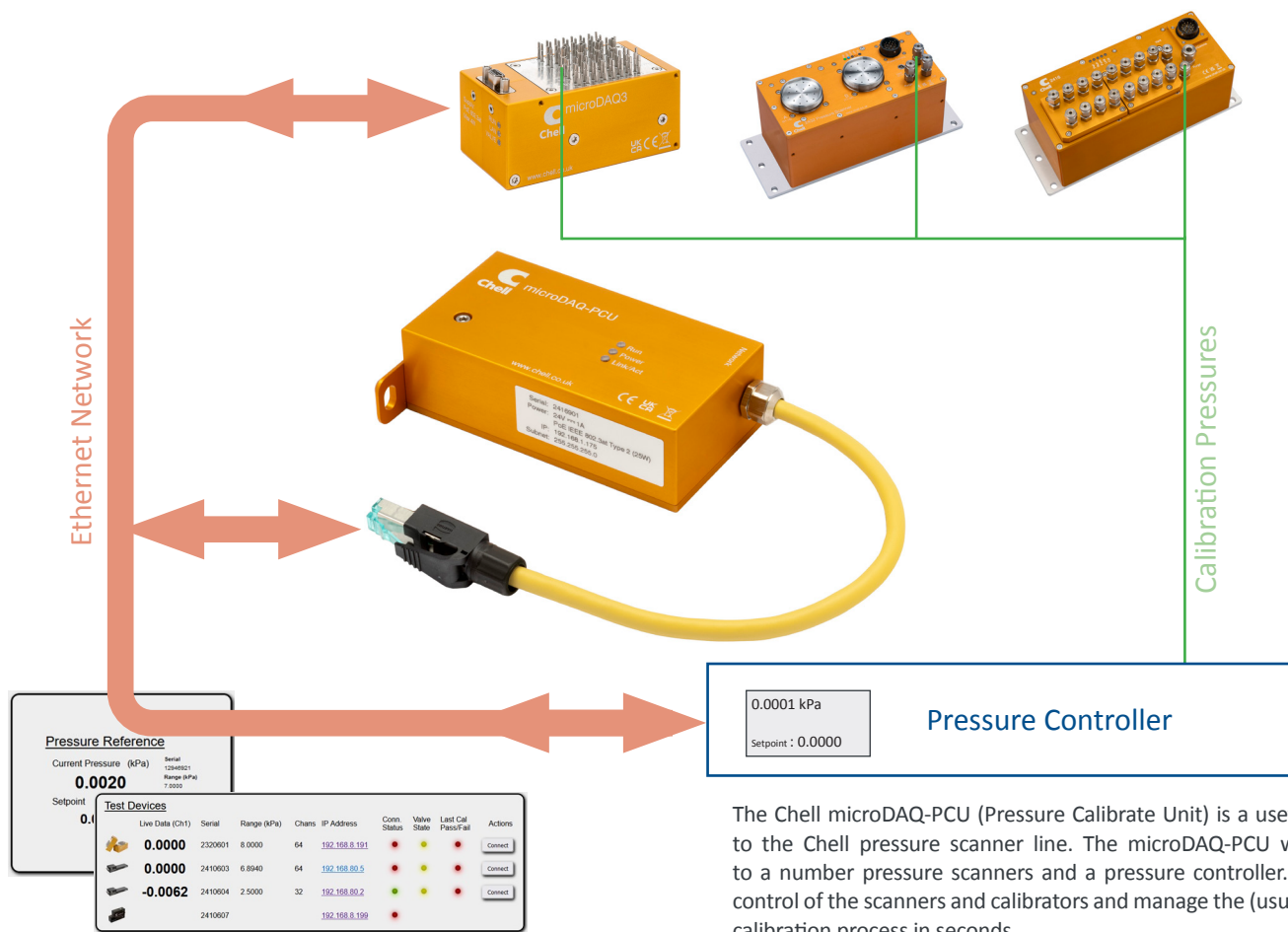




## microDAQ-PCU

### Digital Pressure Scanner Calibration Interface

- Automatic calibration for Chell pressure scanners
- Easy connection to all pressure scanners
- Up to 6 pressures controllers
- Up to 32 pressure scanners
- Web server or remote Ethernet command driven
- Automated zero, span and 5-point validation
- Text file output for certificate / report generation
- On-line calibration of ESP scanners (using CANDaq5)
- Simple, single board PC solution with PoE

The Chell microDAQ-PCU (Pressure Calibrate Unit) is a useful addition to the Chell pressure scanner line. The microDAQ-PCU will connect to a number pressure scanners and a pressure controller. It will take control of the scanners and calibrators and manage the (usually annual) calibration process in seconds.

