AFE4300 Body Composition and Weigh Scale Analog Front End Performance Demonstration Kit

Message Communication Protocol

Communication Protocol for AFE4300EVM-PDK

Reset Device Command:

PC to EVM: 0x72 0x73 0x74 0x3F
Command in Hyperterminal: rst?

EVM to PC: 0x0A 0x0D
Response in Hyperterminal: <LF><CR>

Read Register Command:

PC to EVM: 0x72 <2 bytes of ASCII addr with MSB first> 0x3F
e.g, to read from address 0x12, message format is
"0x72 0x31 0x32 0x3F"
Command in Hyperterminal: r12?

EVM to PC: 0x20 0x30 0x78 <4 bytes of ASCII data with MSB first> 0x0A 0x0D
Response in Hyperterminal: <Space>0x6789<LF><CR>

Write Register Command

PC to EVM: 0x77 <2 bytes of ASCII addr with MSB first> <4 bytes of ASCII data with MSB first> 0x3F
e.g, to write a value of 0x6789 to address 0x12, message format is
"0x72 0x31 0x32 0x36 0x37 0x38 0x39 0x3F"
Command in Hyperterminal: w126789?

EVM to PC: 0x0A 0x0D
Response in Hyperterminal: <LF><CR>

Start Read ADC Register Command:

PC to EVM: 0x72 0x61 0x64 0x63 0x3F
Command in Hyperterminal: radc?

EVM to PC: 0x0A 0x0D
Response in Hyperterminal: <LF><CR>

After receiving this command, AFE4300 starts sending ADC data packets continuously until it receives Stop Read ADC Register command. Each data packet is in the following format:
EVM to PC: 0x20 <2 bytes of raw data with MSB first>
Response in Hyperterminal: <Space> <2 bytes of raw data with MSB first><Space> <2 bytes of raw data with MSB first><Space> <2 bytes of raw data with MSB first> etc…

Stop Read ADC Register Command:

PC to EVM: 0x73 0x61 0x64 0x63 0x3F
Command in Hyperterminal: sadc?

EVM to PC: 0x0A 0x0D
Response in Hyperterminal: <LF><CR>