Flame Ionization Detector to measure Total Hydrocarbons from Engine Exhaust

Requirement:

Specifications	
Range of Detection	0-10000 ppm
Measurement Method	Flame Ionization Detection (FID)
Measurement Accuracy	<= 1% of fullscale at a constant temperature,
	sample flow, fuel, air and sample pressure.
Resolution	<0.01 ppm
Minimum Detectable Level	<30 ppb
Units	ppb, ppm, %
Response time	As low as possible (Typically, <30 Seconds)
Warm up time	As low as possible (Typically, <1 hour)
Alarm Outputs	All types
	(Typically, Flame out alarm, Sample gas on,
	Zero gas on, Span gas on, Fault alarm, System
	alarm etc.)
Sample gas flow regulator	Required
Automatic flame temperature controller	Required
LCD Display with adjustable contrast	Required
Auto range selection based on the input	Required
signal	
Auto calibration check	Required
Necessary Data logger	Required
Suitable rack and mounting facilities	Required
Digitally monitored flow of all the gases	Required