

2.1.3 Output Driver Characteristics

Table 3 provides information on the characteristics of the output driver strengths.

Table 3. Output Drive Capability

Driver Type	Programmable Output Impedance (Ω)	Supply Voltage	Notes
Local bus interface utilities signals	25	$BV_{DD} = 3.3\text{ V}$	1
	35	$BV_{DD} = 2.5\text{ V}$	
	45 (default) 45 (default) 125	$BV_{DD} = 3.3\text{ V}$ $BV_{DD} = 2.5\text{ V}$ $BV_{DD} = 1.8\text{ V}$	
PCI signals	25	$OV_{DD} = 3.3\text{ V}$	2
	42 (default)		
DDR signal	20	$GV_{DD} = 2.5\text{ V}$	
DDR2 signal	16 32 (half strength mode)	$GV_{DD} = 1.8\text{ V}$	
TSEC signals	42	$LV_{DD} = 2.5/3.3\text{ V}$	
DUART, system control, JTAG	42	$OV_{DD} = 3.3\text{ V}$	
I ² C	150	$OV_{DD} = 3.3\text{ V}$	

Notes:

1. The drive strength of the local bus interface is determined by the configuration of the appropriate bits in PORIMPSCR.
2. The drive strength of the PCI interface is determined by the setting of the $\overline{\text{PCI_GNT1}}$ signal at reset.

2.2 Power Sequencing

The device requires its power rails to be applied in specific sequence in order to ensure proper device operation. These requirements are as follows for power up:

1. V_{DD} , AV_{DD_n} , BV_{DD} , LV_{DD} , SV_{DD} , OV_{DD} , TV_{DD} , XV_{DD}
2. GV_{DD}

Note that all supplies must be at their stable values within 50 ms.

Items on the same line have no ordering requirement with respect to one another. Items on separate lines must be ordered sequentially such that voltage rails on a previous step must reach 90% of their value before the voltage rails on the current step reach 10% of theirs.

In order to guarantee MCKE low during power-up, the above sequencing for GV_{DD} is required. If there is no concern about any of the DDR signals being in an indeterminate state during power up, then the sequencing for GV_{DD} is not required.

From a system standpoint, if any of the I/O power supplies ramp prior to the V_{DD} core supply, the I/Os associated with that I/O supply may drive a logic one or zero during power-up, and extra current may be drawn by the device.