The microDAQ-PCU is first configured with up to 6 pressure controller and 32 pressure scanners. The user can then assign one pressure controller and any number of pressure scanners to a CRG (Calibration Range Group). The user can then perform the following actions on that range group.

- Re-zero the scanners
- Calibrate the span of the scanners at nominated pressure
- Perform a 5 point pressure validation
- Output the results of all processes in a text file format
- Save new coefficients for future use

The microDAQ-PCU features an internal web browser interface or a command line interface so it can be operated from customer's software.

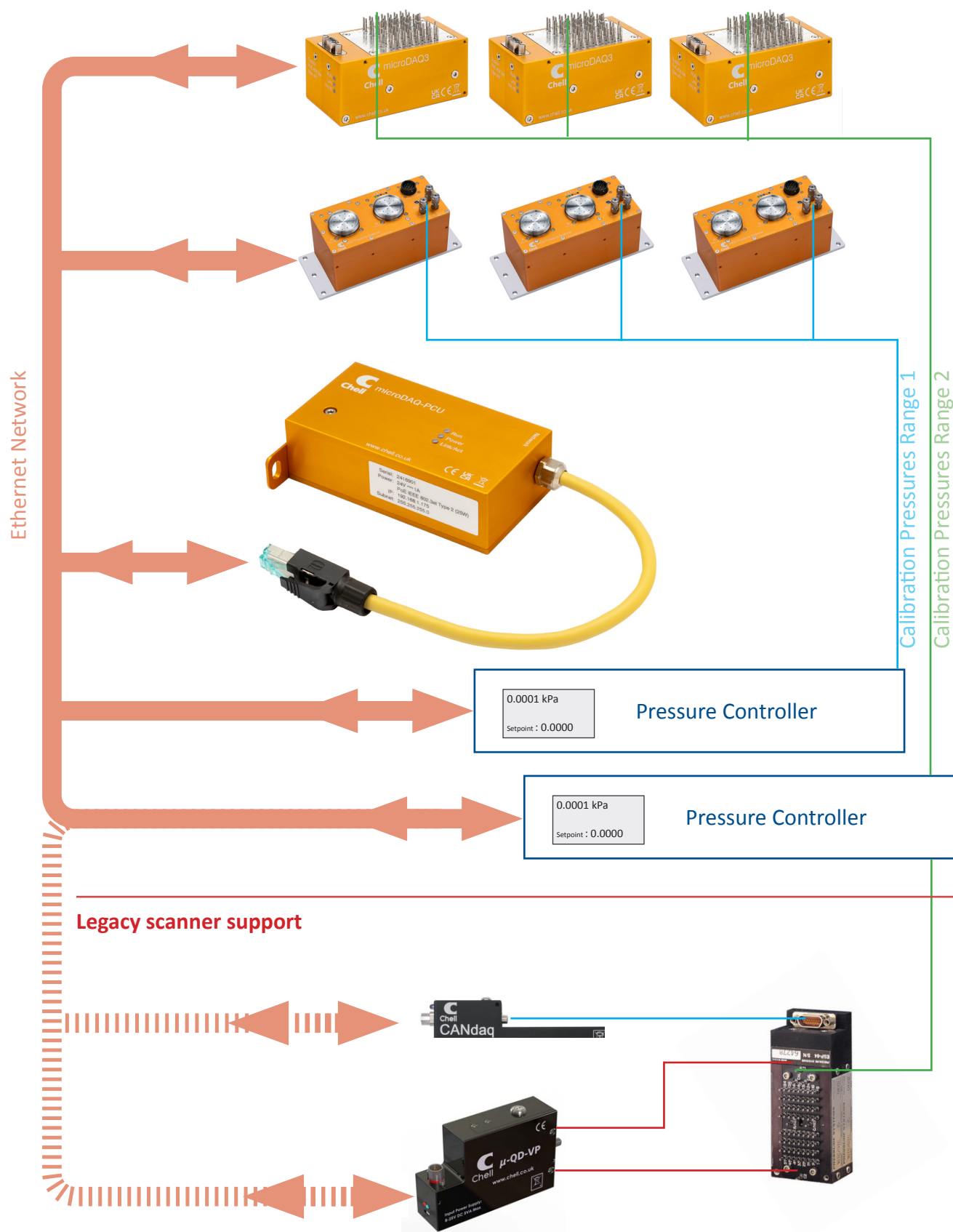
The web server features and easy to use graphical interface and keeps the user informed of the calibration pressure, the output of the scanners (CH1), the valve position of the scanners and if the scanner passes a pre-configured performance target.

