NEC Electronics Expands All Flash Lineup with Six New Microcontrollers for Inverter Control

Addendum 1

V850E/IG3 and V850E/IF3 features

1. Enhanced performance of on-chip components.
   1) Resolution of A/D converter increased to 12 bits: the 12-bit resolution allows precise control of motor drive current in 4,096 steps, compared to the 10-bit resolution and 1,024 control steps of current devices.
   2) Op-amp capable of 13 control steps: the precision of the op-amp was increased from the current two steps to 13 steps, an approximately six-fold increase.
   3) Comparator capable of measuring overvoltage *and* undervoltage with respect to a reference level.

   These features allow easier and finer-grained implementation of motor control applications when compared to corresponding devices in the current series.

2. Integration of previously discrete components, to reduce part counts
   1) Integrated regulator IC: the regulator that generates the internal voltage of the microcontroller is now integrated, replacing a formerly discrete part.
   2) Integrated reset IC and LVI (Low Voltage Indicator) circuit: the reset IC and LVI circuit are now integrated, replacing formerly discrete parts.