

Annexure for 61/15/6137

PIN CONFIGURATION



PIN DESCRIPTION

Pin #	Symbol	Type	Description
1	ALARM	O	Octet Timing Alarm. When active, indicates loss of received bipolar violations that are used for octet timing. Active high.
2	S+R	I	Positive AMI Data to Receiver. Positive data from the XR-T6164 receive-side. Active low.
3	S-R	I	Negative AMI Data to Receiver. Negative data from the XR-T6164 receive-side. Active low.
4	BLS	I	Byte Locking Supervision. When active, causes blanking of PCMOUT under received alarm conditions. Active low.
5	RX2MHz	I	Receiver 2.048MHz Clock. Used to clock out PCM data.
6	BLANK	I	PCMOUT Data Blanking. When active, forces PCMOUT data to all ones (A1S). Active high.
7	RXCKOUT	O	128kHz Extracted Clock. Clock recovered from received data.
8	V _{DD}		+5V ± 10% Power Source.
9	RXCK2MHz	I	2.048MHz Clock. Used by receiver clock recovery circuit.
10	TS1T	I	Transmitter Time-slot 1 Input.
11	BDT	O	Transmitter Byte Deletion Flag. Active when a transmit byte is deleted. Active high.
12	TS2T	I	Transmitter Time-slot 2 Input.
13	T+R	O	Transmit Positive AMI Data Output. Data to XR-T6164 positive transmitter input. Active low.
14	T-R	O	Transmit Negative AMI Data Output. Data to XR-T6164 negative transmitter input. Active low.
15	TTSEL	I	Transmit Time-slot Select. When high, pin 10 is selected; when low, pin 12 is selected.
16	ALARMIN	I	Alarm Input. When active, inhibits insertion of violations used for octet timing in transmitter output. Active high.

PIN DESCRIPTION (CONT'D)

Pin #	Symbol	Type	Description
17	TX256kHz	I	Transmitter 256kHz Clock. Used to output 64kbps encoded data.
18	BIT	O	Transmitter Byte Insertion Flag. Active when a transmit byte is repeated. Active high.
19	PCMIN	I	Transmitter PCM Input. Data read from the system PCM bus.
20	TX2MHz	I	Transmitter 2.048MHz Clock. Clocks PCM data in PCMIN.
21	V _{SS}		Ground.
22	CS	O	Clock Seek. Indicates that clock recovery circuit has loss of lock with received data. Active high.
23	TS1R	I	Receiver Time-slot 1 Input.
24	TS2R	I	Receiver Time-slot 2 Input.
25	BDR	O	Receiver Byte Deletion Flag. Active when received data byte is deleted. Active high.
26	BIR	O	Receiver Byte Insertion Flag. Active when a received data byte is repeated. Active high.
27	RTSEL	I	Receive Time-slot Select. When high, pin 23 is selected; when low, pin 24 is selected.
28	PCMOUT	O	Received PCM Output Data. Data sent to the system PCM bus.

ELECTRICAL CHARACTERISTICS

Test Conditions: $V_{DD} = 5V \pm 10\%$, $T_A = 25^\circ\text{C}$, Unless Otherwise Specified

Symbol	Parameter	Min.	Typ.	Max.	Unit	Conditions
DC Electrical Characteristics						
V_{IH}	Logic 1	2.4			V	
V_{IL}	Logic 0			0.4	V	
V_{DD}	Supply	4.5		5.5	V	
I_{DD}	Supply Current		500		μA	Dynamic Supply Current
I_k	Input Leakage			1	μA	
V_{OL}				0.4	V	At 1.6mA
V_{OH}		2.4			mA	At 0.4mA
AC Electrical Characteristics						
General						
t_r, t_f	Output Rise/Fall Time			20	ns	All Outputs
Receiver						
t_{RS}	RX2MHz Rising Edge to TS Rising Edge Set Up Time	0		$t_{RXL-100}$	ns	Figure 3
t_{RH}	RX2MHz Rising Edge to TS Falling Edge Hold Time	0		$t_{RXL-100}$	ns	Figure 3
t_{DRS}	TS Rising Edge to Leading Edge of PCMOUT D0 Bit Delay			10	ns	Figure 3
t_{DRH}	TS Falling Edge to Trailing Edge of PCMOUT D7 Bit Hold Time	0		10	ns	Figure 3
t_{RXD}	RX2MHz Rising Edge to PCMOUT Bits D1 Through D6 Rising Edge Delay			10	ns	Figure 3
t_{PW}	PCMOUT Pulse Width		488		ns	Figure 3
t_{RXH}	RX2MHz High Time		244		ns	Figure 3
t_{RXL}	RX2MHz Low Time		244		ns	Figure 3
t_{RXCLK}	RX2MHz Period		488		ns	$\pm 100\text{ppm}$
Transmitter						
t_{TS}	TS Rising Edge to TX2MHz Set Up Time	20		$t_{TXL-100}$	ns	Figure 5
t_{TH}	TS Falling Edge to TX2MHz Hold Time	0		$t_{TXL-100}$	ns	Figure 5
t_{DS}	PCMIN Edge to TX2MHz Set Up Time	100			ns	Figure 5
t_{DH}	PCMIN Edge to TX2MHz Hold Time	100			ns	Figure 5
t_{TXH}	TX2MHz High Time		244		ns	Figure 5
t_{TXL}	TX2MHz Low Time		244		ns	Figure 5
t_{TXCLK}	TX2MHz Period		488		ns	$\pm 100\text{ppm}$

ELECTRICAL CHARACTERISTICS (CONT'D)

Symbol	Parameter	Min.	Typ.	Max.	Unit	Conditions
AC Electrical Characteristics (Cont'd)						
Transmitter (Cont'd)						
t _{KOH}	TX256kHz High Time		1.95		μs	
t _{KOL}	TX256kHz Low Time		1.95		μs	
t _{KXCLK}	TX256kHz Period		3.9063		μs	
t _{BOTH}	BDT High Time	488			ns	
t _{BITH}	BIT High Time	12.5			μs	
t _{ALH}	ALARMIN High Time	15.6			μs	

Specifications are subject to change without notice

ABSOLUTE MAXIMUM RATINGS

Supply Voltage 20V
 Operating Temperature 0°C to +70°C

Storage Temperature -65°C to +150°C