

- **IDE R.A.D.**
- **OBJECT Oriented**
- **Large Object Library**
- **Axes Functions Control**
- **eCAM Functions**
- **eGear Functions**
- **Motion Functions Technology**
- **Debug Step by Step**
- **Multitask**
- **Code native CPU**



VTB is an integrated development environment for object-oriented programming on all platforms PROMAX. The environment contains within it all the tools required for developing applications in a simple and intuitive. VTB's philosophy is based on the latest technologies RAD (Rapid Application Development) that allows rapid application development by writing a small amount of code due to a huge library of objects and functions available technologies.

However, implementing the additional code can handle any type of industrial application. VTB integrates a high-level language like BASIC MOTION LADDER language evolved and a graphical management of PLC cycles faster (I / O). In addition to the CAN protocol ETHERCAT OPEN and can be managed RS232/RS485 serial protocols such as MODBUS. The configuration of an OPEN LINE CAN or EtherCAT is done in a simple and driven by defining any node as an object to make it available to 'VTB environment. Powerful axis movement allows the management of any type of machine using linear interpolation functions, CIRCULAR, LINEAR SPEED, POWER LINES, etc. CAM PROFILE. VTB set up for multi language simply by selecting the USE OF LANGUAGE by an internal variable.

A powerful DEBUG allows you to control the operation of applying a remote location.

**DEBUG HIGH LEVEL WITH BREAK POINTS AND STEP BY STEP CODE**  
**VTB creates a dll for Framework and Compact Framework (Windows CE devices), to simplify the user interface from a PC.**

```

Page Init | Master Event | Master Cycle | Page Functions
' *****
' Return 1 if axes move
' 0 Axes stop
' *****
function Wait_Move() as char
    Wait_Move=interp.move()
endfunction
' *****
' Move Axes
' Vel= interp vel Axes in mm/min
' Flg if 1 move without buffer
' 0 move in buffer mode
' Px,Py,Pz Axes value in 0.001 mm
'Return 1 if movement is inserted in the buffer
' 0 The movement is not inserted in the bu
' in this case, is necessary reload the
' *****
function Move_Axes(Vel as long, Flg as char, Px as long, Py as long, Pz as long) as void
    Vel=Vel*TAU/60 ' Transform in mm/min
    Vect(0)=Px
    Vect(1)=Py
    Vect(2)=Pz
    Move_Axes=interp.moveto(Vel, Flg, Vect())
endfunction
' *****
' Set ACC
' Value Acc value in count
' *****
function Acc_Axes(Value as long) as void
    interp.acc=Value
endfunction
' *****
' Stop Axes
    
```

## Specifications VTB

VTB	
VARIABLE TYPE	<b>BIT</b> - 0 a 1 <b>CHAR</b> - from -128 to +127 <b>UNSIGNED CHAR</b> - 0 to 255 <b>INT</b> - from -32768 to +32767 <b>UNSIGNED INT</b> - 0 to 65535 <b>LONG</b> - from -2.147.483.648 to 2.147.483.647 <b>FLOAT(Double)</b> - 5.0x10-324
MEMORY	<b>Globale</b> - Visible all TASK <b>Private</b> -Visible only TASK <b>Static</b> – RAM with battery <b>Fixed</b> – Fixed address
DATA ARRAY	For all variables excluded BIT
DATA STRUCTURE	For all variables excluded BIT
POINTER	<b>Char,Uchar,Int,Uint,Long,(double),Data Structure</b>
CALL e SOUBROUTINE	<b>GOSUB - GOTO - RETURN</b> (obsolete use functions)
FUNCTIONS	Same to “C” language
DELEGATE	Functions call with address
ITERATIVE CYCLES	<b>FOR-NEXT-EXITFOR-STEP-WHILE-LOOP-EXITWHILE</b>
CONDITIONAL CYCLES	<b>IF-ELSE-ENDIF-SELECT-CASE-ENDSELECT</b>
LOGICAL AND MATHEMATICAL	<b>()</b> parenthesis <b>[]</b> Pointers <b>+*/</b> MATHEMATICAL <b>&gt; &lt; &gt;= &lt;= &lt;&gt; =</b> Conditional <b>   &amp;&amp;   &amp; ! ~ ^</b> Bit logical <b>&gt;&gt; &lt;&lt;</b> Shift bit
MATHEMATICAL FUNCTIONS	<b>SIN,COS,SQR,TAN,ATAN,ASIN,ACOS,ATAN2,ABS,FABS</b>
SYSTEM FUNCTIONS	<b>TIMERS</b> String manipulate FREE/ALLOC Memory <b>FAT 16</b> <b>RS232 control</b> <b>ETHERNET control</b> <b>I/O control</b> Interpolation and positioning axes control <b>CAN OPEN</b> <b>ETHERCAT</b> <b>Ecam</b> <b>Gear</b>
DEBUG	<b>BraekPoint</b> , code <b>Step By Step</b> , <b>Watch</b> read and write <b>SCOPE</b> 3 Ch