The microDAQ-PCU is a single board PC which is PoE powered and can be placed anywhere in the calibration network.

The microDAQ-PCU can also be used to calibrate legacy analogue scanners that benefit from frequent on-line calibrations. These can be interfaced with the microDAQ2, CANDaq5 and micro QD-VP products.

## Scalable Configuration

The microDAQ-PCU can be used to calibrate one or a number of scanners over one pressure range or a series of pressure ranges.



## PCU Configuration

All the calibrators, scanners and optional micro-QD-VP's are configured in the microDAQ-PCU web-server. Simply enter the i/p address of the device and the microQD-VP will retrieve the scanner serial number, full scale and firmware version. Add a maximum allowable error for the tests to follow.

## CRG Configuration

The CRG - or Calibration Range Group - is a group of any number of scanners (up to 16), their supporting QD-VP's and a calibrator that are range compatible.

All devices within a CRG are calibrated at the same time.

## Running the Calibrations

All the calibration functionality can be driven via documented Ethernet commands (from customer code) or from the web-server. From the dashboard, first the relevant CRG is selected and the one of the following:

- Leak test (of calibration pipe-work and scanners)
- Zero check
- Zero Adjust
- Span Check
- Span Adjust
- 5-point linearity test

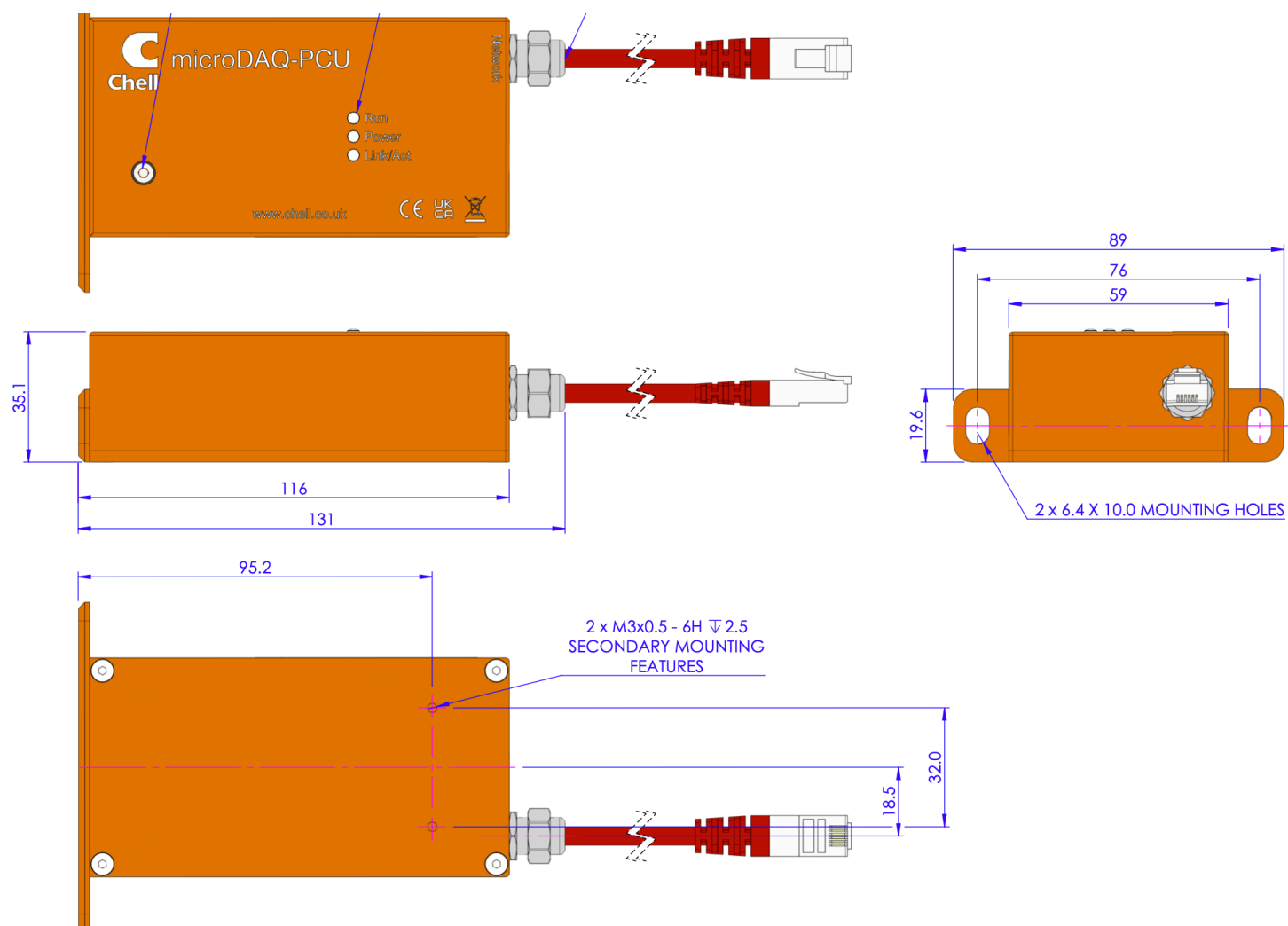
Once selected, the process will be:

