4 Cyl
Orion2 ECU Layout

P1 - 12 Way Input

Wire Colors E24 CR-Only	E22 CR+TDC	Pin Name	#	#	Pin Name	E24 CR+TDC	E24 CR-Only
Green	Green	Water Temp	7	1	Air Temp	Yellow	Yellow
Red	Red	Lambda	8	2	TPS	Blue	Blue
Red	Red	.+5 Volt Out	9	3	MAP	Blue	Blue
Red	Red	.+12 Volt Ign	10	4	GND	Black	Black
N/C	Yellow	TDC Sensor	11	5	TDC Power	Blue	N/C
Blue	Green	Crank Sensor	12	6	Crank Power	Red	Red
			Internal	3Bar Alt Sensor	Altitude Sensor (Priority1) / Map Sensor (Priority2)		

P2 - 10 Way Output

E33 Adv	E32 Std	E31 No Rel	Sim leds	Pr3	Priority2	Priority1	Pin Name	#	#	Pin Name	Priority1	Priority2	Pr3	Sim leds	E31 No Rel	E32 Std	E33 Adv
Black/Red	Black/Red	Black/Red	N5		Inj Drv 1	Basic Coil Drv 1	Coil Negative 1	6	1	Coil Negative 2	Basic Coil Drv 2	Inj Drv 2		N6	Black/Purple	N/C	Black/Purple
Black/Brown	N/C	Black/Brown	N7	GP5	Inj Drv 3	Basic Coil Drv 3	Coil Negative 3	7	2	Coil Negative 4	Basic Coil Drv 4	Inj Drv 4	GP6	N8	Black/Orange	N/C	Black/Orange
Black/Yellow	Black/Yellow	Black/Yellow	N2	GP4	Cam 1	Inj Drv 2	Negative 2	8	3	Negative 1	Inj Drv 1	Cam 2	GP3	N1	Black/White	Black/White	Black/White
Green	Green	Green	RPM			RPM Out	Negative 4	9	4	Negative 3	Relay Out			Relay	Blue/Black	Blue	Blue
Blue/White	Blue/White	Blue/White	N4	GP2	Idle Valve	Inj Drv 4	Negative 6	10	5	Negative 5	Inj Drv 3	Dual Idle	GP1	N3	Blue/Orange	Blue/Orange	Blue/Orange

P3 - 8 Way Output

E36	Sim leds	Pr3	Priority2	Priority1	Pin Name	#	#	Pin Name	Priority1	Priority2	Pr3	Sim leds	E36
Red/White	P1		Idle Vlave	Smart Coil Drv 1 T	Positive 1	5	1	Positive 2	Smart Coil Drv 2 T	Dual Idle	Cam 2	P2	Red/Yellow
Red/Orange	P3	GP7	Cam 1	Smart Coil Drv 3 T	Positive 3	6	2	Positive 4	Smart Coil Drv 4 T	Micro Fuel	GP8	P4	Red/Green
Red					.+12 Volt In	7	3	.+12 Volt In					Red
White	GP1	GP9		Anti-Lag	Coil Negative 5	8	4	Coil Negative 6			GP10	GP2	Blue

P4 - 4 Way Serial

Pin Name	#	#	Pin Name
SDA	3	1	SCL
.+5 Volt Out	4	2	GND

6 Way USB

P05-P3	USB	Pin Name	#	#	Pin Name	USB	P05-P3
Green	N/C	Tuning Pot	4	1	Dual Map Sw	N/C	Yellow
Yellow	Yellow	Receive	5	2	Transmit	Green	Green
Red	Red	.+5 Volt Out	6	3	GND	Blue	Blue

Note!! Coil and Injector numbers used here are firing phases from the ECU. It is not the firing order on your engine.
Refer to the drawings for Phase to firing order comparison.

Negative 1 to 6 = Negative drivers 41 Volt 19 Amp Drivers
Positive 1 to 4 = Positive Drivers 12 Volt 6 Amp current limit drivers
Coil Negative 1 to 6 = Negative Coil Drivers for Basic Coils 500 Volt 18 Amp Drivers
Tuning Pot and Coil Driver 6 share the same Micro Connection. Selection with Jumper J6 on board
Dual Map Switch and Coil Negative 5 share the same Micro Connection. Selection with Jumper J6 on board
An optional 3 Bar map sensor can be soldered onto board. It can be used as Altitude or MAP sensor. For an internal MAP sensor you need to make a hole in the lid for the pipe to come through.
Basic Coil = Coil without driver - 0.5 to 0.9 Ohm Primary winding - Charges with earth signal and discharges with open signal
Smart Coil = Coil with Built in driver - Charges with positive signal and discharges with earth signal which is provided by the driver and a pull down resistor
If you use the 3 Bar onboard sensor for MAP then you must use a 2.5 Bar external sensor for Altitude.

Coil Phaze	Fire Order Ex. 1 3 4 2	
	Full or COP	Wasted Spark
Coil Drv 1	1	1 - 4
Coil Drv 2	3	3 - 2
Coil Drv 3	4	
Coil Drv 4	2	

Inject Phaze	Fire Order Ex. 1 3 4 2	
	Full Seq	Split Seq
Inj Drv 1	1	1 - 4
Inj Drv 2	3	3 - 2
Inj Drv 3	4	
Inj Drv 4	2	