

## Refinery Systems

# COMOC 6 Brochure



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## BASIC OVERVIEW

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**T**he COMOC 6 System is Core Lab Refinery System's premier octane analyzer system. The COMOC 6 system connects to multiple CFR® knock testing engines for comprehensive control of up to ten engines and three in-line blenders. COMOC 6 leverages the power of technologies such as client server web based software and the Windows Server operating system to control a network of engines via the COMOC 6 I/O cabinet and consoles.

This document is supplied with the COMOC system to present an overview of the system for a typical COMOC user. Each user function is discussed along with engine operating procedures and error messages that may be presented by the COMOC system.

## THEORY OF OPERATION

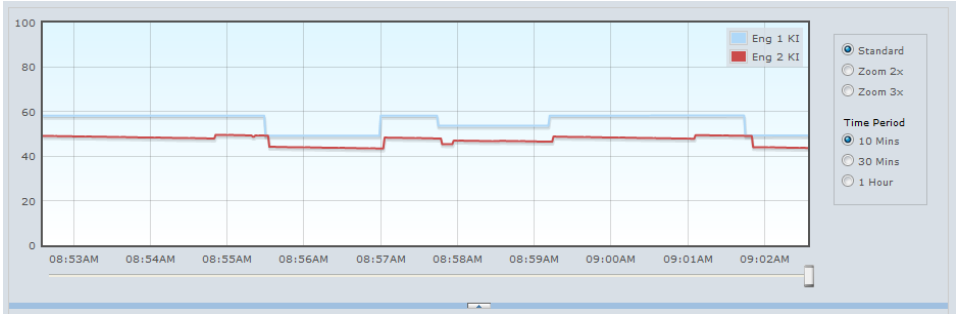
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The COMOC 6 System is designed to comply with the ASTM International D2885 method for on-line octane analysis using research or motor method engine. The method describes in detail the requirements for certifying blended product fuel with an on-line analyzer system. This method outlines several functional procedures which must be adhered to including; Prototype Calibration, System Qualification Checkout, AMS QC Check, Engine Calibration, and In-Line Blend Monitoring. The COMOC system divides the functions above in to two categories; blend commands and engine commands.

Typically most engine commands are issued to COMOC by laboratory personnel and blending commands are issued by a blender operator. In addition, these commands can be issued by any external system which has access to the COMOC 6 database.



**USER INTERFACE**



Several days of KI data is saved in the database and can be easily viewed by clicking on and dragging the slider bar at the bottom of the trending area. Dragging the slider to the appropriate time in history the Y axis will update with the 10 minute time intervals corresponding to the point in time selected along with the requested KI data.

Engine	Type	Status	Fuel	KI	MV	Proto	Line	Delta	Delay	Sample	Cycle Cnt	Alarm
1	RON	Search Proto	Proto	49.30	163.0	0.0	0.0	0.0	20	15	2	
2	MON	Search Proto	Proto	43.97	155.9	0.0	0.0	0.0	24	15	2	

The engine region on the system status display reveals detailed information about each engine in the system. Each engine is assigned an engine number in the COMOC system for addressing operator commands and review report data. The engine number is displayed in the far left column of the engine region. In addition to an engine number each engine is assigned a type; either Research or Motor method (i.e. RON or MON). COMOC maintains a status for each engine which is used to identify what state that COMOC has associated with an engine.

## EQUIPMENT

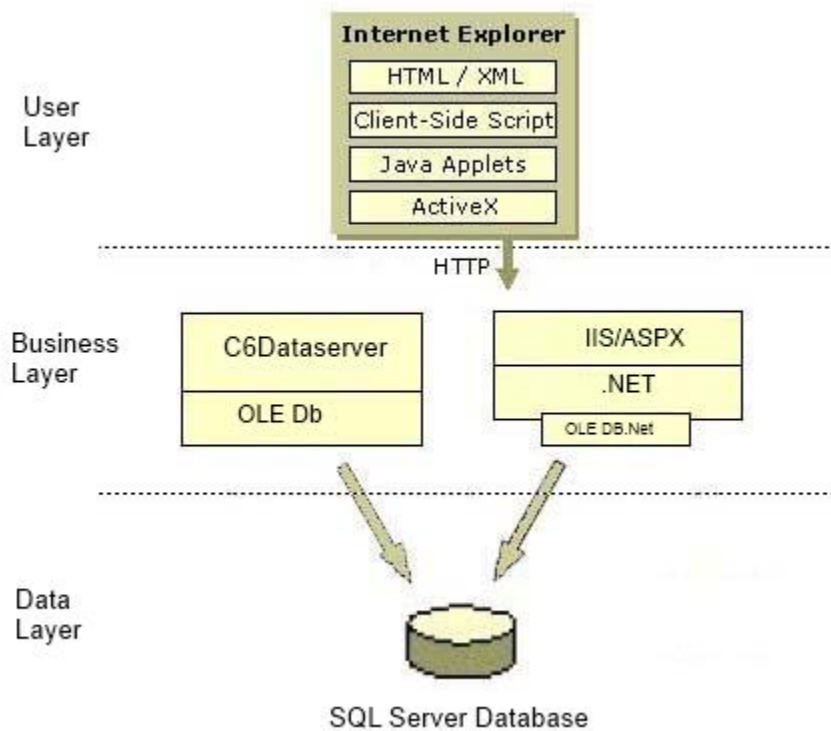
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<b>Component</b>	<b>Description</b>
COMOC 6 Data Server	Dell® PowerEdge® server running Microsoft® Windows® server software, Internet Information Server, SQL Server™, and Core Lab Refinery Systems C6DataServer service and web server software.
COMOC 6 Workstation	Dell® computer running Microsoft Windows operating system, Internet Explorer.
COMOC 6 Blending Workstation	Dell® computer running Microsoft Windows operating system, Internet Explorer. This is optional equipment.
COMOC 6 Engine Console	A COMOC 6 console housing switches and electronics for interfacing to the computer system and providing manual operator control of the engine.
COMOC 6 I/O Cabinet	A cabinet housing the analog and digital inputs and outputs for interfacing the COMOC 6 data server to the engine consoles. The I/O cabinet typically will house Opto 22 brains, input/output modules, and wiring terminal strips.

