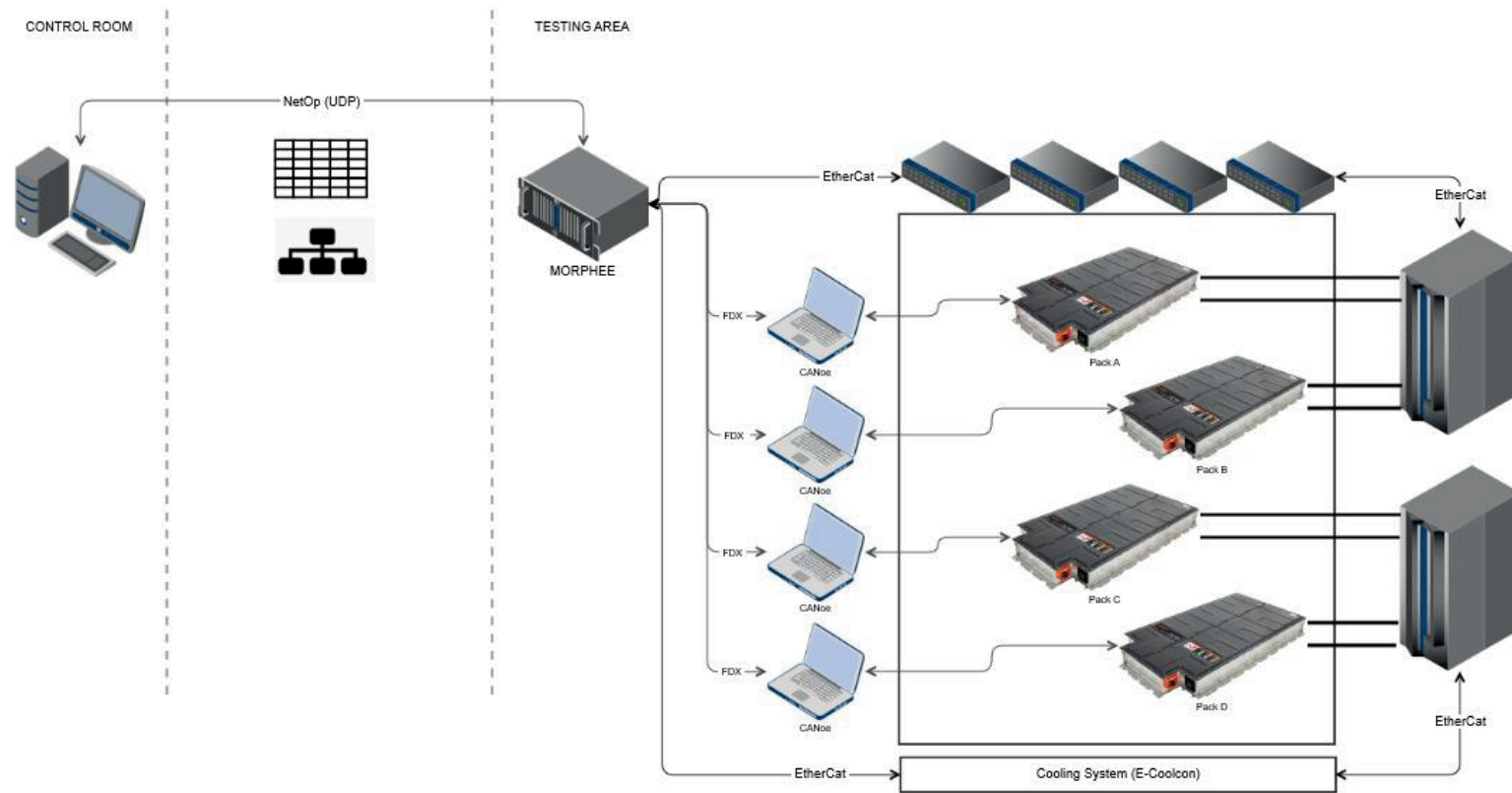


Standard FEV Pack-testing Battery Test-bed MORPHEE® Automation System



FEV MORPHEE® AUTOMATION SYSTEM (MULTI-INSTANCE TECHNOLOGY)



Technical Description

- Reduce number of automation systems to 1 per climatic chamber
- Independent operation of automation SW instance for each running UUT
- Management from one computer 24/7
- Parameters modification during running test without stopping
- Real-time system
- Fully automated continuous testing

FEV Cell Testing Solutions

Use case: Battery cells testing: Tailored solutions to customer needs



INVESTIGATING TEST-CELL FOOTPRINT

FEV France Battery test center
Battery cells testing: **FEV 36 channels solution B**

36 channels power unit

Climate chamber 12 channels

Climate chamber 12 channels

Items	Description
Nb of channels	12
Temperature	-40°C to 180°C or -10°C to 100°C
Fire protection	Inert gas

Items	Description
Nb of channels	36
Voltage	0 to 6V
Current nominal peak	300A
Current nominal continuous	200A
Current parallelization	Up to 6 channels (1800A peak)

~19.2m² for 36ch

FEV Cell Testing Solutions
Battery cells testing: **6/12 Cells Islands**

2 channels as example

FRONT

DETAIL

DETAIL

FRONT

BACK

Items	Description
Nb of channels	6
Temperature	-70°C to 180°C
Fire protection	- Fire sensors: CO, O ₂ & Temp - High pressure water mist - Permanent inertisations

4800mm

4000mm

~19.2m² for 24ch

Items	Description
Nb of channels	6
Voltage	0 to 6V
Current nominal peak	1200A
Current nominal continuous	1000A (4x250A)
Current parallelization	Up to 6 channels (7000A peak)

* Cabinet includes Automation and measurement

FEV France Battery test center
Battery cells testing: **FEV 36 channels solution A**

Layout:

3x4 Climate chambers of 3 channels each

36 channels power unit

-40 to 80°C

0 to 80°C

Items	Description
Nb of channels	12x3 → 36
Temperature	-40°C to 80°C (4) & 0°C to 80°C (8)
Fire protection	No – fire resistant + smoke exhaust
Voltage	0 to 6V
Current nominal peak	300A
Current nominal continuous	200A
Current parallelization	Up to 6 channels (1800A peak)

~17.2m² for 36ch

