification tool for fine tuning and machine performance evaluation. |
| Gantry control | Advanced control algorithm to drastically reduce settling times on gantry type machines. |
| Stage protection | Safety algorithm to handle very fast and controlled axis stop. |
| Cogging and friction compensation | Learning algorithm to compensate disturbances like friction and cogging. |
| Dual encoder feedback | Optimized management of dual encoder feedback on a single axis. |
| RTV (Real Time Values) | 8 channels of real time data per axis for upper level motion management. |
| Trajectory filters | Advanced trajectory shapes to avoid axis vibrations and reduce settling times. |
| High Speed Encoder Interface (HSEI) | 6MHz encoder input for high resolution and high speed axes |
| Built-in analog Input/Output | Four built-in 16 bits analog inputs/outputs to read/control external devices |

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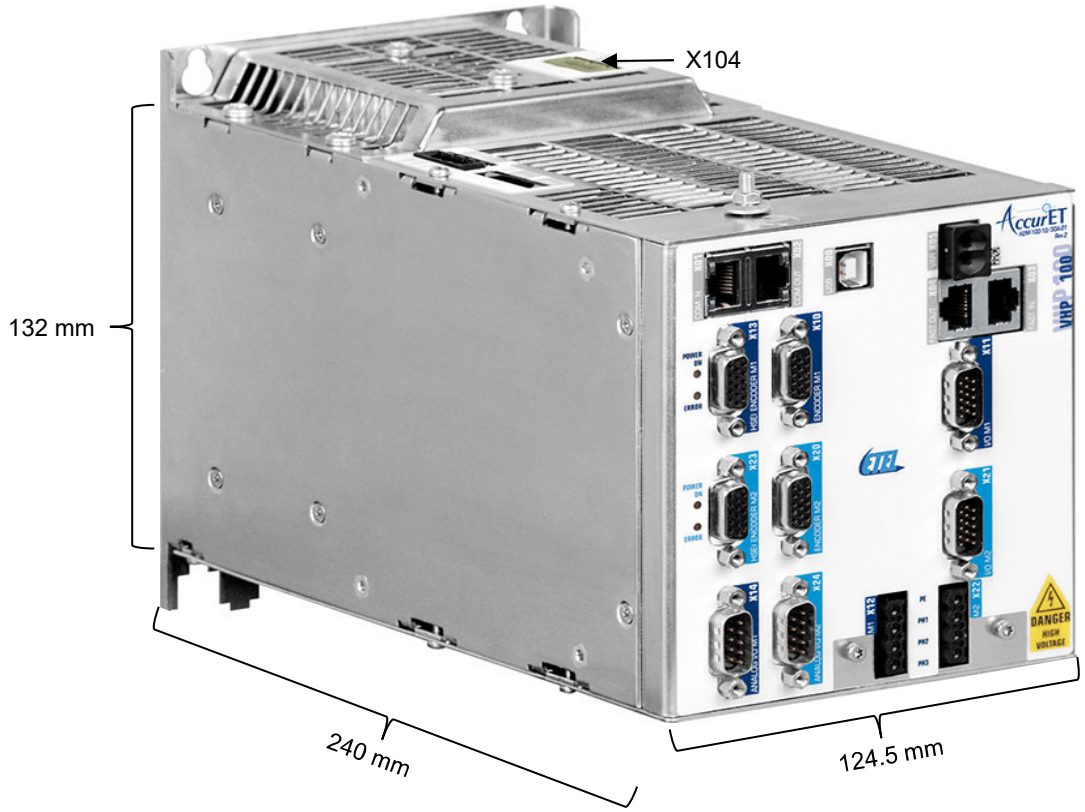


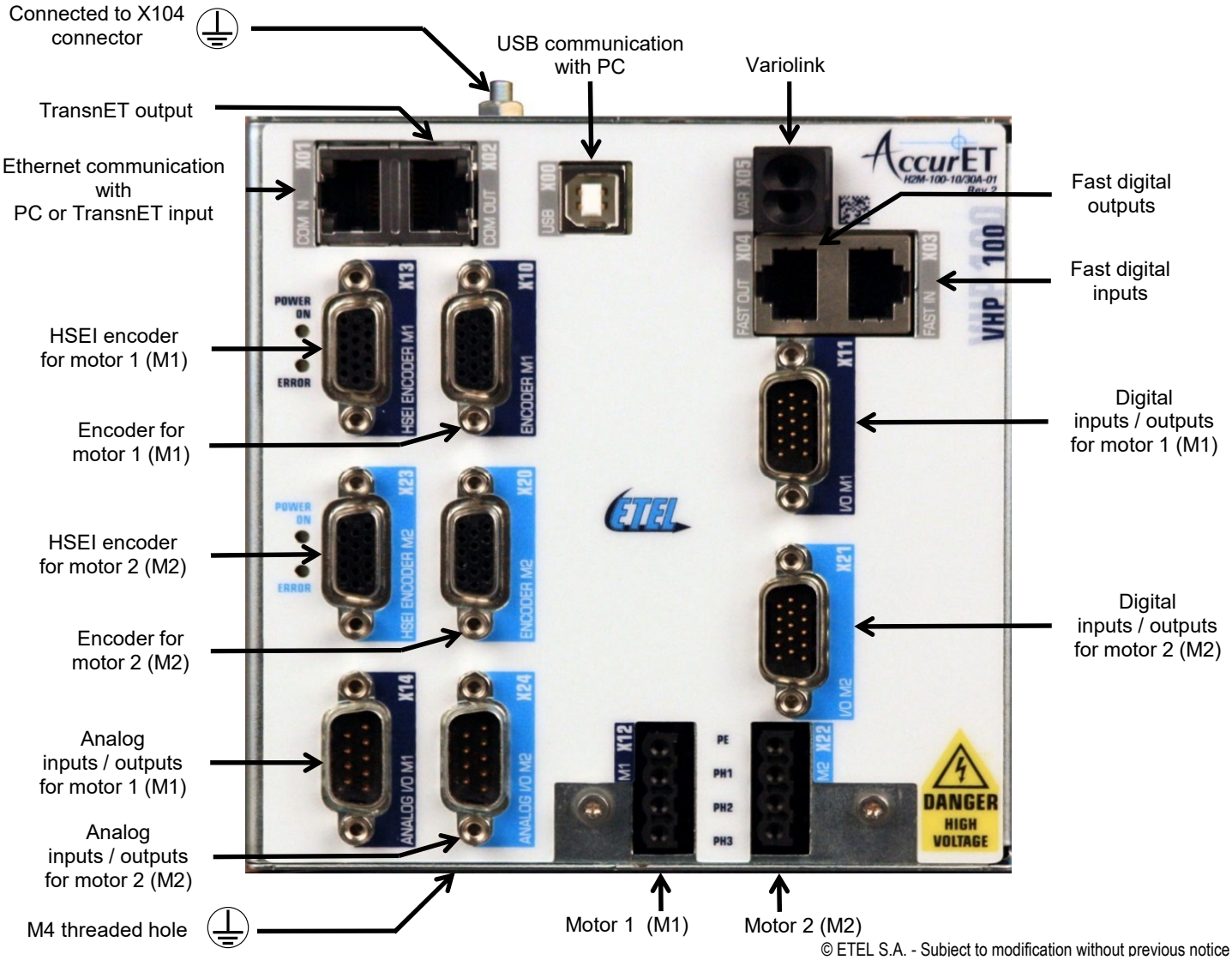


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