1. Connect to pressure controller
2. Connect to each scanner in turn
3. Move all valves to cal positions (MD3 via its internal electric valve and ESP via a QD-VP valve controller)
4. Perform the leak test/zero/calibration
5. Adjust coefficients (if adjust selected)
6. Update Pass/Fail
7. Output text data (for import into Excel)
8. Return valves to run mode
9. Retrieve and store the new coefficients from the scanners (optional)

| Live Data (Ch1) | Serial  | Range (kPa) | Chans | IP Address    | Conn. Status | Valve State | Last Cal Pass/Fail | Actions |
|-----------------|---------|-------------|-------|---------------|--------------|-------------|--------------------|---------|
| 1.2458          | 2411701 | 2.4909      | 64    | 192.168.80.8  | ●            | ●           | ●                  | Connect |
| 1.2462          | 2411702 | 2.4909      | 64    | 192.168.80.7  | ●            | ●           | ●                  | Connect |
| 1.2436          | 2411703 | 2.4909      | 64    | 192.168.80.15 | ●            | ●           | ●                  | Connect |
| 1.2464          | 2411704 | 2.4909      | 64    | 192.168.80.4  | ●            | ●           | ●                  | Connect |
| 1.2450          | 2410603 | 6.8948      | 64    | 192.168.80.5  | ●            | ●           | ●                  | Connect |
|                 | 2410608 |             |       | 192.168.80.6  | ●            |             |                    |         |

| General                              |                                                                              |
|--------------------------------------|------------------------------------------------------------------------------|
| Maximum number of pressure standards | 6                                                                            |
| Pressure standards supported         | Druck PACE 5000 and 6000 (other pressure controllers can be supported)       |
| Maximum number of pressure scanners  | 32                                                                           |
| Scanner supported                    | microDAQ3 (16 and 64 channel), 2416, 2432, microDAQ2, CANDaq5 and microQD-VP |
| Maximum number of CRG's              | 16                                                                           |
| Dimensions                           | 89 x 131 x 35                                                                |
| PoE Specification                    | IEEE 802.3at Type 1                                                          |
| Environment                          |                                                                              |
| Operating Temperature Range          | -0 to +60°C                                                                  |
| Storage Temperature Range            | -40 to +90°C                                                                 |
| Maximum relative humidity            | 95% at 50°C (non-condensing)                                                 |

## Dimensions



## Part Number:

MD-PCU