

FIREPILOT™

AI POWERED AUTONOMOUS WELDING

FirePilot uses machine learning to identify weld features such as groove geometry, weld pool shape, and torch position. It generates optimal parameter settings and real-time process control through digital communication with the GoldTrack™ line. FirePilot is compatible with various Liburdi weld head platforms to enable fully autonomous welding.



Real time feature recognition and graphical display



Automatic parameter optimisation



Automatic torch and wire positioning



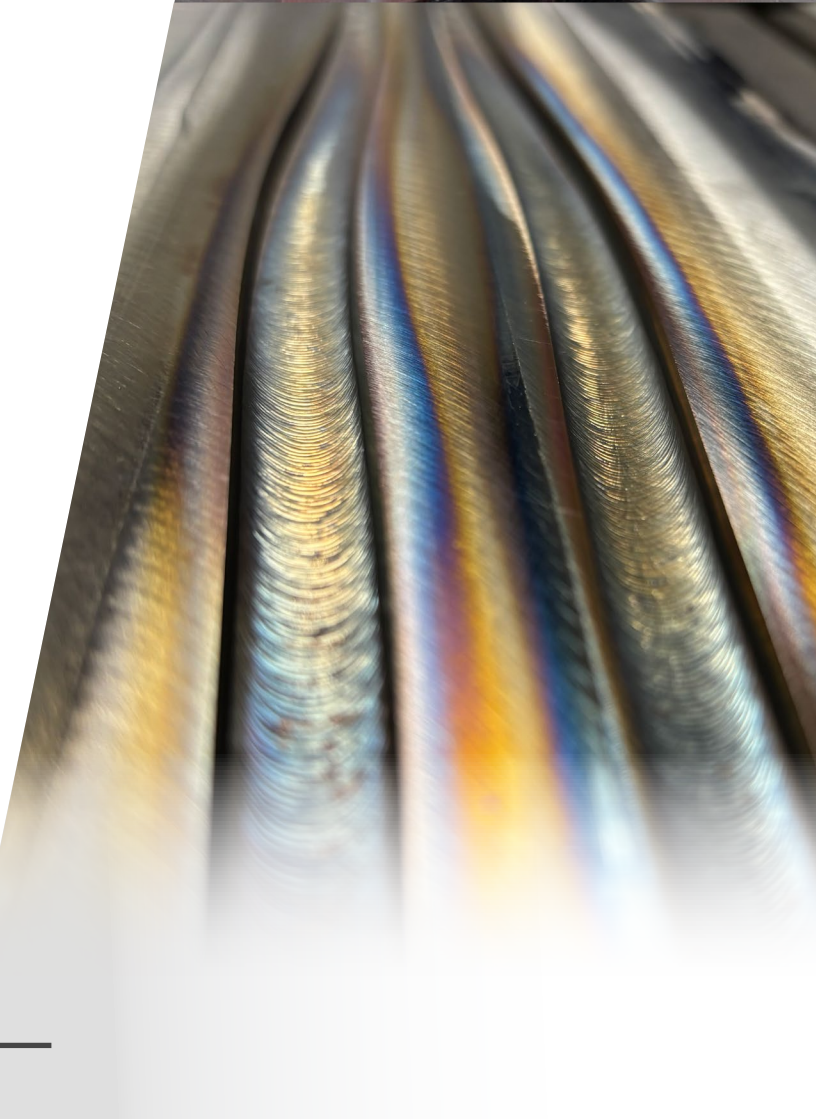
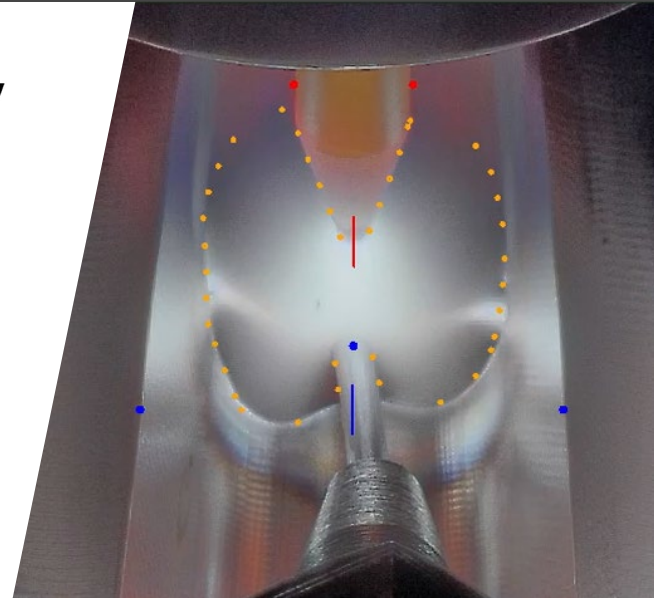
Multiprocess capability



