ON Semiconductor®

RF Amp embedded Digital Servo DSP for CD

LC78615/LC78616

Port Setting Specification Sheet

ON Semiconductor

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Update History

Ver 1.00 (2016.11.06)
New Document

1 LC78615 port setting
1.1 LC78615 Port Setting List

Table below shows the port setting which is decided by value of "Port Setting" in "Set Mode" command

Port Setting		CONT0	CONT1	CONT2	CONT3	CONT4
		36pin	37Pin	38Pin	39Pin	40Pin
00h	Default	PUIN	AMUTE	DMUTE	OPCDM	Depend on Reg
01h	MUTE output mode	PUIN	AMUTE	OPCDM	DMUTE	Depend on Reg
02h	EMPH output mode	PUIN	Fixed "LO"	EMPH	OPCDM	Depend on Reg
03h	MUTE and EMPH mode	PUIN	AMUTE	EMPH	OPCDM	Depend on Reg
04h	Register mode	PUIN	Depend on Reg	Depend on Reg	Depend on Reg	Depend on Reg

Port Setting		CONT5	CONT6	CONT7	note
		41Pin	42Pin	43Pin	
00h	Default	Depend on Reg	Depend on Reg	Depend on Reg	For general
01h	MUTE output mode	Depend on Reg	Depend on Reg	Depend on Reg	For using AMUTE / DMUTE
02h	EMPH output mode	Depend on Reg	Depend on Reg	Depend on Reg	For using Emphasis
03h	MUTE and EMPH mode	DMUTE	Depend on Reg	Depend on Reg	For using AMUTE / EMPH
04h	Register mode	Depend on Reg	Depend on Reg	Depend on Reg	For depends on register setting

1.2 Description of port function

The port function decided by "Port Setting" is as shown below.

・Fixed "LO" …The port output is fixed "LO"

・AMUTE (output) …Mute control signal for external audio circuit

・OPCDM (output) …Port ODPCM shows the end point of searching in LBA Play command, CD_MUTE off pont in CDDA playback, enable point for external CD-TEXT decoding

・PUIN (input) …For input pickup inner position switch

・EMPH (output) …Monitor signal for Emphasis is valid or invalid in CDDA playback

・DMUTE (output) …Mute control signal for Motor Driver

・Depend on Reg (I/O) …It depends on register setting

1.3 Note

Please be sure following notes for LC78615 Port Setting.

・The port except the function "Depend on Reg" such as "PUIN" is reserved by Sequencer
to use assigned function. So, you cannot change register value of reserved port.

・The initial setting for the port "Depend on Reg" is output "LO".

・The 3-wires for CDDA / ROM Data are assigned to LRSY pin, DATACK pin, DATA pin.

・In case of supporting compress audio function with external decoder, it is necessary to connect
OPCDM port and 3-wires (FS384 is optional).

・In case of using "FS384", please use the CONT8 pin.
To use CONT8 pin for FS384, it is necessary to set several registers by host MCU.

・In case of using "DOUT (SPDIF)", please use CONT7 pin or CONT8 pin.
To use CONT7 pin or CONT8 pin for DOUT, it is necessary to set several registers by host
MCU.

2 LC78616 port setting
2.1 LC78615 Port Setting List

Table below shows the port setting which is decided by value of "Port Setting" in "Set Mode" command

Port Setting		CONT0	CONT1	CONT2	CONT3	CONT4
		24pin	23Pin	22Pin	21Pin	19Pin
00h	Default	Depend on Reg	Depend on Reg	Depend on Reg	OPCDM	Depend on Reg
01h	MUTE output mode	Fixed "LO"	AMUTE	DMUTE	OPCDM	Depend on Reg
02h	EMPH output mode	Depend on Reg	Depend on Reg	Depend on Reg	OPCDM	EMPH
03h	General	Depend on Reg	Depend on Reg	Depend on Reg	OPCDM	Depend on Reg
04h	CONT3 Reg mode	Depend on Reg	Depend on Reg	Depend on Reg	Depend on Reg	OPCDM
05h	Register mode	Depend on Reg	Depend on Reg	Depend on Reg	Depend on Reg	Depend on Reg

Port Setting		CONT5	CONT6	CONT7	補足
		20Pin	69Pin	70Pin	
00h	Default	PUIN	Depend on Reg	Depend on Reg	For general
01h	MUTE output mode	PUIN	Depend on Reg	Depend on Reg	For using AMUTE / DMUTE
02h	EMPH output mode	PUIN	Depend on Reg	Depend on Reg	For using Emphasis
03h	General	PUIN	Depend on Reg	Depend on Reg	For general
04h	CONT3 Reg mode	PUIN	Depend on Reg	Depend on Reg	For CONT3 such as "FS384"
05h	Regsiter mode	PUIN	Depend on Reg	Depend on Reg	For depends on register setting

2.2 Description of port function

The port function decided by "Port Setting" is as shown below.

・Fixed "LO" …The port output is fixed "LO"

・AMUTE (output) …Mute control signal for external audio circuit

・OPCDM (output) …Port ODPCM shows the end point of searching in LBA Play command, CD_MUTE off pont in CDDA playback, enable point for external CD-TEXT decoding

・PUIN (input) …For input pickup inner position switch

・EMPH (output) …Monitor signal for Emphasis is valid or invalid in CDDA playback

・DMUTE (output) …Mute control signal for Motor Driver

・Depend on Reg (I/O) …It depends on register setting

2.3 Note

Please be sure following notes for LC78616 Port Setting.

・The port except the function "Depend on Reg" such as "PUIN" is reserved by Sequencer

to use assigned function. So, you cannot change register value of reserved port.

・The initial setting for the port "Depend on Reg" is output "LO".

・The 3-wires for CDDA / ROM Data are assigned to LRSY pin, DATACK pin, DATA pin.

・In case of supporting compress audio function with external decoder, it is necessary to connect

OPCDM port and 3-wires (FS384 is optional).

・In case of using "FS384", please use the CONT8 pin.

To use CONT8 pin for FS384, it is necessary to set several registers by host MCU.

・In case of using "DOUT (SPDIF)", please use CONT7 pin or CONT8 pin.

To use CONT7 pin or CONT8 pin for DOUT, it is necessary to set several registers by host

MCU.

・In case of using 64Mbits SDRAM, the CONT6 pin and CONT7 pin are reserved for SDRAM

interface function.