## APPLICATION

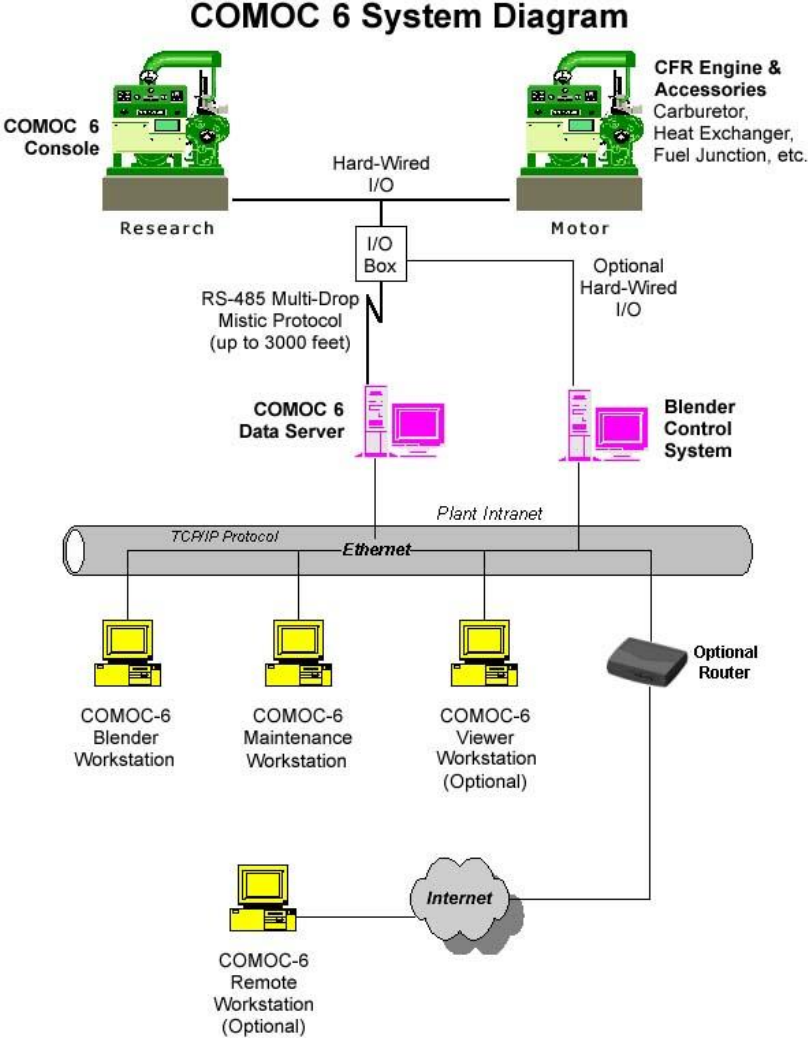
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The COMOC 6 system is a client-server application that follows a three-tier architecture design. The three tiers consist of user services, business services, and data services to provide a distributed scalable application design. The three-tier architecture design places emphasis on logical distribution of the individual tiers. Although COMOC 6 uses a single machine to house both the business services and the data services tiers it is not a requirement. If a single machine proves to be inadequate an additional machine can be added to increase performance.



**DATA SERVER AND SYSTEM DIAGRAM**

The COMOC 6 Data Server is a high powered server with multiple hard disks installed and a high capacity tape drive for data backup and restore and disaster recovery. Multiple hard drives are typically installed with a RAID configuration to prevent prolonged downtime in the event of a drive failure.



## CONTACT US

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1. Give a complete description and part number of required item.
2. Be certain to give a complete street address where the parts are to be shipped to and billed.
3. Specify method of the shipment – parcel post, freight, air express, etc.
4. Prices and F.O.B. supplier's plant and subject without notice.
5. The minimum order is \$100.00USD.
6. Title passes on delivery to common carrier. Claims for loss or damage must be filed with the delivering carrier immediately.