Multi camera support



AI model training toolkit



■ Standard Features:

- All critical process parameters can be controlled through FirePilot
- In a typical application the following parameters are controlled:

- Torch Steering
- Wire Position
- Current
- Voltage
- Travel Speed
- Wire Feeder Rate
- Oscillation Width
- Excursion Time

■ Hardware Requirements:

- FireView Console
- GoldTrack VII or GT400
- Liburdi Based Camera (Single or Dual)

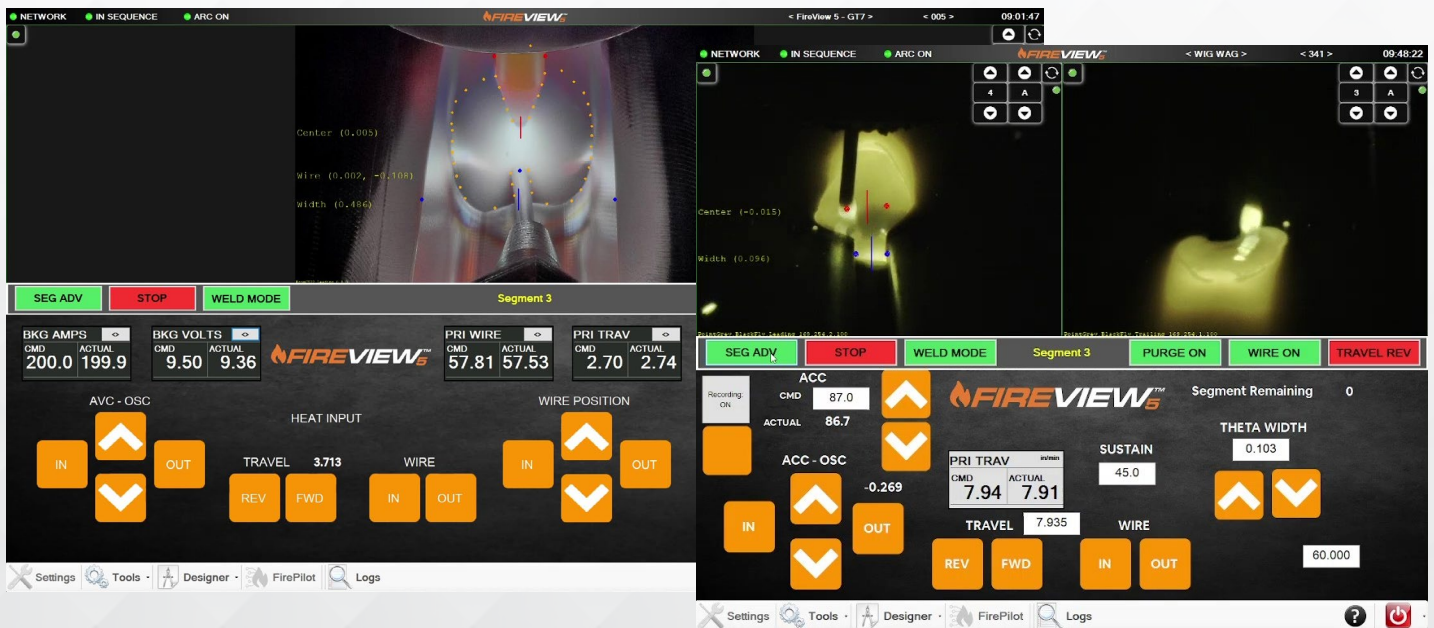
■ Technology Packages:

Package 1 - Turnkey:

- Includes: FirePilot + Liburdi developed AI vision model and adaptive parameters
- Liburdi provides production ready solution

Package 2 - Customer Developed:

- Includes: FirePilot + AI model training toolkit (software to extract video frames, create truth images, train AI model)
- Customer provided all software to enable independent AI model training



This product was developed and licensed using **EPRI** research

